

## SOCIO-ECONOMIC CONSEQUENCES AND PROBLEMS OF LABOR TAXATION

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**Abstract.** *The development of each state and economic growth are highly related to the number of factors of production such as labor and capital along with higher productivity of utilizing them. Frequently, high unemployment rate (with small labor force participation) and significant “shadow” employment accused of the high tax burden on labor. Moreover, some assumptions exist that decrease in personal income tax or social security contributions paid by employee induce an increase in labor supply, and a decrease of payroll taxes increment the labor demand. However, the impact of the tax change on labor market depends on the behavioral responses of economic “players” estimated by elasticities. The higher elasticity of supply or demand means higher sensitivity to the tax changes, with relatively less elastic side bearing the higher tax burden.*

*We discussed the significant problems in the field of labour taxation and socio-economic consequences using the experience of Denmark, Estonia, Germany, Poland, Slovakia, and Ukraine. Unscrambling the decomposition of labour taxation, factors affecting labour supply and labour demand, tax incidence, employment problems and groups vulnerable to these problems. The main methods: a synthesis for primary concepts (labour taxation, take-home pay, tax wedge, tax incidence, payroll taxes); deduction; induction method for conclusions; statistical methods for analyzing revenues, structure, and composition of labour taxation between selected countries.*

*Anyway, taxes discourage both labor demand (by raising labor costs to employers) and labor supply (by lowering the real consumption wage of workers). They create a “tax wedge” between labor cost to the employer and the worker’s take-home pay and thereby reduce both employment and economic growth. We tried to discover the issues above concerning existing research data. However, the investigation scale needs to be expanded for the thorough look and deep awareness of taxation concepts and problems.*

**Keywords:** *taxes, tax system, labor taxation, take-home pay, tax wedge, payroll taxes, gross salary, social security contributions, personal income tax, implicit tax rate*

**Introduction.** There is no point denying, taxes take a significant share in our life. Part of the income which levied by tax authorities specifies the ability to satisfy conventional needs and wellbeing.

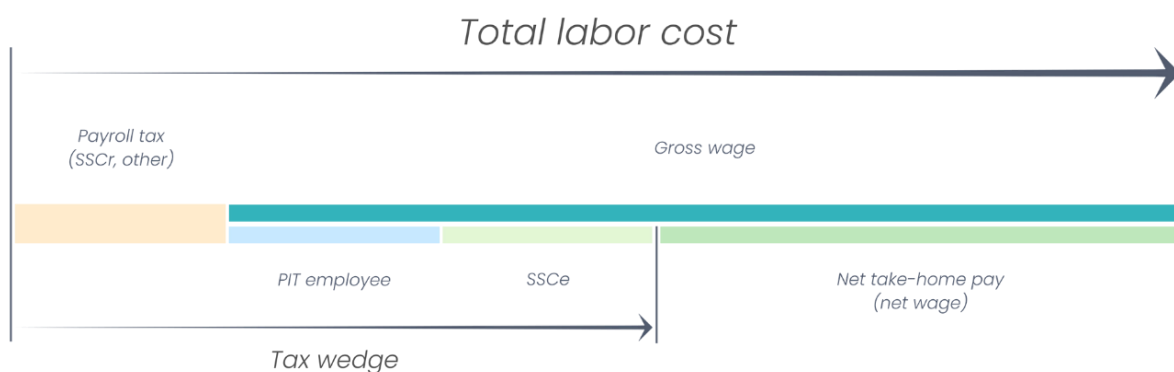
The main purpose of taxation can be either raising revenue to meet huge public expenditures or reduce consumption of harmful goods. It is one of the economic policy instruments that affects the total volume of production,

consumption, investment, choice of industrial location and techniques, the balance of payments, distribution of income, etc.

In the vast majority of Western Europe countries, labor taxation has the dominant part in tax revenues. Forasmuch the approaches and decomposition of labour taxation are different, we consider the experience of Denmark, Estonia, Germany, Poland, Slovakia, and Ukraine with a look at labor demand and supply side as the reasons for unemployment; sensitive groups in the labor; tax incidence and tax wedge (Is it relatively high because of expensive social security system?).

There are a lot of publications and research data regarding labour taxation, especially from Yushko S., Shvabij K., Krat O., Bezverkhoga K., Yurchyshena L., Shevchuk I., G. Carone, Löffler, M., Peichl, A. and S. Siegloch, Styczyńska, I., Najman, B. and A. Neumann. However, dynamic development of taxation system requires constant monitoring of the changes with a fresh appraisal approach.

**Material and method.** The effectiveness of any tax system is a background for solving social and economic problems, and support functions performed by the state. Labor taxes include personal income tax, social security contributions paid by employees, and payroll taxes (social security contributions and other taxes paid by the employer).



**Pic. 1. Decomposition of total labour cost**

Social security contributions finance social security benefits (old-age pensions, disability pensions, survivors' pensions, sickness benefits, and unemployment benefits). Total labor cost is a sum of gross wage earnings of employees and payroll taxes paid by the employer (Pic. 1). Net take-home pay (net wage) is the difference between gross earnings and personal income tax and social security contributions paid by the employee. Tax wedge is the difference between total labor cost to the employer and the net take-home pay of the employee, expressed as a % of the total labor cost.

#### Employment problems

1. *Unemployment*-share of the workforce who wants to work and does not find employment. Reasons:

- ✓ business cycle (short-term lack of aggregate demand);
- ✓ structural reasons:
  - Unwinding of unsustainable developments (long-term lack of aggregate demand)
  - Mismatch between labour demand and supply. Factors affecting labour supply and labour demand are presented in Table1 and 2 respectively.

## 1. Factors affecting labour supply [4]

Factors	Labour supply effect
Population aging	People aged 50+ have lower chances of employment. A large share of the population potentially decreases link between contributions and pension entitlements.
Falling fertility levels	Having children has ambiguous effects on employment. While it increases the probability of men to be employed, the chances of being employed decreases for women.
Changing family structures	Being married has ambiguous effects on employment, for men there is a positive correlation, while for women it is negative. However, most likely also a reverse causality.
Female labour participation	Women still have a lower labour force attachment.
Changes in educational attainment	Lower educated people are less probable to find employment.
Increasing migration	Migrants have lower chances of finding employment.

- Rigidities at the labour market:
  - ✓ Wage rigidities
  - ✓ Other labour market regulations

## 2. Factors affecting labour demand [4]

Factors	Labour demand
Occupational shifts	Shifts in production between occupations/ sectors cause increased demand for one type of skills and decreasing demand for the different type of skills. In short- to medium-run such shifts can result in a skill-mismatch, i.e. mismatch between skills that are demanded on the labour market and skills that are available. It causes the increase of unemployment and the increase in vacancies at the same time. In the long run, the market should adjust and the unemployment should decrease and employment increase.
Structural changes in labour market	Introduction of innovative tools in the workplace, changing nature of the workplace induce demand for different types of skills, often unavailable on the labour market. Again, we observe a skill shortage, which creates unemployment and lower employment.

2. *Under- and non-employment*-share of the population who (apparently) voluntarily stays away from the workforce.

Reasons:

- ✓ non-employment outside the labour market;
- ✓ incentive problems:
  - Opportunity cost (cost of child care);
  - Poverty trap (where income related benefits create situations for unemployed people where they are better off staying outside the workforce.

Groups vulnerable to employment problems

- *Low-skilled* - facing a labour demand problem as a result of the sectoral shifts which substantially reduced the need for the low-skilled workforce.

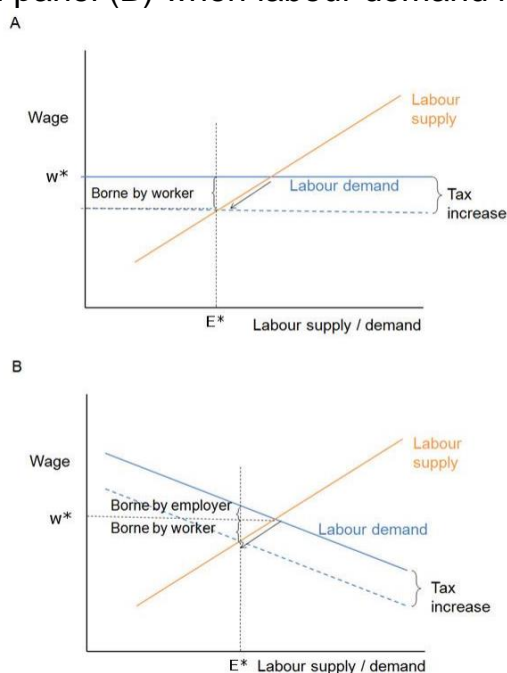
- *Young people* - usually perceived as unstable employees who would leave an employer to gain more experience before they settle into a permanent role.

- *Elderly*. Due to population ageing the labour supply of elderly people is increasing. But labour demand is not keeping up because the elderly are often perceived as people of lower productivity, who are not keen on investing in themselves, and who are unable to acquire new skills and adapt to rapid changes in the market.

- *Women*. They are still largely responsible for child care, care of elderly relatives and other non-market household activities.

- *Migrants*. Often their previous work experience and foreign education are not adequately valued by employers, and therefore they are facing a labour demand problem.

The extent to which workers or employers bear the burden of labour taxation is intimately linked to the relative degree of responsiveness of each to the financial (dis)incentives created by the tax: that is, to the relative elasticities of labour supply and labour demand. This is most clearly seen in a simple representation of a classical perfectly competitive labour market. Picture 2 shows the situation where labour supply is somewhat elastic, and: in panel (A) when labour demand is completely elastic; and in panel (B) when labour demand is incompletely elastic.

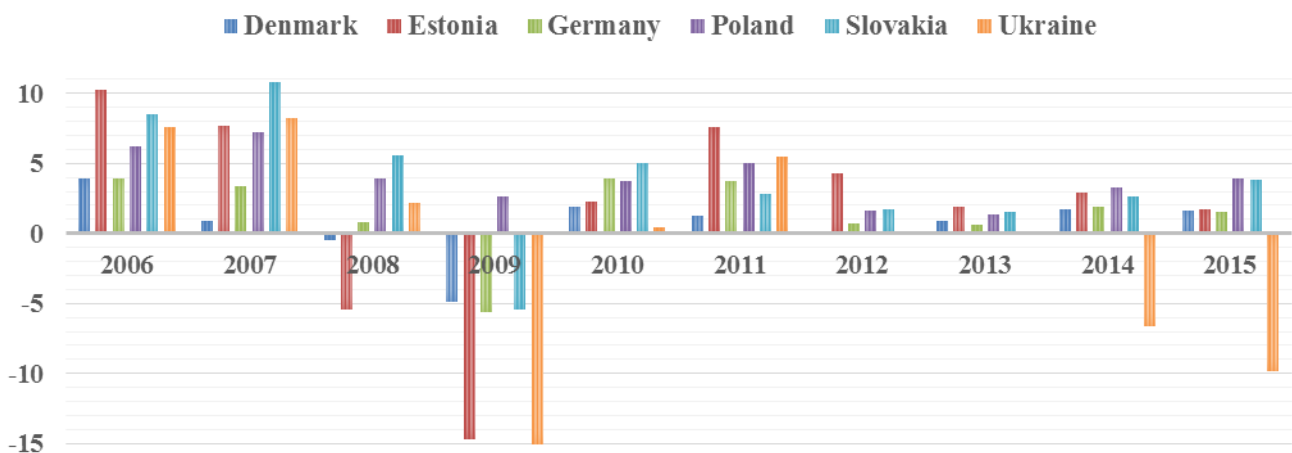


**Pic. 2. The relationship between behavioral response to taxation and tax incidence [4]**

Initially, no taxes are levied. Market equilibrium is at the point at which labour demand and labour supply are equal: let's call the resulting level of employment " $E^*$ ", and the resulting wage rate " $w^*$ ". Now let's introduce a tax, in this case, formally levied on workers, so, that for a given gross wage paid by employers, workers receive a lower net wage. But who bears the economic burden of this tax? In the case of completely elastic labour demand (A) - fully on the worker: the gross wage remains unchanged, and the worker bears the full burden of the tax in the

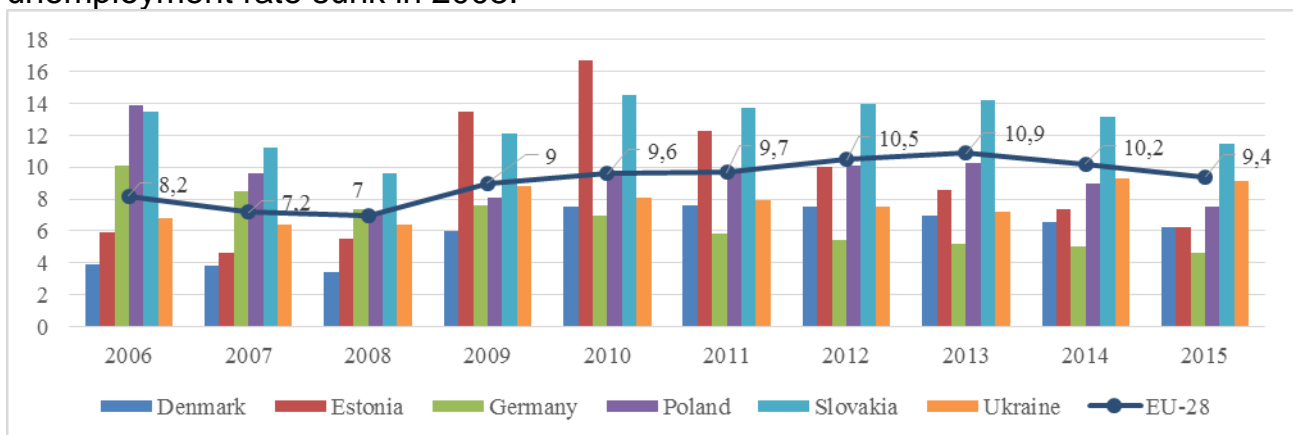
form of a lower net wage. However, in the case of incompletely elastic labour demand, panel (B) shows that the incidence of the tax is split between the worker and the employer. Intuitively, as the workers reduce the amount they are willing to work because of the lower net wage they receive when the tax is in place, the employers are willing to pay a higher gross wage to help maintain a supply of (the now more scarce) labour. Thus the burden of taxation is split between employers who pay somewhat higher gross wages than in the absence of the tax, and workers, who none-the-less still receive a lower net wage than in the absence of the tax.

**Results and discussion.** It is not superfluous to recall the real GDP growth, due to social significance for increasing in tax revenues as a whole (see Figure 1). There was a significant decline of GDP in 2009, which was caused by the global recession in 2009 with a consumption boom, which was accompanied by a steady increase in commodity prices.



**Fig. 1. Real GDP growth (annual percentage change) [3]**

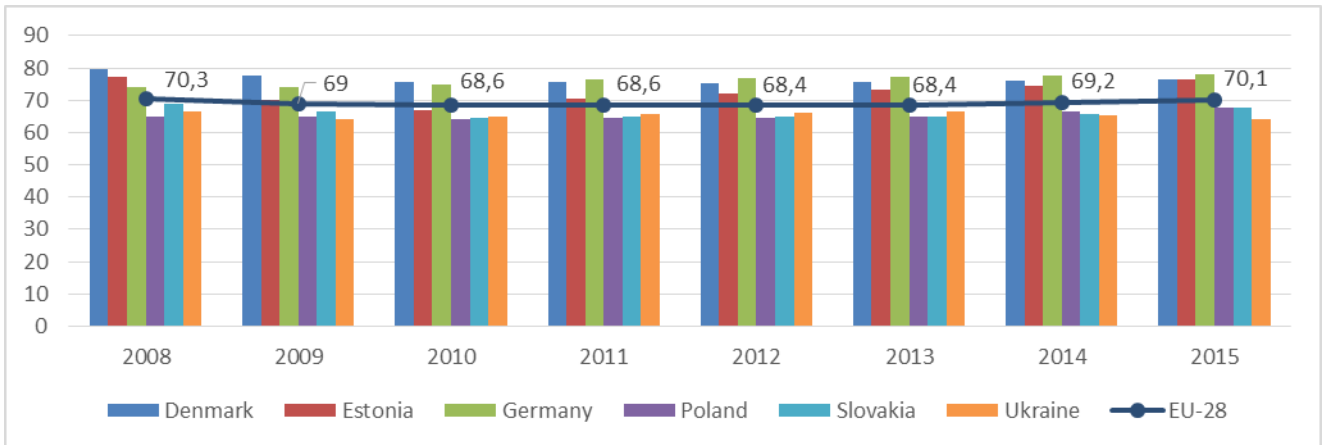
The sharp recession and the sluggish recovery has strongly increased the level of unemployment in the all researched countries. Figure 1 and 2 highlight the development and the relationship between the annual GDP growth and the unemployment. Following a period of solid growth in 2006 and 2007 the unemployment rate sunk in 2008.



**Fig. 2. Total unemployment rate (% of the labour force (active population)) [5, 6]**

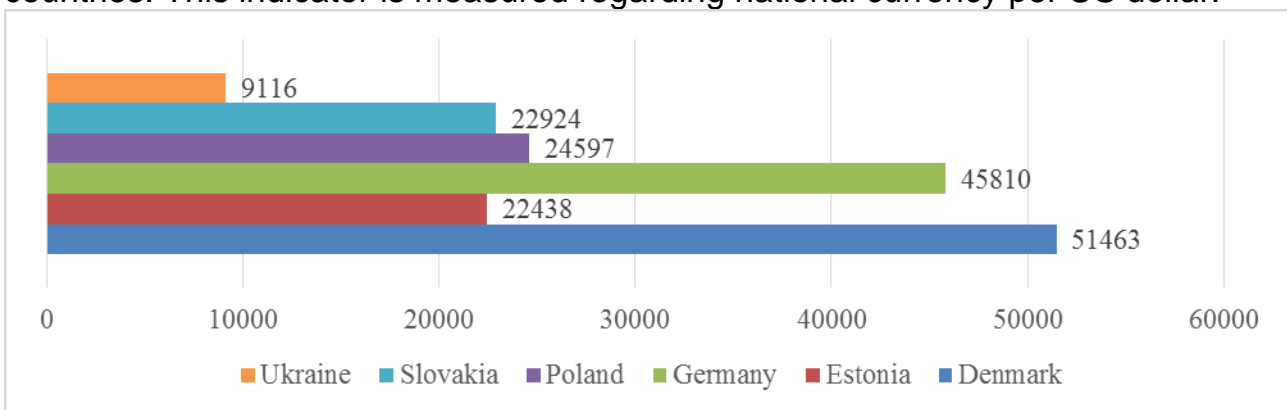
However, the economic recovery in 2010 was not strong enough to reduce the level of unemployment, and the next recession in 2012 and 2013 further increased the unemployment rate. Only over the course the last year there has been a slow improvement in the researched states.

The dynamic of employment is higher in Denmark, Estonia and Germany compare to average in EU member states. The highest employment observed in Germany (78% in 2015) as one of the largest economies in the world and the lowest in Ukraine (64,2 % in 2015).



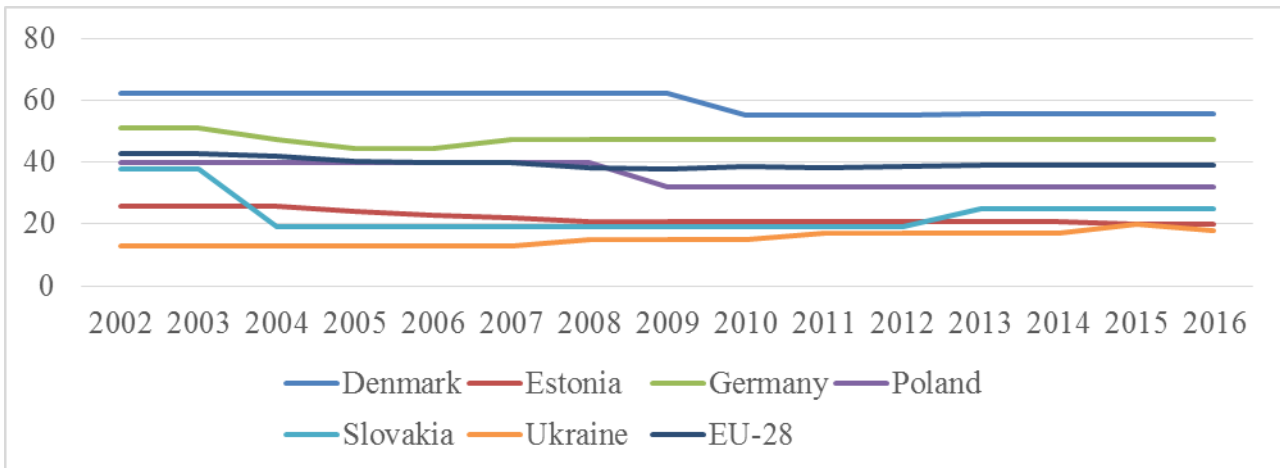
**Fig. 3. Employment rate (% , aged 20-64) [7, 8]**

Let's have a look at the average annual wage in constant prices at 2016 USD PPPs (Figure 4). Purchasing power parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs show the ratio of prices in national currencies of the same good or service in different countries. This indicator is measured regarding national currency per US dollar.



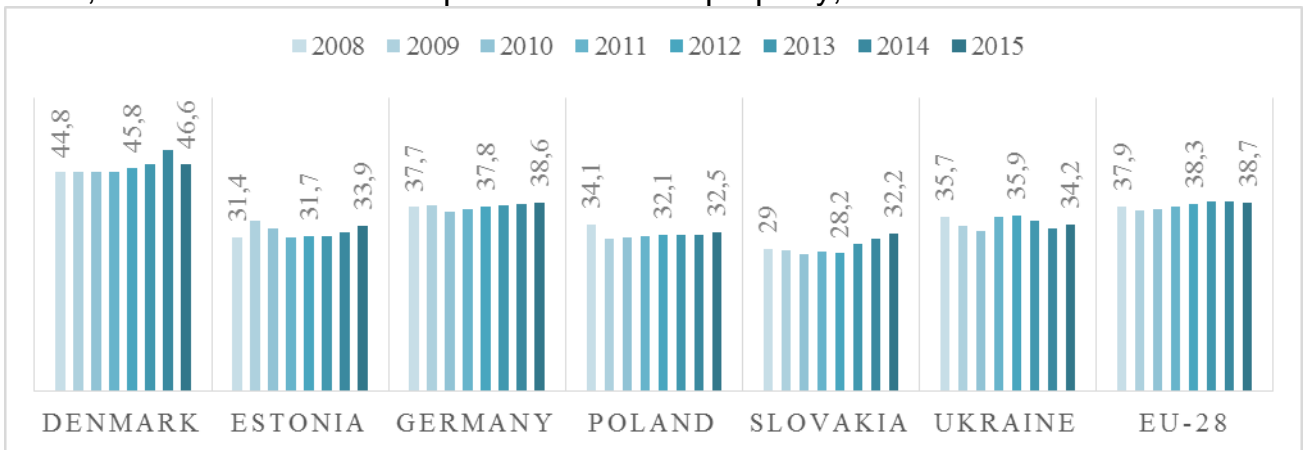
**Fig. 4. Average annual wage (in 2016 constant prices at 2016 USD PPPs) [9, 10]**

Generally, the average annual wage in researched countries correlates with the personal income tax rate. The higher the wage the higher is tax rate respectively (Figure 5).



**Fig. 5. Development of top personal income tax rate, 2002-2017 [9, 10]**

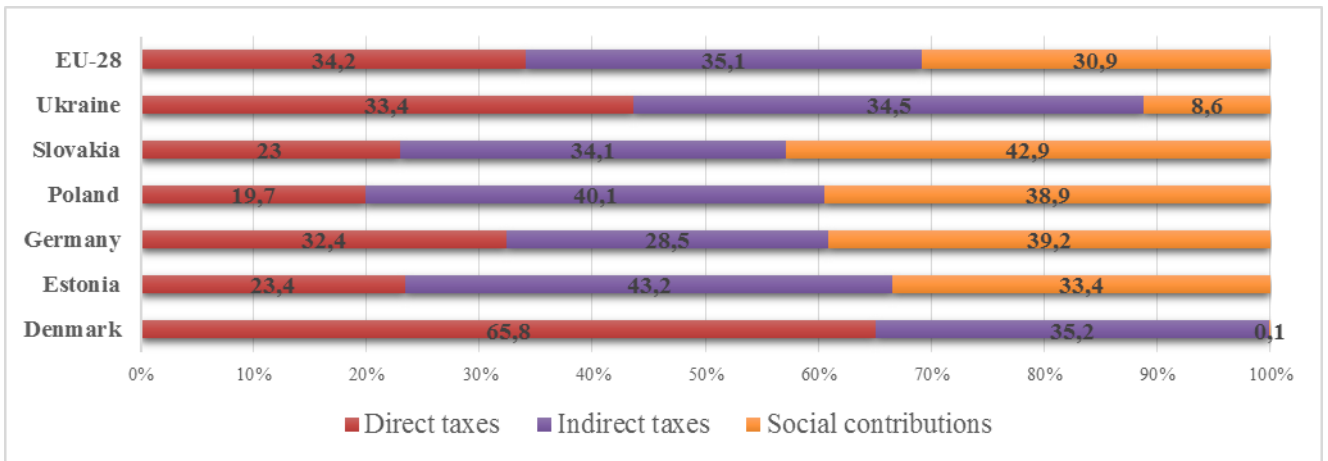
Tax revenue is defined as the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes.



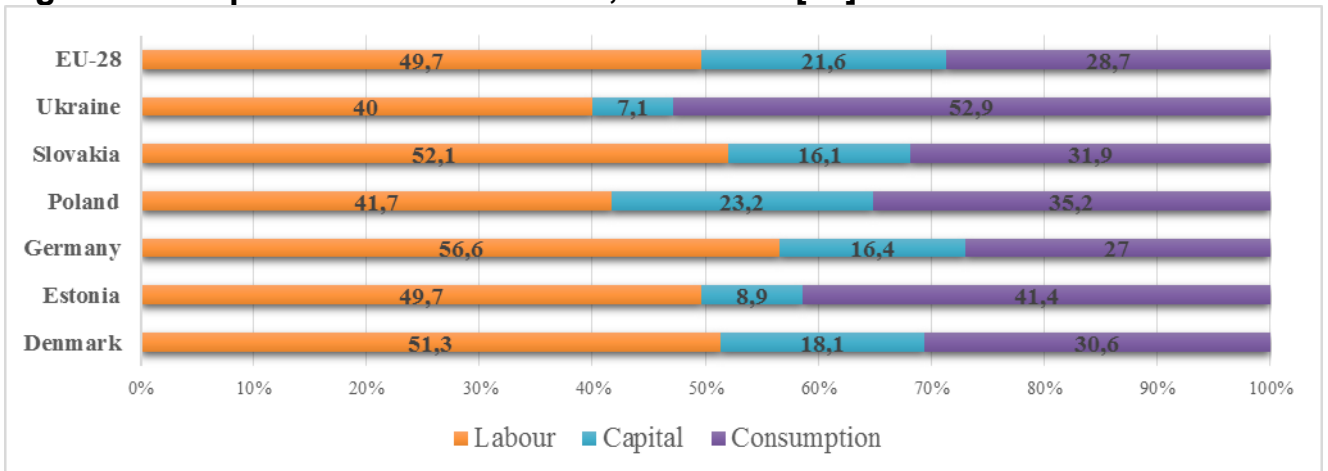
**Fig. 6. Tax revenue (including compulsory actual social contributions) as % of GDP [9, 10]**

Overall, Germany has very similar dynamic as the average between EU-28 Member States. Denmark fill in a substantial amount of budget by means of taxes, while Slovakia has the smallest share.

Taxes are traditionally classified as direct or indirect. Direct taxes cover personal income taxes, corporate income taxes and other income and capital taxes. Indirect taxes relate to the VAT, excise duties, and consumption taxes, other taxes on products and production. Actual compulsory social contributions are, as a rule, directly linked to a right to benefits such as old age pensions or unemployment and health insurance. Decomposition of tax revenue revealed on Figure 7 and 8.



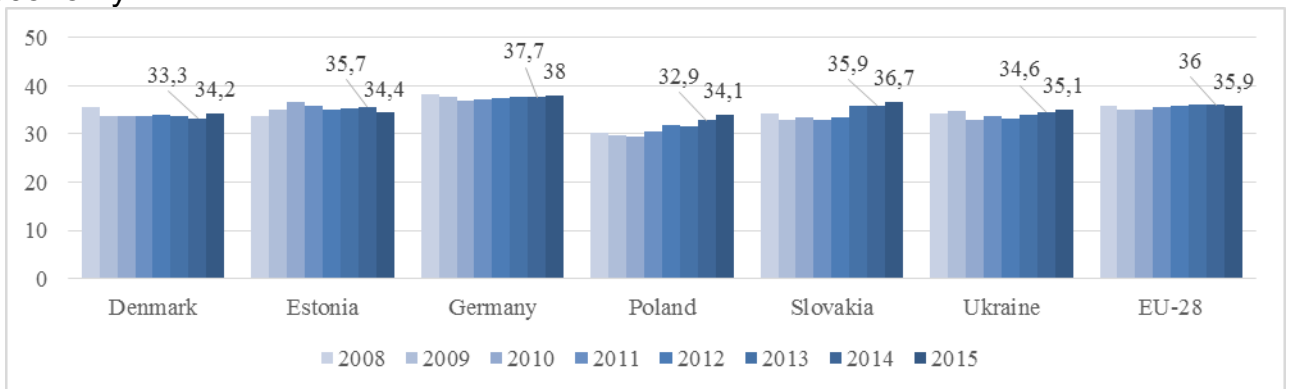
**Fig. 7. Decomposition of tax revenue, % in 2015 [10]**



**Fig. 8. Decomposition of tax revenue by the type of tax base, % in 2015 [9, 10]**

Taxation of capital takes the smallest share between all researched countries. Although, Slovakia, Poland, Germany, Estonia and Denmark focused on labour taxation, Ukraine still rely on consumptions taxes (mainly VAT). Also, Denmark has almost no revenues generated by social contributions, in contrast to Slovakia.

The ITR on employed labour is defined as the sum of all direct and indirect taxes and employees', and employers' social contributions levied on employed labour income divided by the total compensation of employees working in the economic territory. The resulting ITR on labour should be seen as a summary measure that approximates an average effective tax burden on labour income in the economy.



**Fig. 9. Implicit tax rate on labour (%) [10]**



For example, cuts in taxes or social contribution rates that are targeted on low-wage, low-skill workers or families with children may have a small impact on the overall ITR and yet be effective in raising take-home pay for the beneficiaries.

### Conclusion

Although, reduction of payroll taxation can be compensated by higher wages with no effect on employment adequate tax policy should create all conditions for financial stability and prosperity. Countries can limit the negative impact of labor taxes on employment by three main ways:

- Improve the efficiency of the social security system by tightening eligibility, limiting system abuse, strengthening revenue collection, and curbing informality. If there were no early retirement schemes in Poland, social security contributions could be reduced by one-third, and if expenditures on disability pensions were reduced to the average EU-28 level, the rate of social security contributions could be reduced by an additional percentage point;

- Limit the insurance-based portion of the social protection system by moving more to tax-financed universal benefits. Examples include family and maternity benefits, health care, flat rate social pensions, flat rate unemployment benefits, and services to the unemployed;

- Reduce social security contributions, particularly for workers for whom the elasticity of labor demand is relatively high and the pass-through effect (whereby lower contributions are captured through higher wages) is limited.

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## СОЦІАЛЬНО-ЕКОНОМІЧНІ НАСЛІДКИ ТА ПРОБЛЕМИ ОПОДАТКУВАННЯ ПРАЦІ

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**Анотація.** *Розвиток кожної країни та її економічне зростання безпосередньо пов'язані з кількістю факторів виробництва, таких як праця та капітал разом із підвищенням продуктивності їх використання.*

*Достатньо часто у високому рівні безробіття та значному «тіньовому» працевлаштуванні звинувачують високий податковий тиск на працю. Проте, вплив змін в оподаткуванні на ринок праці залежить від чутливості економічних "гравців", яка вимірюється еластичністю. Чим вища еластичність пропозиції або попиту, тим вища чутливість до змін, де менш еластична сторона має більший податковий тягар.*

*Наведено огляд основних проблем у сфері оподаткування праці та соціально-економічні наслідки, використовуючи досвід Данії, Естонії, Німеччини, Польщі, Словаччини та України. Висвітлено основні складові оподаткування праці, фактори, що впливають на попит та пропозицію робочої сили, податкове навантаження, проблеми працевлаштування та групи, вразливі до цих проблем.*

*За результатами дослідження встановлено, що податки зменшують як попит на працю (за рахунок збільшення витрат на робочу силу для роботодавців), так і пропозицію (знижуючи реальну заробітну плату працюючих). Вони створюють "податковий клин" між вартістю робочої сили для роботодавця і реально отриманою заробітною платою працівником, і таким чином зменшують як зайнятість, так і економічне зростання.*

**Ключові слова:** *податки, податкова система, оподаткування доходів громадян, податковий клин, податкові нарахування, валова заробітна плата, соціальні внески, податок на доходи фізичних осіб, ефективна податкова ставка*

## СОЦИАЛЬНО-ЭКОНОМИЧЕСКИЕ ПОСЛЕДСТВИЯ И ПРОБЛЕМЫ НАЛОГООБЛОЖЕНИЯ ТРУДА

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**Аннотация.** *Развитие каждой страны и ее экономический рост напрямую связаны с количеством факторов производства, таких как труд и капитал вместе с повышением производительности их использования.*

*Достаточно часто в высоком уровне безработицы и «теневом» трудоустройстве обвиняют высокое налоговое давление на труд. Однако, влияние изменений в налогообложении на рынок труда зависит от чувствительности экономических "игроков", которая измеряется эластичностью. Чем выше эластичность предложения или спроса, тем выше чувствительность к изменениям, где менее эластичная сторона несет большее налоговое бремя.*

*В данной статье приведен обзор основных проблем в сфере налогообложения труда и социально-экономические последствия, используя опыт Дании, Эстонии, Германии, Польши, Словакии и Украины. Освещены*

основные составляющие налогообложения труда, факторы, влияющие на спрос и предложение рабочей силы, налоговую нагрузку, проблемы трудоустройства и группы, уязвимые к этим проблемам.

По результатам исследования установлено, что налоги уменьшают как спрос на труд (за счет увеличения затрат на рабочую силу для работодателей), так и предложение (снижая реальную заработную плату работающих). Они создают "налоговый клин" между стоимостью рабочей силы для работодателя и реально полученной заработной платой работником, и таким образом уменьшают как занятость, так и экономический рост.

**Ключевые слова:** налоги, налоговая система, налогообложение доходов граждан, налоговый клин, налоговые начисления, валовая заработная плата, социальные взносы, налог на доходы физических лиц, эффективная налоговая ставка

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## ПОДІЄВИЙ ТУРИЗМ В УКРАЇНІ ЯК СКЛАДОВА ІНДУСТРІЇ ГОСТИННОСТІ

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**Анотація.** Розкрито сутність подієвого туризму під яким розуміється подорож з метою відвідування тієї чи іншої події культурного, спортивного, розважального чи громадського життя суспільства. Виділено тематичні види подієвого туризму. Подано класифікацію подієвого туризму за масштабом події. Виокремлено особливості подієвого туризму, головна з яких полягає в неповторності кожної поїздки, незабутніх враженнях і атмосфери свята. Розглянуто основні суспільні функції подієвого туризму: економічна, пізнавальна, рекреаційна та розважальна.

Зроблено SWOT-аналіз конкурентоспроможності України щодо розвитку подієвого туризму для виявлення найсильніших та найслабших місць. Обґрунтовано доцільність реалізації провідних напрямів щодо успішного розвитку подієвого туризму, які стосуються управлінської, освітньої, економічної, інформаційної сфер діяльності. Надано рекомендації щодо напрямів розвитку подієвого туризму в Україні.

**Ключові слова:** подієвий туризм, подія, туризм, туристичні ресурси

**Актуальність.** Розвиток національного туризму в країні створює нові робочі місця, розбудовує інфраструктуру, диверсифікує економіку, підвищує рівень ділової активності та забезпечує залучення інвестицій у різноманітні галузі виробництва. Успішне функціонування туристичної галузі

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