International Experience in Tax Reform and Lessons for Ukraine

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Abstract

This paper discusses the negative effect of income and value-added taxation on the Ukrainian economy during the transitional period. The ultimate purpose of this paper is to ascertain links between fiscal policy and economic transformation, to define objectives for tax reforms, which took place all over the world in 1970–90s, to evaluate major trends and the need for tax reform in Ukraine, to examine Ukrainian income and value-added taxation and to set requirements for tax reform there. It stated that economic trends reflect disequilibrium in Ukrainian economy, which can be eased if tax reform will be undertaken. Key taxes, which tax reform shall be focused on, are personal income tax, corporate income tax and value-added tax. Non-standard tax rules and heavy tax burden (compared to GDP and economic growth) depress markets, distort corporate and individual economic behaviour in Ukraine. Tax reform may reduce the negative effect of taxation if new tax rules are more standard and the tax burden is reasonable.

Keywords: Ukraine, transitional economy, taxation, tax burden, personal income tax, corporate income tax, value-added tax, tax reform.

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1. Introduction

It is no secret that the past decade has been a poor one for Ukrainian society. Useless efforts to support moderate economic growth through enlargement of the public sector, artificial prices and extensive use of the nation’s resources have all led to a public budget deficit, huge structural distortions in the aggregate demand and supply of goods and services, a permanent deficit of most industrial goods, food products and services combined with huge new public investments across the country and the growth of an informal economy in the USSR in 1970–80. Ukraine also inherited an outmoded political system from the USSR, as well as a poor legislative base and impractical legal system, a closed, costly and administratively regulated economy with a primitive financial system and an inefficient economic infrastructure, a high degree of regional and industrial monopoly, artificially low prices and obsolete quality standards, huge social liabilities of the state to population, and numerous economic and administrative barriers for exchange of ideas, technologies and standards.

A similar heritage was bestowed by history to many other FSU countries. However, unlike many other FSU countries, Ukraine had large industrial and agricultural sectors tied to CEE and FSU commodity markets and was critically dependent on the import of energy, machinery and raw materials. Ukraine also inherited small proportions of private sector, a dominance of industrial goods production, a huge amount of unfinished construction, a large stock of unsecured financial system liabilities to the population associated with savings in the Savings Bank of Ukrainian SSR and Foreign Trade Bank of USSR.

After proclaiming Ukrainian independence in 1991, reform of the political system was a major concern for Ukrainian policy-makers and the economy was ignored, the consequences of which were disastrous. In spite of possessing a relatively high level of industrial development, a well educated and highly skilled labour force, a large stock of fertile lands suitable for agriculture, a mild climate and remarkable natural resources, the Ukrainian economy suffered an extremely deep recession. In 1991–94 Ukraine faced a sharp contraction of industrial and agricultural output, an increase in the negative balance of external trade, a huge public budget deficit financed by increases in money supply, high rates of inflation and obvious polarisation of personal wealth. It made the process of transition towards a market type economy very expensive for both the economy and the Ukrainian population.

Price liberalisation, enterprise reform and privatisation, and the development of an effective social safety net could greatly facilitate transition to the market economy and ensure social stability in Ukraine. Disciplined financial policies, structural reforms, trade liberalisation, and rapid growth of trade, especially with Western Europe have all contributed to the rapid transformation in the CEE economies in the 1990s. In some of the countries that are most advanced in transition, capital inflows - attracted largely by prudent macroeconomic policies and prospects for strong growth - have helped to ease financing constraints, stimulate activity, and permit a more rapid replacement of obsolete capital equipment. Capital inflows have also facilitated privatisation and enterprise restructuring, thus promoting the role of market forces in the allocation of resources.

1 The strategy of business management in the former USSR favoured reduction of costs in every possible way, but profit and return on equity were never considered to be important indicators of economic performance.

2 The Ukrainian economy is overburdened with old and relatively new large enterprises operating within heavy industries because of the historically advanced industrial development of the European part of the USSR and also because of the unusual focus of the USSR economic policy, which targeted the development of heavy industries (and military related production, first of all) at the expense of agriculture and other industries in Ukraine before and after World War II. For example, in 1990 output of ferrous metals and machinery constituted 44.2% of industrial production whereas output of food industry constituted 14% of industrial production. Also the ratio between production of industrial and consumer goods was about 70:30, and it was combined with a deficit of most consumer goods and food products.

3 Ukrainian residents had approximately 1 billion USD in deposits in the Foreign Trade Bank of USSR (Vnesheconombank of USSR) just before it was declared bankrupt. It is estimated that over 84 bn RUB (or, approximately, 40 bn US Dollars) were transferred from Savings Bank of Ukrainian SSR to Moscow headquarters in 1980s.
However, Ukraine became independent so suddenly that the public authorities were neither prepared to develop any sound economic policy nor were they open to recommendations from foreign advisors and international organisations that were aimed at reducing and redefining the role of the state in economic development. Therefore, in the early 1990s, Ukrainian economic policy often copied Russian economic initiatives. Ultimately, energy crisis, hyperinflation, growth of arrears and a foreign exchange crisis occurred in Ukraine and the country paid a very high price for its irresponsible economic policy. Because unlike Russia, there was no trade balance surplus, no significant stock of foreign exchange, no access to foreign credits, and no experience of controlling political and social pressure in Ukraine. But even now, economic and social reforms are slow and the country has a long journey to recovery ahead.

This paper discusses the links between fiscal policy and economic transformation, the objectives and consequences of tax reforms which took place all over the world in 1970–90s, major economic trends, and the need and requirements for tax reform in Ukraine. The paper consists of five core sections: (2) The economic situation in Ukraine in 1992–98 [subsection – Economic disequilibrium and tax policy], (3) Income and value-added taxation: basic rules and advantages/disadvantages [six subsections – History and general rules of personal income taxation, Advantages and disadvantages of personal income taxation, History and general rules of corporate income taxation, Advantages and disadvantages of corporate income taxation, History and general rules of value-added taxation, Advantages and disadvantages of value-added taxation]; (4) Income and value-added taxation in Ukraine: economic efficiency issues [three subsections – Distortions associated with personal income taxation in Ukraine, Distortions associated with corporate income taxation in Ukraine, Distortions associated with value-added taxation in Ukraine], (5) International experience in tax reform [three subsections – Critically important elements of personal income taxation, Critically important elements of corporate income taxation, Critically important elements of value-added taxation (European version)], (6) Ukrainian tax reform: general proposals [subsection – personal view on tax burden analysis].

2. The economic situation in Ukraine, 1992–98

Trend 1: Recession and structural changes in the formal economy and growth of the informal economy

The political and economic decline of the administrative system and the disintegration of the USSR seriously affected public sector performance in the Ukrainian economy. Real GDP in the public sector in Q4 1997 was less than 18% of real GDP in Q4 1992 (see also Chart 1 in Annex). In 1992–94, privatisation in Ukraine was progressing very slowly, and given the permanent and significant growth of prices, public enterprises were reluctant to change their strategies of corporate development or to adjust the volume and structure of production and sales. Eventually, they belatedly observed a sharp decline in demand for their products. Increased prices for raw materials and equipment, deterioration of business links with former suppliers and consumers, relaxation of contract discipline, growth of social insurance contributions and expenditures aimed to maintain the social infrastructure of enterprises, and lack of financial support from the government all led to a significant contraction of financial resources and opportunities (in terms of acquisition of new equipment and technologies) for

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4 In Q1 1994, the industrial price index was 4,871 times higher than the industrial price index in Q1 1992; in Q1 1994 the consumer price index was 4,739 times higher than the consumer price index in Q1 1992.

5 At the beginning of the transitional period, employees were involved in the management of public enterprises. Naturally, employees opposed dismissal of personnel and any reduction in real value of social benefits associated with a social infrastructure subsidised by these enterprises. Thus, public companies had less opportunity to increase labour productivity and to improve their financial performance.
In 1998, one of two enterprises reported losses compared to 1994 when only one of eight enterprises did. However, reporting of losses also reflects the unwillingness of enterprises to present true information on their financial performance due to high and very distortionary value-added and income taxation.

Some forms of preferential treatment existed for co-operatives (1985–93), small enterprises (1990–95), enterprises with direct foreign investments (1990–95), limited partnerships and joint stock companies (1990–93) in Ukraine. However, the vast majority of public enterprises and traders (intermediaries) were in fact associated companies. At the beginning of transition, intermediaries were able to establish high profit margins on goods and services as far as manufacturers were restricted to charging market prices for their products.

In Q1 1997, enterprise arrears registered by Ukrainian banks reached 20.8 bn UAH (approximately 23.4% of accruals), including arrears to employees (3.2 bn UAH) and arrears to tax authorities (about 2.95 bn UAH). Moreover, 50% of tax debts were associated with 600 large companies.

According to estimates, the value of Ukrainian capital abroad is about 10 billion US dollars (approximately, 50% of the annual value of exports in 1998).

According to estimates of State Tax Administration, the informal economy is no smaller than the formal one in 1997–98.

It is expected that real GDP in the formal economy will reach the 1989 level in 2005 or later.
recession in Ukrainian formal economy. Plus, there were also other reasons for economic decline such as:

- deterioration of business links between FSU countries, growth of energy prices, contraction of foreign markets (including the market for military weapons and high technology products) associated with economic disintegration of the USSR;
- slow rates of enterprise reorganisation (including changes in the structure of production and sales, technology and expertise, corporate management and property rights);
- combination of high rates of inflation with monopoly of suppliers and administrative restrictions of business activities.

A flow of capital from the public into the private sector of the formal economy was strongly influenced by the relaxed monetary policy in 1991–93, administrative (including legal) restrictions on legal accumulation and utilisation of ‘new private capital’, an adverse tax regime and the lack of efficient financial markets. Not surprisingly, a significant part of ‘new private capital’ was injected into the informal economy as soon as political liberalisation occurred. It stimulated rapid growth of the informal economy over the years. According to estimates of the World Bank, the size of the informal economy in Ukraine was about 14% of official GDP in 1989 and over 90% of official GDP in 1994.

Generally, the informal economy encompasses any legal and illegal activities that generate income for individuals and companies and that income is not reported to the tax authorities. In transitional economies, illegal activities are not necessarily criminal activities but cases where individuals and companies are able either to charge for services, which are expected to be free of charge (business registration, health care, education, etc.), or to charge a higher price for goods and services which are subject to a regulated (fixed) price. Thus, at the very beginning enlargement of the informal economy was a sort of natural response of economic agents to instability and inefficiencies associated with administrative and transitional economies. For many individuals income generated within the informal economy softened the shocks of price liberalisation and hyperinflation in Ukraine.

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19 In 1992, the average price of imported oil increased by 113 times and the average price of imported natural gas increased by 20 times compared to 1991. In 1993, the average price of imported oil increased by 2 times (and reached 76% of the world market price) and the average price of imported natural gas increased by 4 times (and reached 52% of the world market price) compared to 1992. And, eventually, in 1994 Ukraine was forced to pay 15.5% of GDP (compared with 2.5% in 1990) for the import of energy.
20 According to estimates, 25% of Ukrainian companies were involved in military production.
21 Officially, privatisation in Ukraine started in 1992 but very little was really done until 1994. Approximately 30% of the targets for 1994 were accomplished. The speed of privatisation increased in 1995–96. However, in Q2 1998 about 22% of large and mid-sized industrial enterprises which made over 34% of sector output, were still public companies. Also, central and local governments remained large shareholders in many privatised enterprises and these businesses might not be able to make independent business decisions.
22 The following can be regarded as administrative restrictions: control over costs and profit margins, control over wholesale (prior to Q2 1992 plus Q4 1993 – Q3 1994 period) and retail (prior Q3 1992 plus Q4 1993 – Q4 1994 period) prices, allocation distortions (prior Q2 1992 plus Q4 1993 – Q3 1994 period), export restrictions (prior Q3 1994), mandatory sale of foreign currency revenues at pre-established official exchange rate and other foreign exchange restrictions (prior Q1 1992 plus Q4 1993 – Q2 1994 period).
23 In addition, high inflation complicates business records, and it makes tax evasion less expensive.
24 According to estimates, the average value of agricultural output produced by families in urban areas for private consumption purposes makes up 15–18% of total consumption of these families.
25 According to estimates of Ukrainian tax authorities, the major sectors of the informal economy are the energy sector, financial sector, smuggling, production and sale of goods subject to excise taxes, video and show business, agriculture and external trade.
Growth of the informal economy impairs the effectiveness of the macroeconomic (fiscal and monetary) policy of the Ukrainian government and threatens the legal system of Ukraine as well. Moreover, most economic agents operating within the informal economy are focused on short-term goals only, long-term investments are absent or negligible, and growth of the informal economy is very much related to the addition of new participants. In addition to taxes shifted by economic agents in the formal economy to economic agents in the informal economy, there are many other costs (labour and financial) associated with business within the informal economy. All other things being equal, costs of business (including costs of capital) in the informal economy are higher (at least at the margin) than costs of business in a liberalised formal economy. It means that the informal economy is economically less effective than a liberalised formal economy and generally, society will benefit more if the informal economy is brought to the light.

**Trend 2: Significant proportions of barter trade and the growth of arrears**

Barter operations, breach of contracts (infringement of settlements) and accumulation of debt to employees, suppliers and tax authorities can be regarded as a distorted form of borrowing or even capital outflow from the public to private sector (and also abroad). The share of barter operations was over 35% of GDP in 1994 and more than 40% of GDP in 1997–98. Indeed, barter operations could never attain such a magnitude if there were no ‘incentives’ to conduct these operations. Perhaps, in many cases enterprises were compelled to accept barter operations and infringement of settlements in order to avoid bankruptcy at that period.

It seems that in 1992–95 a reason for the extensive use of barter operations (except for deliberate transactions) was the aspiration of managers of public enterprises to preserve the known structure of prices and perceived real value of output in a high inflation environment. Reduction in output combined with large fixed costs of enterprises, administrative control over output prices, and an imperfect system of taxation did not allow public enterprises to sell their products at prices, which, on one side, would allow enterprises to receive profit and to preserve real value of their capital, and, on another side, would not change the existing structure of prices. Therefore, barter operations were considered advantageous as far as they helped to maintain the structure of prices and perceived real value of output. Expansion of barter-like activities in FSU countries was also associated with the intention of USSR-based enterprises to maintain business links even in the absence of institutes and instruments that would regulate foreign trade and guarantee the protection of domestic producers.

Barter operations were a tool of product promotion for many public enterprises. Obsolete technology and quality standards, large fixed costs associated with extensive development and maintenance of social infrastructure depressed profit margins and required price adjustments (in money terms) for domestic products. With administrative control over profit margins and increase in costs, reduction of demand in the domestic market and absence of direct business links with foreign customers depressed profit margins and forced enterprises to seek any opportunity to sell their products, even at the expense of a mutual reduction in the quoted price (usually, at the expense of taxes, profit margin and/or depreciation expenses and some other costs) in barter operations.

There were also other reasons/incentives to conduct barter operations in Ukraine in 1992–98:

- controls over prices and administrative allocation of energy, water, timber and some other resources in the public sector were removed very slowly in 1992–98 (and some prices were still under administrative control in 1998);
- very restrictive foreign exchange regulation made non-barter transactions for Ukrainian exporters unprofitable in 1991–95;

27 It is estimated that Ukrainian producers lose from 20% (steel) to 30% (grain) of their revenues in barter trade.
28 Many barter operations were more than simple trade between two parties. Instead they required a third party or intermediaries to be involved in that trade as pro-brokers or pro-dealers, who were usually entitled to 10% (or even higher) commission.
29 There was export duty with an effective rate of up to 40% of export revenues in 1992, a multiple exchange rate system (prior Q3 1992) and 100% of export revenues must be sold to the state at the official rate (prior to March
many domestic producers considered the US dollar exchange rate as a benchmark in a high inflation environment and they used barter transactions as a rudimentary hedging tool for foreign exchange risks, because Ukrainian authorities did not develop a good foreign exchange rates strategy in 1992–96;

primitive commercial law and a weak legal system allowed Ukrainian companies to accumulate debt to employees, suppliers and tax authorities as a result of barter trade at low risk of bankruptcy;

many managers obviously require more experience in domestic and foreign trade, and feel restrained by significant stock of inventories, accounts receivable and payable, low or no cash available, and low or no bank finance;

a ‘cash’ based tax system made barter transactions a cornerstone in tax evasion.

At the beginning of 1997, Ukrainian companies were involved in barter trade with 78 countries. The rapid growth of barter operations is a unique feature of transition in FSU countries, because other Soviet Bloc countries did not experience any similar growth of barter operations in transition to the market economy. There was a number of frequently traded commodities on the export side (ferrous metals, ores, sugar, rubber) and import side (oil & other fuels, machinery, rubber), but the scale of barter operations in terms of share in export or import activities and trade partners (countries) was not identical. The share of barter operations in import, for example, was smaller than in export. And in terms of trade partners (countries) the share of barter operations in trade with CEE and FSU countries was bigger than share of barter operations in trade with American and Asian countries. In January-September 1998 over 28% of trade between Ukraine and Belarus, 18.4% of trade between Ukraine and Slovakia (13% in 1995), 13.6% of trade between Ukraine and Hungary, 11.5% of trade between Ukraine and Poland (17% in 1995) and about 10% of trade between Ukraine and Russia (25% in 1997) took the form of barter operations.

Liberalisation of the foreign exchange market and stabilisation of the financial system made non-barter export activities more profitable for enterprises and, consequently, at some point it reduced the number of barter operations in foreign trade and stimulated the growth of barter-like activities in domestic trade. In 1997, the size of barter operations in agriculture tripled Barter operations made up 48–51% of all business operations in the energy sector, 49% in chemical and oil-based chemical industry and 47% in engineering. About 60% of enterprises are involved in barter-like activities and some of them conduct over 75% of their business operations in the form of barter operations. Barter transactions even took place in public institutions, which are supposed to be entirely financed by the government, when government financing was insufficient.

Barter-like activities were used to withdrawn financial resources from the public sector (no business entity would be engaged in these activities without clear profit perspectives). Extensive use of barter operations in domestic and foreign trade led to the emergence of restrictions.

which substantially deviated from the market one, in Ukraine. In March 1993 – August 1993, 50% of export revenues had to be sold to the state at Ukrainian Interbank Foreign Exchange (UIFE) rate. In August 1993 – October 1994 a multiple exchange rate system was operated and 50% of export revenues had to be sold to the state at the official rate, which substantially deviated from the market one. Additionally, in November 1993, 10% tax was levied on the export revenues of Ukrainian exporters. Since October 1994, 30% of export revenues had to be sold to the state at the official rate, 10% of export revenues had to be sold to the NBU at auction rate. There were no foreign exchange restrictions in 1996–98. Elimination of foreign exchange restrictions led to the contraction of barter operations in export activities. For instance, in 1995 enterprises were required to sell 50% of export revenues to NBU, and barter operations made up 33% of Ukrainian export and 27% of Ukrainian import. In 1996 and 1997 there were no foreign exchange restrictions, and barter operations made up 23% and 14% of Ukrainian export and 18% and 13% of Ukrainian import, respectively.

Historically, the Russian Empire and the USSR had less appropriate time for development of a pure market economy than most European countries.

Barter operations were rarely used in trade between Ukraine and Western European countries. For instance, only 2.5% of Ukrainian export to Germany took the form of barter trade in January–September 1998.

Only 1% of trade between Ukraine and China took the form of barter trade at the beginning of 1997.
vicious circle: ‘barter operations’ – shortage of cash – infringement of settlements; shortage of cash – barter operations’, reduction of tax revenues and increase in tax arrears. The expansion of a shadow economy and very slow changes in the structure of prices, which were inherited from the administrative economy resulted in a hyperinflationary environment. Barter operations made markets non-transparent and distorted competition (some taxes were not paid and commodity prices were not sensitive to foreign exchange rate fluctuations). Barter operations further promoted isolation of domestic producers from the financial system in terms of settlements and bank finance and even now, the situation in the market of goods and services does not depend very much on interest rates. Nominal interest rates remain rather high due to the large risks associated with barter operations and the inability of financial institutions to assess the liquidity and credibility of enterprises and/or projects if some operations do not have an accurate monetary value.

Barter operations must be regarded as a serious obstacle to the development of a true market type economy in Ukraine and anywhere else. The introduction of ‘accruals’ basis (instead of ‘cash’ basis or mix of ‘accruals’ and ‘cash’ basis) in corporate accounting for the calculation of revenues, costs, net income (profit), and tax liabilities (corporate income tax, VAT, excises and personal income tax) of businesses; de-monopolisation of public and private enterprises; conversion of arrears into conventional long-term debt instruments and repudiation of any mutual reckoning of obligations between government (associated with acquisition of goods and services) and enterprises; restructuring, reorganisation or liquidation of insolvent enterprises could significantly reduce barter operations and resolve the problem of settlements.

Trend 3: Deficit and unfavourable structure of balance of payments

In the 1990s, foreign trade was an important factor of Ukrainian economic performance. In 1996–98, exports/imports from/to Ukraine made on average 50–60% of its GDP (see Charts 4 and 5). However, export per capita was low – about 270 US dollars only (compared to 1,000 US dollars in the Slovak Republic). Nominal exports reflected changes in the nominal GDP whereas nominal imports were quite steady (i.e., the correlation between exports and nominal GDP is stronger than the correlation between imports and nominal GDP) due to a high and stable demand for energy products, machinery and some other industrial goods. A substantial part of Ukrainian foreign trade was associated with (1) export of industrial and agricultural raw materials and semi-finished goods, undervalued industrial and consumer goods, military weapons and by-products, agricultural products, tourism and transportation (transit) services; (2) import of energy, machinery, vehicles, and consumer goods produced

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34 As far as companies were allowed to use the cash method in the calculation of revenues, costs and profits (losses), barter transactions were often used to escape taxes such as corporate income tax, VAT, excises and personal income tax. In 1997, tax authorities discovered that 100 top tax debtors (companies) conducted on average 38% of their business transactions in the form of barter transactions. Gradual substitution of regular trade (for domestic currency) by rare and large barter operations had “frozen” a substantial part of the company’s assets in the form of inventory.

35 In addition to the extensive use of barter operations, unexpected liberalisation of prices, hyperinflation, severe penalties, neglect of bankruptcy legislation, weak corporate financial management and lack of incentives for corporate restructuring all caused a shortage of cash and infringement of settlements in the public sector.

36 In Q2 1994 and Q2 1995, an increase in arrears was equal to 13.68% and 26.42% of GDP, respectively. According to research financed by TACIS in 1996, 84% of arrears were due to manufacturing, agriculture and coal industry; 74% of arrears were due to the energy sector for supply of oil products, natural gas & electricity; 75% of arrears were due to suppliers, 11% to tax authorities, 5% to employees, 4% to foreigners, 2% to banks.

37 In 1996–97, tax arrears jumped from 1.4 to 2.3 bn UAH (in addition, written-off and restructured tax liabilities were about 5 bn UAH in 1997). In January-March 1998 tax arrears increased by 2.4 times and they were the fastest growing component of total arrears.

38 In 1996, commodity prices in the coal industry, chemical & oil-based chemical industry, construction and some food industries showed no or very low correlation with foreign exchange rate movements.

39 Barter transactions.

40 About 6.2 bn UAH and 7.2 bn UAH of tax liabilities were mutually reckoned in 1996 and 1997, respectively.

41 At the end of the 80s, Ukraine used 6 times more oil per GDP equivalent unit than Western Europe, and it imported more than 50% of required energy.

42 According to estimates, export of weapons made up 5–10% of Ukrainian exports in 1992–96.
by leading multinational companies; (3) re-export and re-import operations related to production (processing) of consumer goods in Ukraine or abroad.

In 1997 export of ferrous metals (39.3%), chemicals (10.9%), machinery and equipment (9.1%), ores & coal (8.3%), sugar (2.5%) made over 70% of Ukrainian export of goods. At the same time import of oil, gas & coal (45.4%), machinery and equipment (15.6%), chemicals (6.9%), transport vehicles (5.28%) made up over 70% of Ukrainian import of goods. Large imports of energy products, machinery and some other industrial goods combined with inefficient import/export tariffs caused a negative balance of trade in Ukraine in 1992–98 (see Charts 6, 7 and 8).

Ukrainian businesses were used to having very close business links with CEE and FSU companies, especially with Russia. In 1995, for instance, Ukraine was the biggest foreign supplier of sugar, ferrous metals, drinks, and vehicles, the second biggest foreign supplier of meat and the third biggest foreign supplier of paper, plastic and oil products to Russia. Negative changes in foreign trade with CEE and FSU countries seriously affected Ukrainian foreign trade and, hence, general economic performance in 1990s. Deterioration of business links and high transaction costs caused contraction of old markets and growth of energy prices forced Ukrainian businesses to look around for new markets and new partners.

While there were few changes in the structure of export/import of goods in 1995–97, the growth of experience in international trade, studies of domestic and foreign markets, development of business links with domestic and foreign producers and traders in 1994–97 led to some positive changes in the structure of foreign trade in terms of trade partners and proportions between export/import of goods, services and capital. In 1997, for example, Ukraine was already involved in trade with more than 150 countries (major partners are Russia, China, Turkey, USA, Germany, and Belarus). Trade with non-FSU countries grew faster than trade with FSU countries, export of services grew faster than export of goods and there must be further positive changes if transaction costs are low and a proper institutional infrastructure – trade credits, reliable payment systems, insurance, etc. – is in place. To enter and maintain positions in new markets, Ukrainian products must be sufficiently competitive in terms of their technical and quality parameters, and also services associated with normal trade, such as insurance, reliable delivery, after-sales services, export credits and so forth.

The experience of Ukraine and many other FSU countries shows that from chronological point of view export/import of goods and services precedes an inflow/outflow of capital and labour in/from the country because of administrative and legal barriers (see Chart 9). Major foreign investments come to Ukraine from the USA (18.6%), the Netherlands (10.4%), Germany (9%), the United Kingdom (7.3%), Russia (7.3%), Cyprus (6.1%), and Liechtenstein (6%). At the beginning of 1998 20.6% foreign direct investments were injected to food industry, 16.4% – in wholesale and retail trade, 8.5% – in financial sector, 8.2% – in engineering, 6.9% in chemical and oil-based chemical industry, 4.4% – in construction. On other side reported Ukrainian investments abroad were channelled to

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43 In 1992–95, Ukraine was forced to establish quantitative export restrictions (especially, for coal, electricity, oil, natural gas, ore, metals, steel, chemicals, fertilisers, timber, grain, sugar, etc.) since many domestic producers were subsidised by the state. In 1993–94, 40–50% of Ukrainian export was covered by quantitative export restrictions. Also export tariffs were higher than import tariffs in Ukraine in 1991–93.

44 High transaction costs are associated with “cumbersome and slow (and often corrupt) customs procedures, some high tariffs, poor export insurance and export credit guarantee facilities, slow and costly financial transactions, unreliable transport services, and weak legal arrangements to protect and enforce business contracts” (see Hare, CERT 96/19).

45 For instance, in 1995 exports of ferrous metals (36.2%), chemicals (9.7%), machinery and equipment (11.8%) amounted to almost 58% of the Ukrainian exports of goods and imports of oil, gas & coal amounted to 55.2% of the Ukrainian import of goods.

46 About 250 million USD come from Cyprus and Liechtenstein. These so-called “foreign” direct investments presumably represent re-investment of Ukrainian capital taken abroad legally and illegally. Unfortunately, this re-investment ratio is very low (1.5–2.5%).

47 For the CEE countries, foreign direct investment (FDI) has proved to be a useful source both of technology and management expertise, and it has also facilitated access to Western markets - much FDI has contributed to the
Russia (44.8 million USD or 33.5% of total Ukrainian investments abroad), Panama (43 million USD or 32%), Vietnam (22.8 million USD or 17%), and Switzerland (7.4 million USD or 5.5%).

**Trend 4: Immense tax evasion and huge budget deficit**

Poor economic performance and large government expenditures (up to 45% of nominal GDP in Q3 1997) made the tax burden oppressive for many corporate and individual taxpayers in Ukraine (see Charts 10 and 11). The tax burden was especially heavy for businesses and individuals, which have no access to tax privileges and benefits. The heavy tax burden and undeveloped tax legislation stimulated growth of tax arrears and expansion of tax avoidance/evasion activities. Poor economic performance and tax avoidance/evasion activities reduced the real amount of public revenue (first of all, tax revenue) and shifted the tax burden towards honest taxpayers.

In the 1990s, tax evasion was especially significant in the energy and financial sectors. In 1996, tax evasion activities were discovered at three out of four inspected enterprises and organisations subordinated to the Ministry of Engineering and the Ministry of Conversion, and at two out of three enterprises subordinated to the Ministry of Transport and the State Committee on Food Industry. In 1997, the Ukrainian tax authorities spotted 25,900 business entities established for tax evasion purposes. 12,300 individuals faced charges of tax offences in 1996 and 9,500 individuals faced similar charges in 1997. In 1998, the tax authorities collected 1 bn UAH as anti-evasion initiatives were undertaken.

In 1991–97, a reduction in the real amount of tax revenue caused by poor economic performance and tax avoidance/evasion was combined with forceful political pressure from the agricultural lobby and industrialists, to encourage financial support from the government. The combination of tax losses and financial subsidies produced large public budget deficits – up to 20% of GDP in Q3 1994 (see Chart 12). Unfortunately, the Ukrainian government had no regular access to conventional non-inflationary sources of domestic and foreign funds like loan agreements or placement of government bonds with the private sector in 1992–98 (see Charts 13 and 14), and public budget deficits were often financed by increases in money supply – up to 40–200% for M0 and 44–229% for M2 quarterly (see Chart 15).

Increases in money supply often took the form of NBU loans to the public sector and growth of public sector debt to the NBU was especially strong in 1992–95 and 1997–98 (see Charts 14 and 16). Large increases in the nominal money supply, combined with administrative control over prices in 1991–92 almost instantly inflated the real money supply and the money supply/GDP ratio reached 65% for M0 and 100% for M2 in Q4 1992 (see Chart 17). Rapid growth of the money supply (caused by the public budget deficit) and the weak financial sector increased inflation rates in Ukraine. The average monthly inflation rate was 66% in Q4 1993 (Consumer price index).

On other hand, financial subsidies to the public sector often generate deceptive budget constraints for public companies and individuals. Unclear (soft) budget constraints influence corporate and personal consumption/saving decisions, slow down enterprise reform and restructuring, and hamper economic transformations. Large government expenditures can be financed either by taxes or public debt issues. New (or higher) taxes or public debt issues reduce the financial resources of non-subsidised companies and individuals, and financial growth of manufacturing exports to the EU and other developed market economies by the CEE countries (Hare/CERT 96/19).

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48 Over 50 million USD were invested in the economies of Panama and Switzerland. These so-called direct investments abroad represent legal outflows of Ukrainian capital made for tax avoidance purposes only.
49 Share of tax revenues in total government revenues was about 75% in 1997.
50 In Q1 1996 – Q2 1997 tax arrears increased by 3 times.
51 In 1992–98, the share of government expenditure in GDP reached 45–60% (annual figures) and 55–80% (quarterly figures).
institutions. In most cases, it has a negative effect on the economic growth of the nation. Therefore, it is very important to get public expenditure (as a certain proportion of GDP) under control and to balance the public budget in order to promote economic growth.

Trend 5: Massive changes in the structure of prices combined with high inflation/unemployment

Transition towards a market economy requires significant changes in the structure and level of prices (which may be guided or may not be guided by the government). Neither the Soviet Union nor Ukrainian governments were ready to carry out radical reforms and to accept market prices, foreign exchange and interest rates at the very beginning of transition. Hypothetically, conversion of accrued public debt (i.e., accrued direct borrowings from the financial system) into conventional market instruments and the liberalisation of the foreign exchange market before liberalisation of domestic markets (in terms of prices and interest rates) could make pro-market reforms less detrimental. Unfortunately, governments did not have or, at least, did not implement any sound economic strategy for the transitional period in the USSR and Ukraine. Instead, a policy of administrative price adjustments and rigid foreign exchange control was chosen.

Administrative price adjustments change the level of prices on selected products but they do not always improve the structure of prices. And as far as administrative prices may deviate substantially from market prices, many enterprises receive distorted signals and work inefficiently. Therefore, policies of administrative price adjustments and public enterprise reform do not work well together. Moreover, administrative price adjustments provide the government with additional revenues (including turnover tax and profit tax revenues) and, hence, allow it to maintain the same size of public sector operations (i.e., financial support to industries, military programmes and generous social benefits). And, eventually, it may create additional economic inefficiencies and distortions.

In Ukraine, price liberalisation was officially announced in January 1992 and average monthly inflation rates instantly jumped to 75% (for consumer prices) and 133% (for industrial prices) in Q1 1992. However, administrative price control over most important products (energy, utilities, transportation, etc.) was still maintained. Further increases in administratively regulated prices on energy, transportation, public utilities and housing, etc. (especially high in 1993) were combined with rapid growth of money supply and shortly after hyperinflation occurred (see Charts 18 and 19).

Administrative control over prices for many products was slowly removed in 1992–95. In 1996–98, for instance, administrative prices cover about 10% of products and the most important products are basic food and services such as public housing utilities and transportation. However, administrative control over prices will be a source of inflation (at consumer price level) until the government pays the difference between industrial and consumer prices to suppliers (see Chart 20). Another potential source of inflation is the public sector arrears if government authorities opt to pay off this part of public debt increasing money supply, as occurred in Q2–Q3 1997 (see Chart 21). And, finally, domestic prices can be seriously affected by contraction/expansion of foreign trade and changes in foreign exchange rates caused by external shocks (such as the aggravation of the Russian economic crisis in summer 1998).

Economic transformation also requires structural and non-structural adjustments in the labour market. The initial reduction in employment was especially large (about 20%) in mining, energy and other heavy industries affected by the disintegration of the USSR (however, the reduction in employment was less than the reduction in real GDP). The number of registered unemployed persons increased by 31.5 times in the period Q1 1992 – Q1 1998.

52 In 1996–98, the population was supposed to pay about 60% of public housing costs.
53 Research studies from ILO-CEET show that almost 40% of Ukrainian companies had surplus labour force at the beginning of 1994 (especially, in the chemical industry, energy sector, engineering, and light industry).
Unemployment in accordance with ILO classification was 8.9% in October 1998. About 50% of registered unemployed persons were young people between 18–30 years old and 75% of registered unemployed persons were women.\(^{54}\)

Total unemployment was high – about 5–14% in 1995 and unemployment often took hidden forms like non-paid vacations and/or reduction of working time (see Chart 22). In March 1995, for instance, over 15% of employees took non-paid vacation (which can be for several days or for several months). This phenomenon can be explained by (1) large lay-off (redundancy) allowance (equivalent to quarterly wage or salary); (2) low ratio between unemployment benefits and average labour income (18.4% at the end of 1995); (3) perception that social status of registered employee is better than status of registered unemployed person (in terms of access to some social benefits and opportunities for future employment); other considerations (for example, amount of retirement benefits).

**Trend 6: Polarisation of personal wealth and low purchase power of most Ukrainian population**

Some polarisation of personal wealth and consumption caused by low income (especially in US dollars terms) and/or limited supply of goods and services existed in the USSR and, hence, in Ukraine before transformation. However, polarisation was mitigated by total (mandatory) employment, generous social benefits (health care, education, childcare, etc.), home, food, transport and other subsidies. A high dependence on labour income and employment benefits combined with a relatively small ratio between minimum and maximum labour income (about one to ten) was another distinctive feature of the administrative economy.

Private sector development in the 1980–90s greatly added to the polarisation of personal wealth and consumption in the USSR and Ukraine. Also, there was a decline in real labour income and a reduction in labour income/total income ratio\(^{55}\) (due to structural and non-structural changes in labour demand and high inflation), contraction of real savings (due to high inflation) and real amount of social transfers (due to budget deficit and high inflation). It is estimated that about 30% of Ukrainian households lived in poverty with personal expenditures less than 300 USD per capita per annum and less than 4% of Ukrainian households were relatively rich and had personal expenditures over 1,600 USD per capita per annum in 1995.\(^{56}\)

Slow price liberalisation combined with administrative price adjustments and tremendous currency devaluation reduced the average registered real consumption by 61% in 1992–97 and led to a high concentration of personal incomes around the poverty borderline. According to responses, for instance, the proportion of poor population was 47% in 1994 and 62% in 1997, whereas the proportion of rich Ukrainians did not change from 0.2% in 1994 and 1997. There are also differences caused by region (polarisation of income and consumption is higher, for example, in Eastern Ukraine), family structure, age, sex, and education.\(^{57}\)

**Trend 7: Small proportions of domestic saving/investment, low real interest rates**

Artificially low prices and the short supply of consumer goods and services allowed relatively high proportions of real corporate and personal savings to be maintained in the

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\(^{54}\) Also, in Q4 1995 there was a complete reverse change in the Unemployment/Vacancies Ratio from 0.77 in Q3 1995 to 1.47 in Q4 1995.

\(^{55}\) The labour income/total income ratio decreased from 71% in 1990 to 49% in 1993.

\(^{56}\) In 1995, average proportions of food, non-food and services expenditures in household budgets were 54%, 25% and 21%, respectively. However, proportions of food and non-food expenditures in low-income families were 83.5% and 16.5%, respectively.

\(^{57}\) However, the difference in income and consumption caused by education is not so great – higher education increases average personal income by 85% (contrasted with 200% and more in industrially developed countries) in comparison with primary education.
In Q2 1992, for instance, the share of personal savings in reported personal income reached 31%. Significant changes in the structure of prices and extremely high inflation halved real incomes and consumption and wiped out 75% of real corporate and personal bank deposits (which, of course, represented a substantial portion of corporate and personal wealth) when inflationary tax accumulated in the financial system at the end of 1980s was shifted to individuals and companies at the end of 1994 (see Charts 23 and 24).

In addition to the very sharp decline in the Saving/Registered personal income ratio (from 1/3 in Q2 1992 to 1/15 in Q3 1994), there were serious negative changes in the structure of savings. The significant portion of personal savings took the form of foreign exchange bank deposits. For instance, the foreign exchange bank deposits/Total bank deposits ratio was 11% in 1992 and 36% in 1997. Also, a large portion of real personal savings was disassociated from the Ukrainian financial system in 1992–94, and in Q4 1994 real personal savings exceeded real personal bank deposits (see Chart 25).

Open and hidden state subsidies to many public enterprises, the domination of administrative decisions in business operations, little use of market loans for business and personal purposes, the absence of fully-fledged money and capital markets, low and even negative real interest rates and adverse tax treatment for interest expenses at the beginning of the 1990s did not allow nominal and real interest rates to determine the level and structure of domestic investments in Ukraine. Certainly, there were other adverse political, economic and social phenomena, which restrained investment there, for example: (1) the unstable political situation and undeveloped macroeconomic strategy, (2) large social obligations of the state and recently privatised companies, (3) poor property rights and lack of guarantees for safety of investments, (4) relatively small domestic savings, a weak financial sector and limited access to foreign markets, (5) a distortionary tax policy, the significant size of the informal economy and inadequate control over illegal activities.

Inefficient privatisation based on the exchange of a significant number of shares of public companies for privatisation certificates and the transfer of ownership to employees, managers and clients of these companies, huge proportions of barter trade, a weak financial system and an unfavourable tax regime did not allow Ukrainian companies to attract a large proportion of savings into the formal economy. Furthermore, the small amount and inadequate structure of savings combined with poor regulation of the financial sector, the seasonal pattern of inflation, the weak infrastructure of domestic financial markets and limited access to international money and capital markets made rather attractive short-term speculative investments (including lending to governments) and long-term investments in real estate (offices and apartments) only. Thus, a large proportion of savings, which have been employed in the formal economy, was never used for the establishment, reorganisation or expansion of industrial or agricultural enterprises because long-term and short-term investments in production were less profitable than short-term investments in trade and financial operations.

Macroeconomic stabilisation, successful monetary reform and positive real interest rates stimulated a growth in real personal saving in Ukraine in 1995–98 (see Chart 26). The share of real personal saving in GDP has expanded as well (see Chart 27). In 1995–97, nominal personal deposits in Ukrainian banks increased by 6 times and even the real amount of personal deposits in Ukrainian banks slightly increased (see Charts 24 and 28). There was also significant growth of the Personal deposits/Total deposits ratio from 2.5% in Q1 1993 to

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58 In 1991, the average amount in a personal bank account in Ukraine was 163 USD, e.g., slightly less than the annual average personal income.
59 From survey responses, 36% of the population made no saving in 1994.
60 The real amount of personal saving may not be a very accurate figure because it is calculated as a difference between registered personal income and registered personal consumption, and of course, a certain amount of personal consumption is not registered in Ukraine at all.
61 At the beginning of 1998, foreign direct investments in Ukraine did not exceed 2 billion USD or less than 40 USD per capita.
62 For example, short-term loans made up over 95% of bank loans in 1993 and over 85% in 1996.
33% in Q4 1997 (see Chart 29). However, the amount of cash in the hands of the Ukrainian population is very large compared to bank deposits (see Charts 24 and 30).

Financial stability is fragile and investment prospects are unclear in Ukraine. But, hopefully, an increase in nominal and real savings, positive real interest rates, and a positive correlation between interest rates and bank deposits will improve the investment climate there. Plus there are some favourable factors which could promote investments in Ukraine such as (1) large potential demand for goods and services, (2) large stock of fertile land, (3) extensive deposits of some minerals, (4) qualified and relatively inexpensive labour force and (5) good geographical position and rather homogeneous transport infrastructure.

Trend 8: Weak financial markets and institutions

Financial markets are an integral part of a market economy. Capital and money markets carry out functions which are extremely important for economic development. These markets help to maintain the liquidity of short-term and long-term investments and to meet the needs of savers and investors. They offer financial intermediation for debt and equity instruments, ensuring greater competition amongst financial institutions and hence, greater efficiency. Diverse financial instruments and agreements allow money and capital markets to transform small savings into large amounts of investment which are necessary for both the private and public sectors. Regular trades in securities help to maintain liquidity of investments in the secondary market. Regular quotations of share and bond prices in capital markets balance a return on investments and reflect opportunities for the government and companies to attract additional capital in the future. Furthermore, efficient money and capital markets promote a reduction of risk through changes in the structure of investments, disclosure of reliable information about activities of companies/governments and reduction of costs and most efficient use of capital.

It is widely perceived that the government must regulate financial markets in order to protect the rights of investors, to keep trust in markets, to maintain discipline of contracts and to determine priorities of market development. Regulatory work of state authorities in financial markets must be focused on market structure and missions of its participants, legislative base and auspicious environment for transactions, liabilities of participants for activities, which can destroy market, infringe competition or adversely affect prices and allocation of financial resources. At macroeconomic level government shall encourage savings and investments to private sector and promote price stability, which is essential for steady real costs of savings. Inflation and inflation expectations will be inevitably reflected in interest rates and foreign exchange rates, and it might have material effect on saving and investment decisions of domestic and foreign market participants.

At the microeconomic level, any administrative control over interest rates should be removed to facilitate the efficient allocation of resources in financial markets. It would allow nominal interest rates to reflect expectations of market participants about future inflation through augmentation or reduction of the inflation premium. In the case of administrative control over interest rates, positive nominal interest rates might inaccurately reflect the true situation, and real rates for savings might even be negative. In this case, potential savings will not come to the market, and potential borrowers will have no access to them, e.g., real interest rates for loans are infinitely high.

In an administrative economy, public authorities allocated financial resources in accordance with the estimated demand for additional funds from industries and regions, and there was no need in financial markets where the flow of investments would depend on domestic and international interest rates and access to international capital markets. In Ukraine, financial markets started to develop in 1991 and they are expected to play an extremely important role in the transition from an administrative to a market type economy. Major instruments of

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63 According to estimates, the Ukrainian economy needs over 40 billion USD (or, approximately, 7-8 billion USD annually) in direct investments.
Ukrainian money market are bank loans and saving certificates, foreign exchange and Treasury bills. Major instruments of the Ukrainian capital market are corporate shares and bonds.

In 1994–98, the nominal amount of outstanding bank loans increased by 15 times and reached 17,020 mln UAH in Q2 1998. However, the real amount of outstanding bank loans in Q1 1998 was 20% less than the real amount of outstanding bank loans in Q1 1994 (because consumer price and industrial price indices increased by 18 times and 19 times, respectively). The structure of outstanding bank loans changed as time passed. In Q1 1998 bank loans to government made up more than 51% of outstanding bank loans (bank loans to industries and households – 48.6%) whereas in Q1 1994 bank loans to government were less than 37% of outstanding bank loans (bank loans to industries and households – 63.3%). The share of bank loans denominated in foreign exchange in total outstanding bank loans has also changed from 13.2% in Q1 1994 to 15.5% in Q1 1998 (perhaps, due to expansion of export/import activities).

Expansion of foreign trade, growth of external debt and inflow of foreign direct and indirect investments fuelled the foreign exchange market development in Ukraine and the volume of trade in US dollars increased by 3 times in 1994–97. The most frequently traded foreign currencies were American dollars, German marks and Russian rubles. Trade in US dollars was the biggest component of the foreign exchange market in Ukraine in 1993–98. For example, in July 1998 the volume of trade in American dollars was 273 mln USD whereas the volume of trade in German marks and Russian roubles was less than 8 mln DM and 35 mln RUR, respectively. Another key feature of the Ukrainian foreign exchange market was the high volatility (in terms of trade volume). However, fluctuations in foreign exchange rates were not so significant. In August 1995 and October 1997, for instance, the volume of trade in American dollars (355–390 mln USD) was at least two times bigger than the volume of trade in December 1995 and March 1997 (140–150 mln USD).

In mid 1998, the market for government securities was the second largest segment of the money market in Ukraine. Government securities increased liquidity and flexibility of the Ukrainian financial markets. In 1995–98, Ukrainian government securities were issued in the form of interest-bearing short-term securities and discount short-term securities – so-called internal state loan bonds (ISLBs). The Ukrainian government raised over 30.5 mln UAH in T-bills revenues in 1995, over 2.5 bn UAH in 1996, over 7.9 bn UAH in 1997 and over 6.9 bn UAH in January-August 1998. There was a significant increase in T-bill sales revenues in Q1–Q3 1997 due to the reduction of nominal bank interest rates, the relatively stable foreign exchange rate and the confidence of many foreign and domestic investors – 2.4 bn UAH in Q2 1997 compared to 1.14 bn UAH in Q4 1996. The high level of T-bills sales revenues in Q1–Q3 1997 was combined with a small amount of matured T-bills and net T-bills sales revenues reached a peak in that period – 1.15 bn UAH in Q3 1997 in comparison with 0.54 bn in Q4 1996. Also, the Ukrainian government was able to place eurobonds denominated in various foreign currencies.

The steady demand on Ukrainian T-bills had lowered yields and lengthened the maturity of T-bills. In 1997, the annual yield of T-bills sold by auctions reached 29.8% for T-bills with 90 days to maturity, 19.7% for T-bills with 6 months to maturity, 19.5% for T-bills with 9

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64 Over 80% of bank loans are short-term loans (1–3 months) because development of the bank loan market is restrained due to high interest rates, bad performance of industrial and agricultural sectors, large amount of bad loans (estimated that 50% of bank loans are doubtful loans and losses), and primitive bankruptcy law.
65 The growth of bank lending to government may well reflect a crowding-out effect in the Ukrainian economy.
66 Similarly, in April 1994 the volume of trade in American dollars was over 29 mln USD whereas the volume of trade in German marks and Russian roubles was less than 3 mln DM and 5 mln RUR (at NBU auctions).
67 However, the large size of this market (compared to other financial markets in Ukraine) made the Ukrainian financial sector very vulnerable to risks associated with public sector performance.
68 In 1995–98, some Ukrainian local authorities attempted to raise additional revenues with municipal securities. Municipal securities were issued in Kiev, Donetsk, Kharkov, Dnepropetrovsk, Lvov, Odessa, Cherkassy and the Republic of Crimea. Most municipal securities were issued to finance housing and local transport development.
months to maturity, 22.3–23.5% – for T-bills with 12 and 18 months to maturity. In May 1997, the average annual yield of T-bills was about 28% (compared to the average annual yield of 72% – 257% in 1995). The reduction in T-bills yields was combined with an increase in average maturity of T-bills. At the beginning of 1997, the average maturity of T-bills was 211 days and it had increased to 264 days (e.g., by 25.1%) in the middle of 1997. However, reduction of T-bill yields and increased risks (due to political instability, relatively large public budget deficit, depreciation of local currency and strange taxation of operations with T-bills) caused some outflow of foreign investors. Also annual yields of T-bills increased up to 40% in nominal terms (about 33% in real terms) in the primary market in October-December 1998.

In September 1998, more than 11% of Ukrainian T-bills were held by Merill Lynch International (739 mln UAH), ING Bank NV London (327 mln UAH) and Credit Suisse First Boston (104 mln UAH). On the other hand, Ukrainian banks (except for the National Bank of Ukraine) held about 19% of the outstanding Ukrainian T-bills. Large T-bills portfolios (about 9% of total stock) were held by Saving Bank (Sberbank) (345.6 mln UAH), Bank Aval (185.5 mln UAH), Bank Ukraine (171.6 mln UAH), Privatbank (149.9 mln UAH), and the Ukrainian Bank for Social Development (112.1 mln UAH). However, the largest stock of Ukrainian T-bills was retained by the National Bank of Ukraine (about 2.78 mln UAH or 65.4% of the total value of T-bills outstanding in April 1998).

In 1992–98, corporate shares were the largest group of non-government securities and the major segment of the capital market in Ukraine. For example, the share of corporate stock in non-government securities increased from 46.3% to 78.4% in 1993–97. And at the beginning of 1998, the total volume of corporate share market had reached 11,921.5 mln UAH (5.72% of shares were issued by banks and 93.96% of shares were issued by non-financial companies). The total volume of trade in corporate shares was about 380 mln UAH in 1997 (compared to 35 mln UAH in 1996). The volume of trade in over-the-counter markets increased from 3 mln UAH in 1996 to 350.5 mln UAH in 1997 and made up to 92% of the total volume of trade in regulated markets.

In 1992–98, there were numerous political, economic and legal constraints such as political instability, the complex macroeconomic situation, slow rate of privatisation, legally restricted property rights, poor market infrastructure, lack of market trade experience, and adverse corporate income taxation, on issue and trade in corporate securities, mortgages and government bonds, e.g., securities that usually form a large part of financial markets in developed countries. Besides uneven distribution of financial resources across the country, a lack of professional supervision, an underdeveloped custody system, inadequate law and restrictions imposed on banks and other financial institutions by public authorities have caused financial markets to be very small, non-transparent, vulnerable and fragmented in terms of instruments and regions.

Financial institutions are an integral part of the financial sector. In an administrative system, the financial system consists of only two types of financial institution – banks and insurance companies because 80–90% of financial resources was allocated directly. Both banks and insurance companies were monopolists in certain sectors or areas. At the beginning of 1990s

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69 Surprisingly, the spread between annual yield equivalent on T-bills with 3 months to maturity and 6–12 months to maturity was negative due to incorrect inflation estimates or poor planning of T-bill sales.
70 At the same time, the annual yield of T-bills, which have been acquired in the secondary market, reached 250% because many non-residents were ready to sell their stock of Ukrainian T-bills at a low price.
71 See also Nataliya Savchuk, “Macroeconomic Inference in the Bond Market Development in Ukraine: Emergence, Trends and Perspectives”, Final Report written under the TACIS ACE Fellowship contract number T95-4621-F (Napier University, Edinburgh).
72 In 1993, the share of private sector in total assets did not exceed 10%. In 1997, the Ukrainian government had over 25% of interest in 3,385 joint stock companies.
73 Central (Kiev region) and Eastern (Kharkov, Donetsk and Dnepropetrovsk regions) parts of Ukraine have a much more developed infrastructure of financial markets than other parts of Ukraine – slightly less than 64% of securities traders operated in the Kiev region (about 40%) and Eastern Ukraine (about 24%).
five largest Ukrainian banks (State Saving Bank, State Export/Import Bank, Industrial Investment Bank, Bank Ukraine and Ukrainian Bank for Social Development) were conducting almost 100% of banking operations. Even later (in 1994) the State Export/Import Bank conducted 60% of all foreign exchange transactions (compared to 80% in 1992), and 60% of personal bank deposits were kept at the State Savings Bank of Ukraine. Likewise, two insurance companies handled almost all types of insurance operations in Ukraine at the beginning of the 1990s and they still controlled the Ukrainian insurance market a few years later.

Transition to the market economy stimulated financial sector development and there were more than 400 banks and insurance companies in Ukraine at the beginning of 1998. In the 1990s, the high return on short-term investments in financial operations and low capital requirements were the main reasons for impetuous growth of banks and insurance companies and, initially, these banks and insurance companies were small ‘captive’ financial institutions. For instance, at the end of 1994, over 100 banks operated with capital below 100,000 USD and only 20 Ukrainian banks had capital over 500,000 USD. Almost all new banks and insurance companies have been established as joint stock companies, and their shareholders were state or reorganised state banks, public enterprises and individuals (managers and related persons).

The National Bank of Ukraine gradually increased bank capital requirements. In September 1998, there were already 36 banks with charter capital over 3 mln ECU. However, the Ukrainian banking sector remains relatively small (total assets do not exceed 30% of GDP) and highly concentrated (7 banks possess 76% of total assets) in 1998. Many Ukrainian banks have a relatively low share of liabilities (deposits) in total assets (somewhere between zero and 80%) and low proportions of foreign liabilities in total liabilities (less than 15%). From the very beginning shares of banks were perceived to be the most liquid financial instruments and very prominent investments in Ukraine, and it greatly accelerated privatisation in the financial sector. For example, about 65% of shareholders in the Industrial Investment Bank, 94% of shareholders in Bank Ukraine and 92% of shareholders in the Ukrainian Bank for Social Development were individuals at the end of 1994.

Similar trends can be observed in the insurance market. In 1990–98, the capital base of insurance companies has gradually increased and presently, the average charter capital in Ukrainian insurance companies is 140,000–150,000 ECU. Major segments of the insurance market were mandatory life and property insurance (22%) and non-mandatory property insurance (54%), and the insurance market itself was highly fragmented and concentrated. For example, the market share of the Oranta insurance company (former Ukrainian State Insurance Company) was slightly less than 20% and it controlled almost all mandatory insurance in Ukraine. Similarly, many ‘captive’ insurance companies had control over certain industries or sectors, and it made the insurance market very fragmented (in terms of sectors and instruments) and risky.

Economic disequilibrium and tax policy

Even brief analysis of Ukrainian economic performance and trends produces a notion that no economic equilibrium existed in the Ukrainian economy during the period 1990–98. Serious structural disproportions in production/trade and the obvious need for additional investments,
high profit margins on most durable consumer goods and some services, negative balance of foreign trade/payments, large public debt, high inflation rates, structural unemployment, and the small amount and unhealthy structure of savings/investments all reflect the absence of economic equilibrium in most segments of the Ukrainian economy.

Ukraine inherited economic disequilibrium from the USSR. In the administrative economy, artificial prices and direct allocation of goods and services led to permanent excess of aggregate demand over aggregate supply and huge distortions in their structure. It promoted, on one hand, a decrease in real money value, a deterioration of quality and/or the complete disappearance of many basic goods and services from the usual channels of distribution, and, on the other hand, it built up a large stock of inventories at existing enterprises, increased imports of goods and services, caused expansion of enterprises and even required the introduction of the coupon system (aimed to improve distribution of basic food products) alongside the vast deferred demand of enterprises and population.

Unlike many industrially developed economies, where market forces work towards economic equilibrium and prevent severe economic disequilibrium, the Ukrainian economy did not have these market forces at the very beginning of transition. Besides which, the development of market forces in Ukraine was restrained by large public sector, industrial and/or regional monopoly of some companies (including public companies, first of all), the vast size of the informal economy, the weak financial sector, imperfect tax, labour, land, bankruptcy and securities legislation and so on. Underdeveloped real estate markets in Ukraine particularly restrained the work of market forces.

Transitional economy can be considered as an unusual deviation from a market type economy and the economic situation in Ukraine in the 1990s can be described with an IS-LM-BP graphic model (Figure 1). IS, LM and BP curves in this model are rather steep reflecting a strong influence of administrative decisions and a weak correlation between changes in real interest rates and GDP in the Ukrainian economy. Point B, which reflects the place of the Ukrainian economy in the above model, must be located below the equilibrium position (point A) and somewhere in the area between the LM and BP curves. Moreover, in Panel (a) point B is located below axis Y because real interest rates were negative prior to mid 1996, and in Panel (b) it is located above axis Y because real interest rates were positive after mid 1996.

An absence of fair markets for land and mineral resources (commodities) in Ukraine did not allow determination of a fair price for land and mineral resources (commodities) and caused serious distortions of costs and prices for any other goods and services there.

In 1990, the aggregate deferred demand of the USSR population was about 200 billion roubles (or, approximately, 10–20 billion US dollars).

In Ukraine, most legal entities and individuals are allowed to use land, which is subject to administrative decisions. Thus, the market of residential and non-residential buildings is not a fair real estate market because legal property rights are limited.

In accordance with the definition of an IS-LM-BP model, all positions, where aggregate demand exceeds aggregate supply in the market for goods and services, are located below and to the left of the IS curve; all positions, where aggregate supply exceeds aggregate demand in the money market, are located over and to the left of the LM curve; all positions, where deficit of balance of payments exists, are located below and to the right of the BP curve. It means that positions, where deficit of balance of payments, an excess of aggregate supply over aggregate demand in the money market and an excess of aggregate demand over aggregate supply in the market for goods and services exist simultaneously, are located below the point of economic equilibrium in the area between the LM and BP curves.
Graphically, economic equilibrium can be reached in all markets simultaneously if point B will move upwards and to the right. By definition the move of point B upwards and to the right in IS-LM-BP model implies, on one side, reduction in real money supply and increase in real interest rates and, on the other side, a decline in real tax burden, increase in real capital inflow to the country and growth of real exports. Steady economic growth (an increase in real GDP) and economic equilibrium in Ukraine can be only reached if macroeconomic policy will target, on one side, reduction of money supply and increase in real interest rates, and on the other side, a decline in tax burden, increase in capital inflow to the country and growth of export of goods and services. Increases in real interest rates and strengthening of the Ukrainian currency may promote an inflow of foreign investments and restrain the growth of ‘cheap’ exports.

While some successful administrative decisions, price adjustments, fiscal or monetary policies could mitigate the negative consequences of economic disequilibrium, these measures alone would not improve the situation very much. International experience

82 Relaxation of the tax regime may also stimulate investments from abroad.
83 Obviously, long-term economic equilibrium can exist in theory only, but any country, by definition, will benefit economically and socially as long as its economy is close to equilibrium.
suggests that it is difficult to encourage economic growth and establish economic equilibrium without economic liberalisation. Moreover, economic equilibrium in transitional economies can be maintained if there are market forces – stable behavioural characteristics like marginal propensity to consume, marginal propensity to import, sensitivity of investments to real interest rates, sensitivity of money demand to the level of aggregate income, sensitivity of money demand to the changes in real interest rates, sensitivity of net capital inflow to the difference in internal and external real interest rates (capital mobility), sensitivity of exports and imports to internal and external price differences, dependence of unemployment level on aggregate income level, dependence of expected price changes on employment level and so forth – which help to maintain economic equilibrium when it is reached.

Theoretically, economic growth depends very much on the amount and structure of supply and demand for goods and services, which are produced and/or consumed within the country. The amount and structure of supply and demand for goods and services are reflected in the amount and proportions between industrial and personal consumption, between consumption and saving, between public and private sectors, between the formal and the informal economies. These proportions have material impact on amount, structure and sources of savings/investments and, hence, economic growth of the nation.

Departure from rigid central planning of prices and output, relaxation of international and domestic trade restrictions, development of private sector, privatisation of residential property and public enterprises improved the balance between supply and demand for goods and services. But even in the market type economy equilibrium between supply and demand for goods and services, which are produced and/or consumed within the country, cannot be established easy and instantly. It depends very much on amount and structure of savings/investments, proportions between public and private sectors, size of public budget deficit and so on. Therefore, government authorities may favour a macroeconomic policy that is focused on international trade and money market equilibrium.

Graphically, a move towards the equilibrium position in the money market and market of export/import of capital, goods and services shifts point B upwards and to the right. Reduction of inflation rate, increase in real interest rates, promotion of export activities and inflow of foreign investments can significantly improve the balance between supply and demand in foreign trade and money market. These measures promoted financial stabilisation and the reduction of the economic recession rate in Ukraine in 1995–98. However, financial stabilisation and economic recovery will never be sustainable without public sector reforms. IMF experts proclaim that many countries (including countries in transition) could probably strengthen their economic performance by reducing the shares of government expenditure and taxes in GDP.

Governmental monetary and fiscal policy (and, particularly, tax policy) can significantly influence economic recovery in Ukraine. In the market type economy, taxes influence the distribution of income and the allocation of resources and play an important role in stabilising the economy. Forms of taxation and the amount of tax burden make a direct impact on the amount and structure of consumption and saving, on the amount and structure of domestic and foreign investments, and on production and trade and so forth. In many countries, effective tax rates on income and expenditures have become so high that they affect resource allocation, discourage work and create other distortions in labour markets and in the economy more generally.

As governments try to gather more revenues, higher tax rates can reduce entrepreneurial initiative and encourage tax evasion, the growth of underground economic activity, and

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84 Foreign investments increase aggregate investments in economy and promote the growth of national wealth as far as they create new jobs, stimulate economic and social development and/or use of new technologies, increase output and improve quality of goods and services.

85 Types of taxes and amount of tax burden may also have an indirect impact on money supply because shortage of tax revenues will force the government to print additional money.
specially pleading by organised interest groups. Quasi-fiscal or off-budget involvement by governments in economic activity adversely affects economic incentives and growth in many countries as well. Furthermore, if one accepts that (1) in most cases the private sector of the economy is capable of utilising financial resources more efficiently than the public one; (2) withdrawal of financial resources from the private sector through tax payments can reduce rates of private sector economic development and, consequently, overall economic development; (3) a heavy tax burden has less favourable impact on the private sector of the economy, than a moderate tax burden does; the conclusion is logically straightforward – an unfavourable tax policy does constrain the economic growth of the country.

In Ukrainian history, there were many examples of the adverse impact of tax policy on the economic and social life of the country. For example, the heavy burden of land taxation and significant tax privileges granted to some groups of the population in the Russian Empire led to the conversion of private property on land to land leases and to serfdom (e.g., personal dependence of rural communities from landlords and monasteries). It slowed the economic growth of the nation for centuries. In 1993–98, high payroll taxes forced companies to report low labour compensation and/or to conduct business outside the formal economy.

The combined negative effect of taxation depends on the size and structure of the aggregate tax burden and encompasses economic phenomena like industrial and regional disproportions in the production of goods and services and/or significant and constant outflow of domestic investments and/or reduction in the amount and growth rates of foreign investments in the country and/or contraction of tax revenues and/or growth of the informal economy. And as far as taxation is the most progressive form of regular, stable and certain public revenues and many taxes can be neutral to the allocation of national resources, the reduction of the combined negative effect of taxation should be an ultimate goal of modern tax policy. In Ukraine the reduction of the combined negative effect of taxation can be achieved through the contraction of the informal economy and the liberalisation of tax rules.

Liberalisation of tax procedures must be based on new tax legislation and it must ensure (1) sufficient, stable and even tax revenues, and flexibility of the system (opportunity to change the size and/or terms of tax payments without considerable economic and social costs); (2) internal and external harmony for the given set of taxes; (3) political, economic and social stability of the tax system. Particularly, internal and external harmony for the given set of taxes requires (1) compliance of tax rules with the mission of tax; (2) economic and social neutrality of taxes; (3) minimal size of double taxation; (4) reasonable size of combined tax burden and certain degree of correlation between combined tax burden and rate of national economic development, including industrial and regional aspects of development. Political, economic and social stability requires (1) precise rules of tax jurisdiction of central and local authorities; (2) reasonable combination of various forms of taxation and opportunity to tax various economic phenomena; (3) transparency and fairness of taxation; (4) economic efficiency and reasonable costs of tax administration.

Nowadays many tax systems are based on value-added tax, personal and corporate income tax. Similar trends can be observed in Ukraine. Value-added tax, personal and corporate income tax revenues made up 43% of total government revenues in Ukraine in Q3 1998. Therefore, any tax reform, which is focused on the liberalisation of tax rules and reduction of the aggregate tax burden, will be associated with changes in value-added and income taxation.

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86 Before 1918, the Ukrainian territory was a part of the Russian Empire.
3. Income and value-added taxation: basic rules, advantages and disadvantages

3.1. History and general rules of personal income taxation

Personal income tax is a very popular form of direct taxation, widely adopted in the world in the 19th and 20th centuries. Assessment and collection of personal income tax generally assumes that any individual, who is liable to personal income tax, should be regarded as either resident or non-resident in the country for tax purposes. Usually, an individual is deemed resident of the country in the tax year if he/she is physically present in the country for 183 days of the year or longer and/or he/she shows a substantial presence in the country in the specified period.

Traditionally, personal income tax is levied on net income received (accrued) by residents elsewhere during the tax year. Also personal income tax is levied on net income received (accrued) by non-residents in the country concerned during the tax year. For personal income tax purposes, net income is gross income less related legitimate expenses. Gross personal income can be divided into four major categories: wages and salaries, business and professional income, investment income, gifts (as in Japan) and other income. Income tax liabilities are the product of tax rate(s) and taxable income, which is computed as total net income less allowable personal exemptions and deductions. In many cases, the product of tax rate(s) and taxable income reflects final personal income tax liabilities. In other cases, taxpayers can reduce their tax liabilities by certain amount(s) determined by personal income tax law (tax credits). Personal income tax should be paid directly to tax authorities or it can be withheld on behalf of tax authorities at the source of personal income.

3.2. Advantages and disadvantages of personal income taxation

Personal income is a good measure of personal power to consume and to save. Thus, a very important advantage of personal income tax is a very close link between personal power to consume/save and personal liabilities to support the state. Another advantage is the broad and relatively stable tax base, which can be adjusted to the personal circumstances of the taxpayer. However, personal income tax also has disadvantages such as (1) complex rules of tax assessment and rather large direct and indirect costs of state and taxpayers associated with assessment and settlement of tax liabilities; (2) high sensitivity of taxpayers to changes in personal income tax legislation and the negative impact of personal income tax on saving; (3) high costs of reforms in the personal income taxation area and the need for tax policy coordination between neighbouring countries due to income fluidity.

Complex rules of tax assessment are the most serious obstacle to the proper organisation of income tax. If the government aspires to improve the wealth of the nation through changes in lifestyle, traditions and habits of the population, it should not exploit the sensitivity of individuals to changes in personal income tax rules. Instead, the government should seek for other way(s) to improve the situation because actual economic and social costs associated with changes in personal income tax law can contrast considerably with expected ones.

Personal income tax is expected to raise additional revenues for the state and to promote income de-polarisation in the society. Therefore, this tax cannot be completely neutral to individual consumption/saving decisions. However, proper organisation of individual income tax can create minimum distortions in the lifestyle, traditions and habits of the population. These distortions are usually associated with unclear definition and inaccurate measurement of personal income and/or related expenditure, which affect the size of taxable personal

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87 Personal income tax was introduced in the UK in 1798, in Sweden in 1810, in Japan in 1887, in the Netherlands in 1892–93, in the USA (at federal level) in 1913, in France in 1914–17, in Australia (at federal level) in 1915, in Russia (1916–18), and in Germany (at federal level) in 1919–20.

88 Houses or any other kind of accommodation (like in Germany, Italy, New Zealand, etc.) can be an evidence of substantial presence in the country during the specified period of time.
income, and/or mismatching (in terms of timing) between personal income and expenditure in
determination of taxable personal income and/or an inappropriate relationship between
taxable income and income tax rate(s).

Clear definition and accurate measurement of personal income can help to avoid/lessen
possible distortions in employment and income pattern, structure of savings/investments and
some other areas. Usually, personal income is a combination of cash income and capital gains
(the so called Haig-Simons concept). In such a case, personal income shall be defined as an
accretion of personal wealth within the specified period in any form that makes it available
for acquisition of or for exchange for any tangible and intangible assets in the course of
consumption during the same period of time or in any other time in the future.

Personal income can be received (accrued) in various forms. Most conventional forms of
personal income are (1) wages, salaries, premiums and other forms of employment income;
(2) business and professional income; (3) regular and irregular investment income; (4) gifts,
gains, prizes, inheritance and other forms of irregular income; (5) other forms of income.
Nowadays it is not very difficult or costly to change the form of income. Therefore, personal
income tax legislation shall (1) give a very precise and complete definition of income, which
would adequately reflect personal ability to consume/save during the specific period of time,
and (2) establish the same rules of taxation (without any additional privileges) for all forms
of income. Otherwise, people can change the form of income and reduce personal income tax
liabilities.

Particularly, international experience in personal income taxation shows that a clear
description and accurate measurement of business, professional and investment income is an
important and very complex issue of personal income taxation. Individual businesses and
partnerships are usually small and medium-sized enterprises and this sector is given
considerable importance in a modern market economy due to its potential contribution to
innovation, flexibility and employment growth. Entrepreneurial incomes may be more
sensitive to the economic cycle and other business conditions and self-employed persons tend
to face greater individual year-to-year volatility in income. Moreover, capital and labour
income are combined in the small business sector in a way which may be difficult to
disentangle. Therefore, the tax treatment of business and professional income must account
for various expenses and possible losses and, at the same time, must reduce opportunities for
tax avoidance/evasion.

Cost of inventories, depreciation allowances and proportions between business and personal
consumption expenditures usually play a pivotal role in the accurate measurement of business
and professional income. Theoretically, the complete deduction of new investments, which
have been made within the specified period, from business revenue in the same period or true
economic depreciation systems help to avoid distortions in the nature and/or form of
business. In the absence of a market for second-hand equipment, the state is unable to
determine the true economic depreciation of assets for every entrepreneur. Besides true
economic depreciation can be very different for identical assets and very similar for different
assets if assets are used by different businesses.

As far as depreciation rates established by income tax law are arbitrary, they can influence
investment decisions. For example, very low rate(s) of depreciation allowances (or, similarly,
non-indexed rate(s) of depreciation allowances in high inflation environment) can stimulate
extensive use of obsolete machinery, equipment and technologies and more dynamic
development of:
• wholesale and retail trade instead of production and/or;
• small businesses to medium and large businesses and/or;
• enterprises, which produce inexpensive/traditional goods and use old (well-known)
technology compared to enterprises which produce more expensive and/or innovative
products and use advanced technology.
Cost of inventory determines proportions between the cost of goods sold and gross margin. Theoretically, the system of inventory accounting, which reflects the real (adjusted for inflation) value of inventory would not cause any distortions in the nature and/or form of business. Therefore, for personal income tax purposes replacement cost is probably the most appropriate basis for inventory valuation (a similar effect can be obtained if the LIFO system is practiced). On the other hand when inventories are priced on an historical cost basis, an entrepreneur might be induced to operate a ‘double accounting’ system and/or become involved in barter-like activities (especially, in times of high inflation).

In the assessment of business income, it is usually very difficult to determine accurate proportions between business and personal consumption expenditures. Certain expenditures can be associated with both business and personal consumption. For example, goods taken out of the business for personal consumption, services provided by the business to its owner(s) or partner(s), bank loans, travel and maintenance of personal property (which is used for business purposes), and medical insurance could simply be a part of personal consumption instead of business consumption. But the tax authorities might not be able to prove it. Besides there are expenditures which can be deducted from gross business income in accordance with personal income tax law and expenditures which cannot be deducted from gross business income, and in many cases it is impossible to find the correct proportions between deductible and non-deductible business expenditures (for instance, some advertisement and travel expenditures, business entertainment expenditures and so forth).

If personal income tax law disallows the deduction of any business expenditures from gross business income there will be a contraction of start-up capital and an infringement of economic efficiency (i.e. personal income tax will not be neutral to the allocation of resources within the economy). On the other hand, deduction of all business expenditures (perhaps, including some personal expenditures) from gross business income will establish different rules of taxation for business income and all other income. Different tax rules can infringe economic efficiency as well. Consequently, in most cases business expenses, which can be deducted from business income, are limited and these limits (imposed by personal income tax legislation) are inevitably arbitrary. These limits can be fair, appropriate for some entrepreneurs and unfair, non-appropriate for others. Hence, some distortions can occur and so far, there is no way to avoid some distortions in this area.

Taxation of personal investment income is an important and, perhaps, the most controversial issue in personal income taxation. Taxation of investment income makes personal income tax similar to capital tax. It might have a negative effect on amount and/or structure of savings/investments in the society. Furthermore, practical difficulties often arise when the correct amount and/or timing of investment income must be determined. In many countries personal investment income is taxed on a cash basis except for interest income in the USA and Canada, rental income in the UK and so on. Thus, personal investment income can be regular (interest, dividends, rent, royalty and similar items) and irregular (realised capital gains). Accurate assessment of regular investment income for income tax purposes is not very simple but it is a less difficult task than assessment of irregular investment income.

As far as only realised capital gains (instead of any capital gains) are considered as investment income, and the value of realised capital gains may reflect a value-added in more than one year, in many countries realised capital gains receive special treatment. This special treatment of realised capital gains usually makes them more attractive to many high income investors (because bigger exemptions and/or lower tax rates reduce progressiveness of personal income tax for those who receive a part of their income in the form of realised capital gains) and, consequently, it can distort investment decisions. Favourable treatment of realised capital gains makes investments in residential property more attractive in comparison with any other investments (as far as personal income from possession of a house – so-called

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89 It seems to be logical that tax considerations may play some role in big savings/investments. Obviously, small savers/investors have fewer incentives to change the form of savings/investments for tax reasons if tax savings are small.
'imputed rent' is not taxed by personal income tax in most countries, and mortgage interest is not included in taxable income). Also the ‘lock-in effect’ which makes exchange of assets less efficient may occur if an investor holds securities or any other assets because of special tax treatment of realised capital gains and despite of evidence that there are other investors who value them more.

Theoretically, it is possible to avoid/reduce economic distortions caused by special treatment of realised capital gains, if capital gains (losses) are taxed whether they are realised or not. However, in practice, taxation of realised and non-realised capital gains requires (1) well developed foreign exchange markets, securities and real estate and (2) free access to market quotations for both taxpayers and tax authorities. Nowadays in many industrial countries taxpayers and tax authorities have permanent access to market quotations for foreign exchange and most securities and, technically, annual assessment of realised and non-realised capital gains on these assets is not a very complex issue. In addition, taxation of realised and non-realised capital gains associated with foreign exchange and market securities will certainly create closer links between government revenues and financial market performance. It will force the state to regulate and to monitor financial markets in the most efficient way in order to suppress the speculative nature of financial markets. Consequently, these financial markets will better reflect economic realities.

Unfortunately, there are also non-market securities and other types of financial instruments, which are not priced regularly by the market. Similarly, modern real estate markets cannot provide taxpayers and tax authorities with reliable information on the market value of real estate investments on an annual basis. However, even approximate (and not very precise) appraisals of these investments (in terms of capital gains or losses) for personal income tax purposes might be better than the existing practice of taxation of realised capital gains (losses) or taxation of ‘imputed rent’ (as in Norway and Belgium) on residential real estate.

In addition to the difficulties faced by taxpayers and tax authorities in the assessment of business and investment income, there are many transactions which are neither measured in money terms nor registered by the market, such as the legal or illegal exchange of goods and services (including personal services). Moreover, countries with low income (per capita), heavy taxation, low tax culture, unclear commercial and tax legislation usually have a more favourable social and economic environment for non-registered transactions. High tax savings associated with non-registered transactions stimulate the growth of the informal economy and this usually has a very negative economic, social and political effect. Therefore, the government shall not encourage any transactions, which are neither measured in money terms nor registered by the market.

A clear description and accurate assessment of personal expenditures which affect the size of taxable income and proper matching of personal income and expenditures related to the same period could help to prevent potential distortions in employment pattern and lifestyle of the population. Many countries allow taxpayers to deduct from the aggregate amount of personal net income their tax-free allowance, pension contributions, medical costs, mortgage interest, local direct taxes, life insurance payments, childcare allowance, moving expenses, casualty losses (in case of fire, robbery and so on), educational costs, charitable contributions

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90 Consequently, taxpayers should be allowed to deduct all non-realised capital losses from their personal income. Taxation of realised and non-realised capital gains attributable to shares may also strengthen the pressure on managers to distribute earnings, especially, if the strategy of the company is not clear for its shareholders.
91 It will be much easier to tax realised and non-realised capital gains associated with investments in corporate shares, if the conduit system of corporate and personal income taxation is used, and shareholders have information about corporate income tax which was already paid on their portion of corporate taxable income.
92 The current practice of taxation of realised capital gains (losses) usually requires a separate count for capital gains (losses) and/or ‘carry-over’ provisions for any unused amount of capital losses and/or indexation of capital gains (losses) and/or life-time allowance for non-taxable capital gains and/or ‘rollover relief’ for capital gains attributable to the sale of principal residence and so forth.
93 Australia, Norway, the Netherlands and some other countries impose no limits on deduction of personal interest expenses.
and some other expenditures. Moreover, it seems to be a political intention to develop a list of deductions which determine a socially accepted (and, of course, politically accepted) size of personal tax-free income, to influence personal behaviour and to promote equal distribution of income and consumption among various groups of the population.

However, personal deductions can be a source of some economic distortions. Personal deductions reduce personal income tax base and any contraction of the tax base creates benefits for both poor and wealthy sections of the population. Moreover, tax savings associated with personal deductions increase as income grows (if progressive tax rates are applied). Contraction of taxable income associated with large personal deductions can eventually stimulate the growth of tax rates. Again, higher tax rates will negatively affect both the wealthy and poor population. So personal deductions make personal income taxation less equal and less efficient and, all other things being equal, they complicate the process of tax assessment/collection. Thus, instead of contraction of the personal income tax base, the state shall attempt to reduce poverty with the help of personal subsidies.

The abolition of most deductions (and at least deductions for mortgage interest, taxes and pension contributions) could reduce social and economic distortions (caused by personal income tax). However, in many countries where for decades the state has been accustomed to solving various economic and social problems via changes in personal income taxation, the abolition of personal deductions or any similar initiatives will not be an easy task. Alternatively, deductions from net personal income can be substituted by tax credits, where the amount of tax credit is a product of ‘socially acceptable expenditure’ and the basic rate of personal income tax. Tax credits, determined by the formula: Tax Credits = Expenditures x Basic (reduced) rate of personal income tax, help to maintain ‘vertical equity’ in personal income taxation and create less economic or social distortions.

Another source of distortions (caused by personal income tax) can be provisions which allow taxpayers to transfer a part of their personal expenditures (or part of their personal income) from one period to another or from one taxpayer to another. If personal income tax legislation grants the taxpayer a right to carry losses (including capital losses) back or forward for a number of years without any change in the nominal value of these losses, either the taxpayer (if losses are carried back) or tax authorities (if losses are carried forward) benefit. These tax benefits can be a source of some distortion. Similarly, if personal income tax liabilities depend on the type of tax base, the assessment and collection of personal income tax can distort the taxpayer’s behaviour and the effect can be far from expected.

3.3 History and general rules of corporate income taxation

Corporate income tax is a form of income taxation which became popular in most of the world only in the 20th century. The assessment and collection of corporate income tax generally assumes that any legal entity (company) which is liable to corporate income tax should be regarded as either resident or non-resident in the country concerned. Usually, a legal entity is a resident of the country concerned if it is registered there and/or its place of management is there and/or residents of the country control it in the specified period.

Traditionally, corporate income tax is levied on net income received (accrued) by residents elsewhere during the specified period. Also corporate income tax is levied on net income

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94 However, many countries reduced a number of deductions in favour of low tax rates or tax credits.
95 If the taxpayer is allowed to carry back any amount of losses, the nominal value of losses should be discounted in order to reflect the correct value of current losses in the past and, similarly, if the taxpayer is allowed to carry forward any amount of losses, the nominal value of losses should be compounded in order to reflect the correct value of current losses in the future. Thus, the state should be prepared to apply annual T-bill interest rates (as an indicator of alternative costs) for discounting or compounding of current losses.
96 In the USA, for instance, personal income tax rates depend on the amount and type of taxable income – income declared by single taxpayer, by joint taxpayers and head of household.
97 Corporate income tax was introduced in the Netherlands in 1918 (applied to distributed profits only), Germany (1920), France (1948).
received (accrued) by its permanent establishment in the country concerned during the specified period. For corporate income tax purposes, net income is gross income less business expenses and income related expenses (except for corporate income tax payments). Most conventional forms of corporate income are business income, investment income, and other income. Income tax liabilities are the product of tax rate(s) and taxable income, which is computed as total net income less an allowance for general corporate expenses. In many cases, the product of tax rate(s) and net taxable income reflects the final corporate income tax liabilities. In other cases, taxpayers can reduce their tax liabilities by certain amount(s) determined by corporate income tax law (tax credits). Corporate income tax should be paid directly to tax authorities or it can be withheld on behalf of tax authorities at the source of corporate income.

3.4 Advantages and disadvantages of corporate income taxation

In many countries corporate income tax plays an important role by being a stable source of public revenue. Corporate income taxation creates a good opportunity to tax returns on capital at the source of capital income (withholding function) and to reduce administrative costs of income taxation in comparison with personal income tax due to the smaller number of taxpayers and a reasonable variety of receipts. However, corporate income tax also has a very significant disadvantage. Corporate income tax discourages the use of capital (relative to labour) in the corporate sector. It increases the cost of capital in the corporate sector relative to the unincorporated sector and therefore it discourages production in the corporate sector relative to the unincorporated sector. Corporate income tax has a very strong influence on the business environment because it is intended to tax returns on capital but capital can leave the country and move internationally. Therefore, the introduction and operation of corporate income tax requires special care to ensure minimum distortions.

Corporate income tax can influence many corporate decisions such as debt/equity finance, business organisation, labour, investment decisions (in terms of type, amount, duration, region and timing of investments) and so forth. Taxable income for corporate income tax purposes is a mix of cash and accounting profits and it can be a source of serious economic distortions. Some distortions associated with the appraisal of corporate income can be similar to distortions which have been discussed above in the personal income tax section. In addition, interest payments are deductible expenses for corporate income tax purposes whereas return on equity is not deductible. This provides an incentive for companies to expand their debt finance relative to their equity finance, thereby encouraging a growth in the D/E ratio. Moreover, an original entrepreneur usually takes his return largely in the form of stock ownership. Thus the corporate income tax, which exempts interest payments, can be viewed effectively as a tax on entrepreneurs.

To avoid other distortions (associated with unclear distinctions between business and non-business expenses, capital and revenue expenses, etc.) standard rules must be applied. The standard rule for expenses to be deductible is that expenses have to be incurred for business purposes or in the production of income. Therefore, expenses that do not, by their nature, generate benefits for the business, fines and expenses incurred in contesting allegations of crime, business gifts and similar payments shall be considered as non-business expenses. Moreover, for corporate income tax purposes deductible business expenses must be revenue expenses and not capital expenses. Revenue expenses are recognised as having been incurred in acquiring resources that have been exhausted in the current accounting period. Correspondingly, capital expenses are recognised as having been incurred in acquiring

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98 Permanent establishment is a place of extension of a non-resident’s activities in the given country that requires a permanent staff attendance and availability of resources, which are essential for extension of activities of the non-resident.

99 Corporate income tax is not a uniform tax on return to capital because the depreciation allowances do not always reflect true economic depreciation.

100 Very high sensitivity of capital to tax regime is often used as an argument for preferential treatment of income from capital. According to estimates of Eugene Steuerle (The Treasury Department and Brookings Institution, USA) 80% of the total income from capital in the USA receives preferential treatment (1982).
resources that may yield a usefulness to the business in the future years by earning revenues like expenses associated with the acquisition of fixed assets, proprietary rights (leases, patents, brand names, copyrights), advantages of an enduring nature to the business in the form of trading rights (franchises) or business assets (agencies).

Entrepreneurship involves risk taking. If entrepreneurs were discouraged from undertaking new risky ventures, the effect on the growth of the market economy would be extremely damaging. Therefore, the corporate income tax law shall provide for a deduction of net losses. Consequently, there are some carry-forward/carry-back provisions for net losses and/or tax credits. Carry forward/carry back of losses and/or tax credits can create a strong distortion against investment in firms that are currently not doing well and helps to perpetuate their weak position. It can also induce mergers and leases, which would not take place otherwise.

Some countries operate corporate income tax with high (and progressive) tax rates. High (and progressive) tax rates can be distortive. There is no clear picture on corporate tax incidence, e.g., whether it is borne by high-income individuals or the entire population due to capital supply elasticity. Therefore, it is generally accepted that the lower the rate of corporate income tax, the smaller the distortions caused by the tax system. A broad tax base and low marginal rates of tax lead to fewer distortions than a narrow tax base with high marginal rates of tax. Also with a progressive tax structure, returns to a successful investment are taxed more heavily than losses from unsuccessful investments are subsidised. Many countries impose limits on the magnitudes of the losses that can be offset and, hence, there is a bias against risk taking.

Prior to the 1980s the corporate tax law demanded that corporate profits were computed using historical costs. Now it is widely recognised that corporate income tax law must provide for some indexation of historical profits because inflation can change effective tax rates very significantly. If the historical cost basis is applied, corporate income tax might be levied on money profits, which can overstate the company’s real profitability. For example, in 1976–80, the effective rate of the UK tax on corporate income of domestic industrial and commercial companies was 25% for conventional historical cost basis and 65% for current cost basis (adjusted for inflation). In 1980, the accounting profession in the UK proposed to adjust historical profits for (1) the difference between historical cost depreciation and replacement cost depreciation, (2) the difference between historical and replacement cost of business stock, (3) the effects of price changes on the value of trade debtors and creditors, (4) the benefit of nominal debt (SSAP 16). These adjustments could help to avoid taxation of money profits and further distortions.

In many countries shareholders receive no relief for tax paid on dividends at corporate level and, consequently, dividends are taxed more heavily than retained earnings. Empirical research has shown that discriminatory taxation of dividends has decreased the proportion of profits that is distributed as dividends. The corporate tax system, which taxes dividends more heavily relative to retained earnings, gives an incentive to the firm to increase its retained earnings. It might help an existing firm (as far as it generates funds for investment purposes) but discourages new firms that must go to the market for funds. There is, therefore, a distortion against external finance. Furthermore, investment projects that appear to be worthwhile when financed from retained earnings might not be worthwhile if financed from external funds. Thus inefficient firms that retain earnings will continue to invest them in inefficient projects.

3.5 History and general rules of value-added taxation

Value-added taxation became widespread in the second half of the 20th century. Although the modern scheme of value-added tax was proposed in 1954, the idea of value-added tax was

101 Value-added tax was introduced in Denmark in 1967, France and Germany in 1968, the Netherlands and Sweden in 1969, the United Kingdom in 1973, Japan 1989, Canada in 1991 and so forth.
not essentially new at that time. One of the first proposals to apply value-added tax (named ennoble turnover tax) was made in Germany in 1919. And in 1921 Thomas C. Adams proposed to use value-added tax instead of corporate income tax in the USA.

The VAT system that exists in many European countries usually assumes that the independent supplier of taxable goods or services pays value-added tax on every purchase of taxable goods or services (so-called input tax) and it charges value-added tax on every sale of taxable goods or services (so-called output tax). Later the independent supplier transfers to the tax authorities or receives from them only the difference between output and input tax for the specified period. As a result, the total amount of VAT is paid by the ultimate buyer (consumer) on purchases of taxable goods or services, and the amount of tax is transferred to the tax authorities (treasury) in instalments from independent suppliers of taxable goods and services (See Example 1).

### Example 1

**General scheme of VAT**

<table>
<thead>
<tr>
<th>Type of business</th>
<th>Volume of sales before tax, £</th>
<th>Amount of tax (13%)</th>
<th>Tax paid to tax authorities, £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mine</td>
<td>10,000</td>
<td>1,300</td>
<td>1,300</td>
</tr>
<tr>
<td>Steel production</td>
<td>20,000</td>
<td>2,600</td>
<td>2,600 – 1,300</td>
</tr>
<tr>
<td>Home appliances manufacturer</td>
<td>30,000</td>
<td>3,900</td>
<td>3,900 – 2,600</td>
</tr>
<tr>
<td>Wholesale trader</td>
<td>40,000</td>
<td>5,200</td>
<td>5,200 – 3,900</td>
</tr>
<tr>
<td>Retail trader</td>
<td>50,000</td>
<td>6,500</td>
<td>6,500 – 5,200</td>
</tr>
<tr>
<td>Total</td>
<td>50,000</td>
<td>6,500</td>
<td>6,500</td>
</tr>
</tbody>
</table>

The size of tax burden: 6,500/50,000 = 13%

### 3.6 Advantages and disadvantages of value-added taxation

Nowadays value-added tax remains the most favoured form of multistage universal excise, which has no cascade effect. Like many other universal excises, value-added tax has a wide tax base, stable receipts, and a rather simple mechanism of assessment and collection. In addition, the European version of value-added tax:

- closely links tax revenues and the place where value-added is generated;
- makes tax rather neutral to current and future consumption (to saving and capital investment) and has less negative (in comparison with other forms of turnover taxes and personal income tax) influence on capital accumulation and economic growth;
- has relatively small collection costs (often, direct costs do not exceed 2% of tax revenues) and delegation of compliance control functions to the taxpayer.

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102 Value-added tax might differ from one adopted by the European Union countries.
103 In order to charge VAT on taxable output an independent supplier must register for VAT with the tax authorities.
104 Universal excises are excises, which tax all, or almost all, goods and services available for consumption in the given country.
105 Tax can be accumulated in the price of goods and services in a multistage universal excise system (so-called cascade effect). Accumulation of tax usually takes place if the tax rate is applied to the price of raw materials and goods at each stage of trade (usual turnover tax). However, if tax rate applies only to the value-added to the cost of raw materials/goods at each stage of trade, there is no tax accumulation (European version of value-added tax).
106 Value-added tax is levied on all or almost all supplies (hence, expenditures of population and some business expenditures), and it enables receipt of significant revenues with relatively low tax rate and compels taxpayers to withdraw from use of traditional schemes of evasion from excises.
107 Value-added tax revenues are stable because, first, consumption is a continuous process, essential for existence of the population; second, the amount of consumption changes less than the amount of income if there are adverse changes in the economic situation. Besides changes in the structure of consumption due to fashion, customs, traditions and other similar reasons have insignificant impact on tax revenues because all or almost all supplies are taxed.
A very important advantage of value-added tax is that, by definition, value-added tax can be a neutral tax. There are two levels of VAT neutrality: internal and external neutrality. Internal neutrality has three dimensions: (1) legal neutrality, (2) competition neutrality, and (3) economic neutrality. In order to ensure legal neutrality of multistage universal excise there should be a possibility of accurately measuring its burden at every stage of taxation in order to allocate tax burden in line with lawmakers’ intentions. Legal neutrality can only be achieved if at every stage the amount of tax represents a certain proportion of (retail) price, and there is no accumulation of tax in the price of goods and services.

If the tax burden does not depend on vertical or horizontal integration, and it is determined in advance as a certain proportion of selling price, integration of commercial activities does not bring any tax advantage to the producer/trader. In such a case, universal excise is neutral from a legal point of view, and it does not affect competition (e.g., tax is neutral towards competition). Besides universal excise is considered to be economically neutral, if it does not impede optimum allocation of factors of production. Hence, the economic neutrality of value-added tax means that this tax (if properly organised) does not significantly affect:

- consumers’ propensity to buy some or another goods and services,
- horizontal and vertical integration of production/trade, or
- territorial dispersion of production and trade within the given country.

External neutrality of value-added tax means that the amount of tax on imported goods/services should not exceed the amount of tax charged on similar domestic goods, and compensation of tax paid by tax authorities to exporters with regard to exported goods/services should correspond to the actual amount of tax paid to the tax authorities.

In order to ensure internal and external neutrality of value-added taxation, macroeconomic stability and certain accounting standards are necessary (otherwise, serious economic distortions can occur). This specific feature – high administration requirements – can be a serious disadvantage of value-added taxation. In countries with transitional economies, for instance, many political and industrial leaders and even some economists claim repeatedly that value-added tax withdraws supplier’s working capital. It can be a real case when slow sales extend the period between the day of purchase of taxable supplies for processing/re-sale and up to the date of sale of taxable supplies. Furthermore, in a high inflationary environment input tax might well exceed output tax in real terms if the tax period is long enough.

Some distortions can also develop if VAT legislation contains any legal restrictions on the amount of input tax that can be subtracted from output tax. Particularly, VAT liabilities can be based on taxable output value minus current business expenditures (except, of course, for labour costs and other non-taxable items), and only a certain portion of capital business expenditures (so called income type VAT). There is obvious tax discrimination of capital business expenditures compared to current business expenditures and, consequently, VAT system can induce taxpayers to change the timing and structure of their business.

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108 From the point of view of economic efficiency and legal neutrality the most successful form of single stage universal excise is universal excise collected at the stage of retail trade (as in the UK prior to 1973). Moreover, universal excise collected at the stage of retail trade represents the only viable alternative to value-added tax (another alternative to value-added tax – personal expenditure tax – that cannot be implemented nowadays). Because single stage universal excise at the retail trade level does not differ very much from multistage value-added tax, provided that it is possible to avoid infringement of neutrality collecting single stage excise at the stage of retail trade.

109 As far as value-added tax is a universal excise charged on personal expenditures, it is necessary to maintain certain proportions between tax burden and amount spent by the taxpayer on purchase of goods or services. One of the most important requirements of taxation contemplates that the amount of tax paid by the taxpayer must be commensurate with the size of tax base. And in order to compare personal expenditures with the amount of value-added tax, it is necessary to know precisely and in advance the amount of tax payable and also proportions between retail price and tax payable. Indeed, the amount of value-added tax should be identical in case of identical goods and there should be no distinction between acquisition of domestic and imported goods or services.

110 Theoretically, VAT liabilities can also be based on taxable output value minus current business expenditures only (so called commodity type VAT).
expenditures. Similar distortions can be expected if the difference between output tax and input tax remains negative during the year or even longer and there is no chance to refund input tax from national tax authorities.

Some economic distortions might be associated with multiple tax rates. The VAT system with several tax rates is often expected to improve the regressive nature of value-added taxation in terms of VAT share in personal income. Therefore, in some countries VAT law reserves higher tax rate(s) for luxury products and/or reduced tax rate(s) for basic products which usually draw the largest portion of low incomes. However, value-added tax cannot be considered separately from other forms of taxation and, particularly, personal income taxation. It shall be regarded as complementary to other taxes. Furthermore, the VAT system with a single tax rate is the most simple and most effective whereas multiple tax rates can distort the pattern of personal consumption. Also, they complicate VAT assessment and collection even in countries where the tax system has developed over centuries and it already reflects present economic and social conditions.

While many economists accept that indirect taxes shall not be used to reduce poverty and/or to redistribute incomes, many countries operate VAT system with two (reduced and standard) or three-five (reduced, standard and higher) tax rates. If two or more tax rates are used, one of them is called a standard rate. Standard rate is applied to most taxable goods and services. Other taxable supplies are taxed at zero and/or reduced and/or higher tax rate(s), where reduced rate can only be applied to basic consumer products, for example: food (except for alcoholic drinks), fuel for heating and illumination, water supply, pharmaceutical goods, books and newspapers, public transport. Theoretically, application of reduced rate to basic goods and services does not influence tax neutrality very much because these goods/services do not compete with others and demand on basic goods/services is almost inelastic. However, reduced rate of VAT applied to basic products will lower the tax burden for all groups of population (if they purchase these products) irrespective of their incomes.

Alternatively, basic products or poor population per se can be exempted from tax scope, or poor population can be supported by direct personal subsidies or tax credits granted within the personal income tax system. However, if any goods (services) are exempted from VAT at the production level or wholesale trade level, there is an opportunity for VAT accumulation in the price of goods (services). Tax accumulation makes value-added taxation similar to conventional turnover tax (See Example 2). Similarly to conventional turnover tax, exemption of goods (services) from VAT at production level can stimulate vertical integration of enterprises involved in production/trade of exempted supplies and infringe market competition.

111 For this reason the most advanced and neutral to business and personal expenditures is the so-called consumption type VAT. Consumption type VAT is a tax based on taxable output value minus all legitimate business expenditures. This tax is charged on the purchase of any taxable goods (services), and in the absence of exempt goods (services), aggregate tax base is identical to aggregate personal expenditures of individuals. Effective (and, of course, marginal) rates of personal income tax will certainly be higher if there is no value-added tax or any other form of universal excise. In a closed economy, the effective equivalent rate of personal income tax (PIT*), which must be applied to low incomes if that country has no VAT, can be calculated from the formula: \[ \text{PIT}^* = \text{PIT}^+ + \left(1 - \text{PIT}^+\right) \times \text{VAT}^* \] where \( \text{PIT}^+ \) and \( \text{VAT}^* \) represents effective rate of personal income tax if value-added tax is used and effective rate of value-added tax, respectively. Low income is income that is not sufficient for saving and can be used for current consumption only. If \( \text{PIT}^+ = 21\% \) and \( \text{VAT}^* = 19\% \), the effective equivalent rate of personal income tax \( \text{PIT}^* \) must be 36\% (e.g., at least 1.7 times higher) in order to provide the same tax revenue, and this can seriously distort personal behaviour.

112 With a single rate, the VAT mechanism is least expensive, whereas a VAT system with several rates is a heritage of past times and a result of political mistakes and electorate’s misunderstanding.

113 Of course, all basic goods and services except for basic goods and services in luxury staging should be taxed at single reduced rate in order to avoid further distortions and administrative difficulties.
### Example 2

**Exemption from value-added tax at production level**

<table>
<thead>
<tr>
<th>Type of business</th>
<th>Volume of sales before tax, £</th>
<th>Amount of tax (13%)</th>
<th>Tax paid to tax authorities, £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mine</td>
<td>10,000</td>
<td>1,300</td>
<td>1,300</td>
</tr>
<tr>
<td>Steel production</td>
<td>21,300</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Home appliances</td>
<td>31,300</td>
<td>4,069</td>
<td>4,069</td>
</tr>
<tr>
<td>manufacturer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale trader</td>
<td>41,300</td>
<td>5,369</td>
<td>5,369 – 4,069</td>
</tr>
<tr>
<td>Retail trader</td>
<td>51,300</td>
<td>6,669</td>
<td>6,669 – 5,369</td>
</tr>
<tr>
<td>Total</td>
<td>50,000</td>
<td>7,969</td>
<td>7,969</td>
</tr>
</tbody>
</table>

The size of tax burden: $\frac{7,969}{50,000} = 15.94\%$

Exemption of goods or services in retail trade\(^{115}\) can affect legal neutrality because the profit margin in retail trade depends not only on goods/services but upon the seller as well. However, exemption of basic products from value-added taxation does not exempt the ultimate consumer from value-added tax entirely – exemptions only reduce the amount of tax paid. Again there is no significant reduction of tax, because value-added at the last stage (frequently, at retail trade level) is usually small. Also, tax can accumulate in the price of goods/services if these goods/services are sold to businesses, which are not able to identify the amount of value-added tax absorbed in the purchase price. On the other hand, exemption of the poor population from VAT will be based on some quantitative and qualitative criteria, which can be somewhat arbitrary. Therefore, personal subsidies or tax credits granted within the personal income tax system, which target certain groups of the population, can be a fair solution of the VAT burden problem.\(^{116}\)

This short qualitative analysis of income and value-added taxation demonstrates that unclear and/or unusual tax rules often increase costs of taxation and create many economic distortions. Promotion of standard rules and reasonable tax rates can help to avoid/reduce many those distortions. Furthermore, technically, some industrially developed countries can introduce advanced and less distortive forms of income and value-added taxation. However, the large number of taxpayers, complex rules of tax assessment and collection, and the variety of financial and non-financial instruments and arrangements can help capital, income and labour to move internationally, make tax reforms expensive and often require close co-ordination of tax policy between neighbouring countries.

### 4. Income and value-added tax in Ukraine: economic efficiency issues

The Ukrainian tax system is based on the Tax System Act 1994, which is a new version of the Tax System Act adopted in 1991. In 1997, tax reform significantly changed value-added tax and corporate income (profit) tax rules in Ukraine. There were also proposals to change some other forms of taxation but the Supreme Council (Parliament) of Ukraine has rejected them. In 1992–98, personal income tax, value-added tax and profit tax made up to 67% (Q2 1993) of total tax revenues in Ukraine (see Chart 31). Thus, in the 1990s the largest portion of tax burden (and, probably, the largest portion of any economic and social distortions caused by taxation)\(^{117}\) in Ukraine was associated with these taxes.

\(^{115}\) Sometimes it is hard or impossible to define accurately the retail trade level, for example, in case of direct sale of goods by manufacturer to ultimate user.

\(^{116}\) Of course, the most appropriate solution is a single reasonable rate of value-added tax.

\(^{117}\) By responses, in 1998 over 40% and 70% of businesses in Ukraine were annoyed with profit tax and value-added tax, respectively.
4.1. Distortions associated with personal income taxation in Ukraine

At the beginning of the 1930s, tax reforms greatly simplified direct and indirect taxation in the USSR. In the command economy, priority was given to turnover tax and administrative distribution of corporate profits. Since then, conventional forms of corporate and personal income taxation have remained mostly undeveloped and the present personal income tax is too simple and distortionary in Ukraine. These distortions originate from tax privileges for some forms of personal income, exemptions and deductions, relatively high tax rates, and the absence of indexation provisions. A good example of distortions is the magnitude of tax avoidance/evasion. The Ukrainian tax authorities, for instance, discovered violations of personal income tax law at 40% of companies examined in 1997. Also, the tax authorities reported that 237,000 companies (over 35% of total number) reported low wages and salaries (reported wages and salaries did not exceed personal tax-free allowance), supposedly, in order to reduce tax liabilities for withholding tax (personal income tax) and numerous payroll taxes in 1997.

Current Ukrainian legislation does not give a clear definition of personal income, and there is no explicit recognition of personal capital gains so far. Also, in a very strange manner personal income tax legislation distinguishes three major income categories – employment income, income from independent business or profession, and other income. Different income categories are taxed differently in terms of exemptions/deductions and tax rates. For example, a 10–40% tax rates are applied to primary employment income and income from independent businesses or professions, a 20% tax rate is applied to secondary employment income and Ukrainian source income of non-residents, a 20–60% tax rate is applied to royalties, etc. Also, since February 1998, qualified taxpayers with annual business revenues less than 7,000 tax-free allowances (55,000 USD, approximately) may opt to pay a fixed amount of tax (over 1,000 USD) with regard to their business income. Preferential tax regimes (established by legislation for some forms of personal income) can induce individuals to change their personal income structure and, consequently, some economic distortions can occur.

There are also numerous exemptions and deductions, which narrow the personal income tax base. Major exemptions are qualified agricultural income, bank interest, dividends, property sale receipts, inheritance and gifts (in the form of cash), social transfers (like childcare subsidies, personal financial aid, state pensions) and so forth. In addition to the standard tax-free allowance (equivalent to 7 US dollars and 10% of average reported employment income in Q3 1998), qualified taxpayers – military personnel, war invalids, Chernobyl victims, disabled persons and some other qualified taxpayers – are entitled to deduct up to ten tax-free allowances. However, many tax exemptions and deductions are not justified (from an economic point of view) or well defined. Tax exemptions and deductions taper the personal income tax base and can often be used for tax avoidance/evasion purposes (and, consequently, keeping real income tax revenues low – see Chart 32). On the other hand, there are no carry-over provisions for business and professional losses. Thus, the personal income system has a serious bias towards business risk.

Other sources of distortion are the relatively high tax rates and absence of indexation provisions. Top marginal tax rates were reduced from 90% (1993) to 40% (1995) but these tax rates were applied to low income (in international terms) – over 850 USD (in 1997) and 600 USD (in 1998) monthly. Besides Ukrainian personal income tax law has no indexation provisions119 and real personal incomes are taxed heavily (especially, in 1992–96). High marginal tax rates and preferential tax regime (established by legislation for some forms of personal income) induce individuals to underreport a large portion of personal income120.

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118 No personal income tax liability arises on disposal of personal property if stamp duty has been paid.
119 The Ukrainian income tax legislation contains no provision that enables tax authorities to automatically change tax brackets in line with inflation. Instead, a separate legal initiative of the President (or Supreme Council) is required.
120 For instance, the average reported amount of personal business income did not exceed 23.8 UAH per month (for reference, the personal tax-free allowance was 17 UAH per month) in 1997.
report it in a form that is qualified for preferential treatment. Frequent changes in tax brackets and tax rates can be another source of distortion.121

Governmental proposals on personal income tax reform (draft legislation 1997) aimed to change personal income taxation in line with changes in corporate income taxation. However, the Supreme Council of Ukraine did not adopt these proposals. Government proposals on the individual and corporate income tax system reflected some basic rules of income taxation and international experience which they had not previously done. However, the new system would be neither simple nor neutral. Most distortions caused by the current system of personal income taxation will not be removed by the new system. Instead, some new distortions may appear if these proposals are approved.

Governmental proposals allow most business and professional expenditures to be deducted from business and professional income. However, new proposals have no provisions (except for the reference to the Corporate Income Tax Act 1997 only), which can help to separate business and professional expenditures from private expenditures. Proposals on the taxation of mortgage interest, capital receipts, inheritance, and gifts can be another source of controversy and potential distortions. Interest on qualified mortgage obtained for acquisition or construction of new main residence can be deducted from net personal income. However, if the main residence is sold, capital receipts (instead of realised capital gains) from the sale will be taxed. While for tax purposes, the amount of gross capital receipts can be reduced by the tax-free capital allowance, the difference between gross capital receipts and tax-free capital allowance represents taxable capital receipts, which are taxed separately from other personal income (30% flat rate must be applied). If the main residence is inherited by or is presented as a gift to any other family member accommodated there, it will not be taxed provided stamp duty is paid. Hence, new proposals represent a good attempt to co-finance private home purchases of rich individuals with public funds in a high interest rate environment and to leave this wealth non-taxed for future generations.

4.2. Distortions associated with corporate income taxation in Ukraine

For years corporate income taxation was considered to be a very important source of public revenue in Ukraine. In the mid 1930s–late 1980s, deductions from profit (a substitute of corporate income tax in the administrative economy) and turnover tax provided the government with the largest portion of tax revenues in the USSR. In the last decade, there were many confusing changes in corporate income taxation expected to raise additional revenues and to reduce corporate income tax burden simultaneously. In 1988–91, corporate income was taxed by profit tax, in 1992 by gross income tax, in Q1 1993 by profit tax, in Q2 1993–Q4 1994 by gross income tax, and in 1995–98 by profit tax. Changes in the tax base were combined with changes in tax rates – downward changes in profit tax rates (from 45% in 1991 to 30% in 1995) and upward changes in gross income tax rates (from 18% in 1992 to 22% in 1994). Gross income tax was neither an efficient nor neutral form of corporate income taxation, and therefore the new Ukrainian government and new members of the Supreme Council replaced gross income tax with profit tax in 1995.

121 Prior to December 1992, the top marginal rate of personal income tax was 13%, in December 1992–June 1993 the top marginal rate was 50%, in June–December 1993, the top marginal rate was 60%, in December 1993–September 1994, the top marginal rate was 90%, in September 1994–November 1995, the top marginal rate was 50%, since November 1995 the top marginal rate was 40%.
122 Qualified mortgage shall not exceed 3,000 tax-free allowances (approximately, 25,000 USD).
123 Annual tax-free capital allowance is 3,000 tax-free allowances (approximately, 25,000 USD) for married couple plus additional 1,000 tax-free allowances for any other family member accommodated there. There is also unlimited tax-free capital allowance for retired individuals.
124 Even qualified mortgage (25,000 USD) and 20% interest rates produce interest/principal payments over 5,950 USD per year or about 500 USD per month (can be compared to reported average wage of 75 USD per month).
125 The gross income tax base consisted of labour expenses and profits, and it made gross income tax very similar to VAT.
The Profit Tax Act of 1994 was a sort of transitional legislation on corporate income tax. It was reasonably progressive and simple but some economic phenomena were not covered at all and many definitions were neither accurate nor complete. Some revenues/expenditures were taxed on a cash basis (when received or made) and others on an accruals basis (when earned or due). For example, for profit tax purposes, sales revenues were not recognised until received (including amounts shown in promissory notes, letters of credit, cheques, bank orders and other short-term debt instruments). Interest and rent receipts were also taxed on a cash basis, whereas profits from barter transactions were supposed to be taxed on an accruals basis (with a reference to so-called usual price). Use of a cash basis instead of accruals basis for recognition of revenues/expenditures affected timing and form(s) of business revenues/expenditures, stimulated barter transactions and postponed tax payments (or even reduced profit tax liabilities if some deliveries were not paid through the banking system).

The Profit Tax Act of 1994 did not recognise capital gains as a separate form of corporate income, and it produced substantial distortions. For example, interest on government securities was exempt from profit tax but so-called profit from trade in government securities (e.g., interest plus capital gain if securities were not sold immediately) was not exempt. Consequently, the full amount of profit (e.g., interest plus capital gain) earned by traders in government securities was taxed by profit tax. The strange treatment of profits from trading in government securities delayed development of a secondary money market in Ukraine in 1995–96.

The Profit Tax Act of 1994 neither recognised business losses nor contained any carry-over provisions for business losses. In spite of extremely high inflation in 1992–94 there was no provision for full automatic indexation of business costs and losses except for occasional indexation of inventories and agricultural losses. Besides which, profit tax legislation did not allow a company to deduct any contributions to reserves for business losses or any insurance premiums (except for mandatory insurance) from its pre-tax profits. Obviously, the Ukrainian profit tax legislation contained very serious bias towards business risk because profit margins in the public and private sector, which could be used to cover current business losses, are narrow.

Other sources of distortions were the special assessment rules and/or tax rates for some forms of corporate income (a sort of schedular system of income taxation). The standard profit tax rate was 30% whereas profits from agricultural and related activities were either exempted or taxed at 15%, profits from intermediary activities and auctions were taxed at 45%, and profits from lotteries (except for state lotteries) and gambling activities were taxed at 45%. Thus, some business profits could be taxed at one rate and other business profits could be taxed at another rate if the business was well diversified. However, the company was not allowed to mix different revenues/expenditures if profits were taxed at different rates. Moreover, the exemption of profits from agriculture and some related activities, 5-year tax holidays for companies with qualified foreign investment and foreign tax credit made the Ukrainian profit tax into a tax on the domestic profits of domestic industrialists in 1995–97. This caused economic inefficiencies and a development of tax avoidance/evasion because many businesses took advantage of their form (not substance) and/or made false reports and escaped income taxation.

126 For instance, there was a place for definition of free supplies and free financial aid but no place for reference or definition of resident, related persons, market price (instead of usual price), capital gains (losses), closed companies, etc.

127 For example, in accordance with Article 1 “supply of goods (services) is an economic operation of business entity, which reflects on transfer of property rights on goods (services) to other business entity in exchange for equivalent amount of money or debt”. There is no recognition of other forms of consideration (compensation) like exchange of goods or services.

128 Exception was made for start-up business losses of new or privatised companies, which were entitled to carry forward their start-up losses for five years.
Poor economic performance, widespread tax avoidance/evasion, insufficient budget revenues, prevalent public discontent with a very distortive tax system and some positive change in the general economic philosophy stimulated the development of a tax reform package, which was partially adopted by the Supreme Council of Ukraine in 1997. New versions of profit tax and value-added tax legislation were adopted and came into force in July 1997. However, the new version of profit tax legislation was neither less distortive nor less intricate than the previous one.

There was no significant progress in terms of a proper text structure and key definitions such as for residents/non-residents, tangible and intangible business assets, usual versus market price, goodwill, free financial aid, bad debts, related persons, additional paid-in capital, etc. A complex text structure and inaccurate definitions obviously increase direct and indirect public and private costs of tax administration and compliance. Profit tax continues to be somewhat schedular and separate rules for assessment and taxation of insurance (and re-insurance) and investment income exist. New legislation also restricts domestic corporations from legal diversification of assets. Particularly, it places limits for legal portfolio investments abroad because there is no chance of obtaining tax credit for foreign tax on passive income and capital gains.

Other potential sources of distortion are depreciation and indexation rules for fixed assets. Annual depreciation rates are not very conservative – about 14.1% for equipment and 4.9% for buildings and structures. There is also provision for accelerated depreciation with various annual rates. However, depreciation rates must be applied to book value of the asset instead of its initial cost. The Ukrainian tax depreciation rules significantly extend the cost recovery period and make business profits subject to inflationary profit tax. Obviously, business entities will be reluctant to invest in fixed assets and technologies if inflation rates are high (According to estimates, annual inflation rate was about 20% in 1998).

The new Ukrainian profit tax legislation allows any business entity to adjust the value of its fixed assets (except for assets which are subject to accelerated depreciation) in line with the inflation rate if the annual inflation rate exceeds 10%. However, this business entity shall recognise that difference between post-adjustment and pre-adjustment value of fixed assets is a form of capital income. And, consequently, a part of this capital income is a subject to profit tax. As far as part of capital income, which is subject to profit tax, is a product of capital income and annual depreciation rate, theoretically there is no way for a business entity to be significantly better off after indexation.

The new Ukrainian profit tax legislation has very unusual rules for the issue and redemption of corporate debt instruments (bonds, annuities, certificates of deposit, etc.). In accordance with the Profit Tax Act of 1997, receipts from the issue of corporate bonds, certificates of deposit, and some other corporate securities (except stocks) at nominal value constitute a part of gross corporate income, and interest payments and redemption outlays constitute a part of gross corporate expenses. Consequently, acquisition of corporate debt securities receives a tax treatment similar to the acquisition of raw materials and, consequently, redemption of corporate debt securities receives tax treatment similar to sales revenues. Thus, the costs of acquisition of corporate debt securities (except for long-term debt instruments and annuities) constitute a part of gross corporate expenditures and receipts from redemption constitute a part of gross corporate income for investors. These rules increase the costs of bond finance and favour bank loans versus corporate bonds, certificates of deposit, and some other corporate securities.

129 Agricultural income is not subject of Profit Tax 1997 at all.
130 There are some limits for deduction of interest expenses. For companies, where non-residents and/or companies with exempt income can control directly or indirectly 50% or more of earnings and liquidation proceeds, deductible interest expenses shall not exceed 50% of adjusted profits.
131 In terms of tax treatment acquisition of long-term debt instruments (over 10 years to maturity) and annuities is alike acquisition of intangible assets, hence, incurred costs are subject to depreciation.
There are also separate and very uncommon rules for corporate debt securities issued in a discount form. There is always a difference between price and nominal value of corporate bonds (and other corporate debt instruments) issued in a discount form. The Ukrainian profit tax legislation considers this difference as a part of gross corporate expenses, when corporate bonds (and other corporate debt instruments) are issued. These rules reduce the costs of bond finance if bonds are issued in a discount form, and favour a discount form of corporate bonds, certificates of deposit, etc. versus all other forms of corporate bonds, certificates of deposit, etc. Very strange rules for corporate bonds, certificates of deposit, and some other corporate securities produce very serious distortions in terms of corporate finance mix and corporate bond market development in Ukraine.

4.3. Distortions associated with value-added taxation in Ukraine

In 1992, value-added taxation replaced turnover tax in Ukraine. But Ukrainian value-added taxation was very distortive and only basic features make it similar to the VAT system used by the EU countries. For instance, all domestic transactions settled in foreign currency were exempted from VAT whereas identical transactions settled in local currency were taxed. Similarly, export transactions which had been settled in Ukrainian currency were exempted from VAT, whereas export transactions which had been settled in foreign currency were taxed at zero rate. To improve tax assessment and collection, VAT legislation was significantly changed in 1992–97.

In spite of very significant changes – in 1997 the tax invoice system was introduced – value-added taxation in Ukraine produces some economic distortions. There are many exemptions, which erode the tax base and break the legal and competition neutrality of VAT. Some imports, for instance, are exempted from VAT in Ukraine. It gives exempted imports competitive advantage because they have been taxed at zero rate in the source country. Instead, the price of exempted domestic supply includes input VAT and therefore, the price of exempted domestic supplies will be somewhat higher than the price of exempted imports, all other things being equal. Consequently, competition will force Ukrainian suppliers to reduce their profit margins or to lose their market share. Numerous exemptions also change the structure of the tax burden, which appears to be higher for non-exempted supplies and their consumers.

There are also other tax privileges which influenced corporate and individual behaviour and kept the real amount of VAT revenues at a low level (see Chart 33). In 1997–98, for instance, many exporters were qualified for VAT refund on a monthly basis (whereas tax reports and tax invoices could be submitted quarterly) and also entitled to interest equal to 1.2 NBU refinance (discount) rate, which must be paid on any late payments of VAT refund. Of course, the Ukrainian tax authorities were not prepared to trace most export transactions and to detect tax offences until the law was changed. In 1997, VAT expenditures (e.g., costs of tax privileges) made up to 40% of VAT revenues and 50% of all tax expenditures in Ukraine. On the other hand, double taxation can be another source of economic distortion. Double taxation increases selling price and creates strong incentives for illegal activities. In Ukraine, for instance, the same supplies can be subject to custom duties, excises and VAT. Moreover, in this case, VAT is levied on the amount which already includes excises and custom duties (for imports). According to estimates, this has increased VAT revenues by 5%, approximately 372 mln UAH in 1997 and 400 mln UAH in 1998.

It follows from the above discussion that, in 1992–98 income and value-added taxation produced numerous economic distortions in Ukraine. Examples are non-registered economic activities, barter transactions, capital outflow, extensive use of foreign currency, reduction of real bank deposits, uneven distribution of tax burden, tax evasion, etc. These negative phenomena suggest that there is an explicit need for tax reform in Ukraine, e.g., a need for a

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132 It will be less distortive if the interest rate, which is applied to VAT refund arrears, is equal to the weighted average interest rate on government securities because the weighted average interest rate on government securities reflects “opportunity costs” of tax receipts for the government.
change or series of changes in the tax system with objectives additional to any revenue objectives. This tax reform must address issues of fairness, efficiency, simplicity and transparency of taxation. And, importantly, nowadays Ukraine may take advantage of internationally accumulated knowledge and experience in tax reform.

5. International experience in tax reform

In the last two decades, many nations have been forced to implement tax reforms. Tax reforms in the 70s to the 90s have no precedent in fiscal history. They share common characteristics and objectives. These reforms were peacetime changes, generally aimed to be revenue neutral instead of raising revenues immediately. In many countries, there was extreme discontent with the existing tax system and the widespread belief that taxation is failing to achieve the social and economic objectives it was expected to meet. International influence and changes in economic environment (namely increases in public sector expenditures and high inflation rates) helped to spread the tax reform movement. There was also a change in economic philosophy (promotion of market forces instead of state intervention) and growing concern about distortions caused by high marginal tax rates and/or non-transparent tax rules. Thus the dominating motive for tax reform was to minimise distortions, to improve efficiency (in terms of allocation of resources in the economy) and to stimulate economic growth. The tax system was expected to be neutral and to interfere as little as possible with market forces.

Tax reforms in the 1970–90s were part of fiscal reforms aimed at the elimination of budget imbalances, reduction of aggregate tax burden, improved income distribution, and simplified tax assessment and collection rules. While there were specific objectives of tax reforms in every country, most countries declared equity, economic efficiency,133 and simplicity as priorities. These objectives were expected to be achieved mainly with (1) expansion of the personal income tax base and reduction of personal income tax rates,134 (2) expansion of the corporate income tax base and reduction of corporate income tax rates; (3) adoption of value-added tax and changes in the structure of tax revenues; (4) enhancement of tax administration and anti-avoidance legislation.

Tax reforms in the 1970–90s reflected major trends in income and value-added taxation at the end of the 20th century such as:

- a move towards tax neutrality between sources of income and forms of business organisation, augmentation and indexation of tax-free personal allowance (or standard deduction) combined with elimination of other exemptions and deductions (or transformation of deductions into tax credits), reduction of tax rates and number of steps in the personal income tax scale, extensive integration of personal and corporate income taxation – in personal income taxation (See also Table 2);
- the elimination of exemptions and deductions, reduction of tax rates and number of steps in the corporate income tax scale (and introduction of single-rate corporate income tax), elimination of investment tax credit135 and some other ineffective tax preferences, indexation and extensive integration of corporate and personal taxation – in corporate income taxation (See also Table 2);

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133 Taxes can distort allocation of resources and affect proportions between work and leisure, consumption and saving/investment, structure of consumption/investments, business organisation forms, etc. These distortions can generate big economic and welfare losses.

134 Expansion of the income tax base and reductions in tax rates can be combined with increases in tax-free allowances, changes in tax deductions, tax credits and other forms of tax relief. The same degree of progression could be obtained, with less horizontal inequity and with much lower marginal rates, if tax concessions are reduced or eliminated.

135 Investment tax credits and other investment incentives were inevitably very general. Generalised investment incentives led to much investment of poor quality at high cost to the government, which found itself subsidising investment which would have taken place anyway.
• the elimination of many exemptions and zero-rated supplies, move towards fewer tax rates and some increase in tax rates – **in value-added taxation.**

### Table 1. Changes in top rates of personal and corporate income tax in selected countries in 1984–90

<table>
<thead>
<tr>
<th>Selected countries</th>
<th>Top Rates of Personal Income Tax, %</th>
<th>Top Rates of Corporate Income Tax, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>60%</td>
<td>49%</td>
</tr>
<tr>
<td>Canada</td>
<td>51%</td>
<td>45%</td>
</tr>
<tr>
<td>Denmark</td>
<td>73%</td>
<td>68%</td>
</tr>
<tr>
<td>France</td>
<td>65%</td>
<td>57%</td>
</tr>
<tr>
<td>Germany</td>
<td>56%</td>
<td>53%</td>
</tr>
<tr>
<td>Italy</td>
<td>65%</td>
<td>60%</td>
</tr>
<tr>
<td>Japan</td>
<td>88%</td>
<td>76%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>72%</td>
<td>70%</td>
</tr>
<tr>
<td>Sweden</td>
<td>82%</td>
<td>75%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>United States</td>
<td>55%</td>
<td>33%</td>
</tr>
</tbody>
</table>


Many transitional economies were also forced to reform their tax systems. In the initial stages of transition, rapid inflation allowed many of them to rely extensively on seigniorage and the implicit inflation tax on cash balances. Inflation also boosted conventional tax revenues as enterprises reported large profits from the valuation of inventories (whereas depreciation allowances were not indexed in line with inflation) and individual incomes increased due to inflation. Unsustainability of seigniorage/inflation tax and poor performance of conventional revenues in the post-hyperinflation period, implied that progress with fiscal consolidation requires enhancement of revenue collection, elimination of both direct and indirect government support for unprofitable activities and a cost-effective social safety net.

Weaknesses in revenue mobilisation, which reflect not only narrow tax bases but also inefficient tax administration (and corruption), hamper the ability of governments to provide basic services and to maintain adequate levels of investment in economic and social infrastructure. High tax rates are often levied on modest tax bases, reduced not only by economic contraction but also by various exemptions, deductions and tax credits, allowed in many instances on political grounds. Weak tax administration also raises fundamental questions of equity and economic efficiency, since the effective tax burden on those who comply with the tax code is increased when a large number of taxpayers successfully evade taxes. Currency substitution, continued use of barter and accumulation of arrears affected tax revenues very much, too.

Tax reforms were expected to facilitate the transition from the arbitrary and negotiable tax system in centrally planned economies to a more uniform, parametric and rule-based tax system, as in the economies of Western Europe. They were prepared for greater uniformity in the tax treatment of different sectors, commodities and forms of ownership to ensure that the

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136 In Ukraine, for instance, according to estimates major tax expenditures amounted to 12 billion UAH in 1998 whereas major tax revenues (value-added tax, profit tax, personal income tax, excise taxes and land tax) made less than 17 billion UAH only.

137 Taxation in the old system was “non-parametric” in the sense that market economy tax systems need to be if firms are to face clear and appropriate budget constraints and incentives.
market mechanism guided resources into their most productive use. Broadening of tax bases and subsequent reduction of high marginal tax rates were predicted to enhance revenue mobilisation and to improve economic efficiency, and also have the healthy effect of promoting greater horizontal equity in the tax system by raising compliance rates.

International experience suggests that successful tax reform depends critically on:

**Public demand.** There must be obvious discontent with the existing tax system and an awareness that high marginal rates distort economic behaviour and that taxation is failing to achieve certain social and economic objectives. There must be changes in economic philosophy and economic environment which put public demand on policy-makers to reduce the tax burden and to adjust public expenditures (in terms of amount and structure), accordingly. There might be some international influence, too.

**Political will.** There is no way for tax reform to be successful if no powerful political leaders (first of all, in the government and/or in parliament) advocate it and, hence, it obtains no or small political support. Plus there should be a consensus on tax reform within the government and between government and parliament because the time span between elections is usually limited to 3–4 years.

**Scrutulous preparation.** Taxation is a very complex area in terms of its economic and social effects and, therefore, tax reform must be thoroughly prepared well before political leaders advocate it. Moreover, business practices in any economy already reflect the tax system in place, and tax privileges and concessions may be capitalised into asset values. Thus, policymakers must realise that tax reform may lead to substantial capital gains and losses (especially, if it is inadequately prepared), which will almost certainly have political, economic and social costs.

**Publicity.** Tax reform commonly requires a lot of public support and public tolerance. Government will be able to convince the public and, consequently, to reduce direct and indirect administrative and compliance costs if tax reform objectives are clear and well received by the business community and general public. Consultations, conferences, television/radio programmes and dissemination of written materials may help to persuade the public of the necessity of tax reform.

**‘Package’ approach.** It is widely acknowledged that political support/opposition is more obvious and links between any changes in tax rules and tax reform objectives are more evident, if the government offers parliament a ‘tax package’ instead of irregular proposals on every single tax.

**Appropriate momentum.** Obstruction to tax reform will obviously be less strong if this reform is undertaken before or during economic expansion when some losses/gains in tax revenues/payments (due to reduction of marginal tax rates) are compensated by gains/losses in tax revenues/payments (due to tax base expansion). However, in terms of timing it is more important that proposals on tax reform are adequate, reflect public demand and receive necessary political support.

**Speed.** It is a crucial feature of any reform. A high speed of tax reform can reduce some temporary gains/losses produced by the reform for businesses and the population and/or time span which is sufficient to recognise these gains/losses and to block the reform.

**Sustainability.** Whatever the political forces at the beginning or at the end of tax reform are, these forces may not be able to continue this reform or to support a modernised tax system in the future. Thus, proposals on tax reform should account for the ability of the government/parliament to maintain the status quo in the economy/society for a long time after the objectives of tax reform have been met. In other words, a modernised tax system must be politically, economically and socially stable.

Prior to any tax reform there must be a clear awareness that any form of taxation (whether income or value-added taxation) often requires an adaptation of the general rules to local economic and social conditions. Therefore, national tax legislation can be rich in unique provisions, which reflect compromise(s) between certain political groups, between politicians and the population, between pure theory and the real economic and social environment. However, by design any tax has a number of ‘critically important elements’, which ascertain its nature and fix the amount of tax burden. In other words, there are provisions in national tax legislation, which must be standard, complete and as precise as possible in order to ensure
economic efficiency and low compliance costs. And the most essential are provisions which define taxpayers and registration procedures, size and structure of tax base, calculation and redemption of tax liabilities.

5.1. Critically important elements of personal income taxation

The standard approach to assessment and collection of personal income tax requires legal provisions which define taxpayers of personal income tax and their registration with tax authorities (see lines 1 and 2 below), the size and structure of tax base (see lines 3–7 below), calculation and redemption of personal income tax liabilities (see lines 8–13 below), to reflect precisely that:

1. any individual who is entitled to earn (receive) income in any form in the given country during the specified period of time, can be a taxpayer of personal income tax in this country;
2. there are two groups of taxpayers of personal income tax – residents and non-residents of the country in the specified period; individual is deemed non-resident if he/she is not resident of the country in the specified period; individual is deemed resident of the country during the tax year if he/she is physically present in the country for 183 days or longer during this year and/or he/she has a house or any other kind of residential property, which is available for his/her to live there 183 days or longer during the tax year;
3. personal income tax is levied on net income of resident and non-resident taxpayers;
4. for personal income tax purposes net income of resident taxpayers is a total amount of net income derived domestically and/or abroad during the tax year; net income of non-resident taxpayers is net income derived from the source(s) in the country during the tax year;
5. net income is gross income less losses and relevant legitimate expenses incurred during the tax year;
6. gross income is an accretion of personal wealth during the specified period in any form that makes it available for acquisition of or for an exchange for any tangible and intangible assets in the course of consumption during the same period of time or in any time in the future;
7. relevant legitimate expenses are usual and necessary expenses, which are associated wholly and exclusively with given form of personal income, supported by documents and reflected properly in business book(s) or personal records of individual.
8. amount of personal income tax is a product of taxable income and tax rate(s), which are established by personal income tax legislation for this tax year;
9. taxable income of resident taxpayers is total net income less personal tax-free allowance established by personal income tax legislation for resident taxpayers for this tax year;
10. taxable income of non-resident taxpayers is net income derived from the source(s) in the country during this tax year;
11. to avoid double taxation of resident taxpayers personal income tax liabilities of resident taxpayers can be reduced by amount of foreign personal income tax paid on foreign income abroad;
12. personal income tax must be paid directly by individual to tax authorities or it can be withheld on behalf of tax authorities at the source of personal income;
13. personal income tax is levied on annual basis.

5.2. Critically important elements of corporate income taxation

The standard approach to assessment and collection of corporate income tax requires legal provisions which define taxpayers of corporate income tax and their registration with tax authorities (see lines 1 and 2 below), the structure and the size of tax base (see lines 3–6 below), calculation and redemption of corporate income tax liabilities (see lines 7–12 below), to reflect precisely that:
1. any legal entity, which derives income directly or through permanent establishment from sources in the given country and/or from abroad during the specified period, can be a taxpayer of corporate income tax in this country;

2. there are two groups of taxpayers of corporate income tax – residents and non-residents of the country in the specified period; legal entity is deemed non-resident if it is not resident of the country in the specified period; legal entity is deemed resident of the country in the specified period, if it is registered in this country and/or its management was located in this country during the specified period;

3. corporate income tax is levied on net income of resident and non-resident taxpayers;

4. for corporate income tax purposes net income of resident taxpayers is a total amount of net income derived domestically and/or abroad during the tax year; net income of non-resident taxpayers is net income derived through the permanent establishment from the source(s) in this country during the tax year;

5. net income equals total revenues less losses and relevant legitimate expenses, which are directly associated with these revenues and specified period;

6. permanent establishment is a place of extension of non-resident’s activities in the given country that requires permanent staff attendance and availability of resources, which are essential for extension of those activities;

7. corporate income tax liability is a product of taxable income and tax rate(s), which are established by corporate income tax legislation for this tax year;

8. taxable income does not include usual and essential expenses, which are associated wholly and exclusively with corporate revenues, supported by documents and reflected properly in business records (books) of corporation;

9. taxable income of resident taxpayers is total net income of residents less deductions, e.g., expenses, which are not directly associated with any specific form of revenues earned (received) by resident taxpayers in the tax year;

10. taxable income of non-resident taxpayers is net income of non-resident taxpayers earned (received) in the country during the tax year;

11. to avoid double taxation of resident taxpayers corporate income tax liabilities of resident taxpayers can be reduced by amount of foreign corporate income tax paid on foreign income abroad;

12. corporate income tax must be paid directly to tax authorities or it can be withheld on behalf of tax authorities at the source of corporate revenues;

13. corporate income tax is levied on annual basis.

5.3. Critically important elements of value-added taxation (European version)

The standard approach to assessment and collection of value-added tax requires legal provisions which contain description of taxpayers\[138\] and registration for value-added tax (see lines 1–3 below), the size and structure of tax base (see lines 4–10 below), calculation and redemption of tax liabilities (see lines 11–16 below), to reflect precisely that:

1. any individual or legal entity, which is involved in supply of goods and services in the country, can be a taxpayer of value-added tax in the given country;

2. individual or legal entity has to be considered as taxable person if it is economically independent\[139\] and it is involved in importation of taxable supplies or any economic activity, which encompasses supply of taxable goods and/or services\[140\] to other party for consideration, irrespective of purpose and results of such activity\[141\] in the country;

\[138\] Under VAT system taxpayer is a person who is responsible to withhold value-added tax on any taxable supply of goods and services.

\[139\] Individuals who perform a work under an agreement, which establishes employer-employee relationships, are economically dependent and, therefore, they are not VAT taxpayers.

\[140\] At the same time supplier of goods and services, which are free of charge under all circumstances, shall not be considered as VAT taxpayer.

\[141\] Government agencies and public organisations shall be considered as taxpayers if they are involved in certain activities where they compete or can compete with business entities.
3. any taxable person has to register with tax authorities if amount of taxable supply made by this taxable person has exceeded or may exceed a specified amount, which is established by national VAT legislation for the specified period;
4. value-added tax is levied on any taxable supply of goods or services made by or on behalf of registered taxpayer to consumer or consumer’s representative in the course or furtherance of any business carried by this registered taxpayer;
5. VAT can be charged by taxable person, who is registered for VAT and has a right to issue a tax invoice for any taxable supply of goods or services;
6. taxable supply includes all forms of supply of goods or services made for consideration, apart from supply of goods or services which are specifically exempt;
7. supply of goods is a transfer of legal and economic rights to dispose property as owner except for transfer of rights on all or part of assets of registered taxpayer to taxpayer’s successor; supply of goods which do not require from registered taxpayer or taxpayer’s representative an assembly or installation in the certain place, specified by consumer or consumer’s representative, is considered to take place where goods are at the beginning of delivery, hence, in the country of origin (except for catalogue goods);
8. supply of services is any supply, which is not a supply of goods, and delivery of services is considered to take place where taxable person is registered or place where registered taxpayer has a permanent establishment providing services, or place of permanent (or usual) residence of registered taxpayer;
9. exemption from value-added tax does not reduce significantly VAT burden for consumer and, for all other things being equal, it is a privilege granted by law to registered taxpayer, and therefore any supply of goods or services, which are usually made or can be made by commercial entities, and/or any supply of goods or services, where exemption leads or can lead to significant violation of economic competition, are not qualified for exemption from value-added tax;
10. tax base is a consideration, which is already received or will be received by registered taxpayer or taxpayer’s representative from buyer or buyer’s representative for taxable supply of goods or services, including any grants or subsidies associated with taxable supply of these goods or services; and under any circumstances amount of consideration shall not be less, than costs of these goods or services for registered taxpayer or taxpayer’s representative.
11. liability for value-added tax usually arise at the commencement date of taxable supply of goods or services to the buyer or date when money due for the taxable supply of goods or services were transferred to taxpayer’s bank account, if money transfer to taxpayer’s bank account is advance payment for taxable supply and it foregoes shipment of goods or performance of services;
12. VAT system has two tax rates - standard rate and reduced (zero) rate;
13. standard rate of value-added tax can be applied to any taxable supply of goods and services, which are available for consumption in the country;
14. reduced (zero) rate of value-added tax is a tax privilege granted to consumers of taxable supplies and it can be applied to any taxable supply of goods and services, which are available for consumption outside the country;
15. the amount of VAT, which must be transferred to tax authorities at the end of tax period, is a difference between amount of VAT charged by registered taxpayer on taxable supplies during the specified period and amount of VAT paid by registered taxpayer on purchase of taxable goods or services from other registered taxpayers during the same period;
16. VAT tax period does not exceed 12 months.

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142 Consideration shall not be taken into account if the parties which are involved in transaction(s), are connected and “arm’s length” principle is not preserved.
143 Including transfer of rights in accordance with a decision of public authorities or their representatives or court decision if similar private transaction is subject to tax.
144 Of course, there are some exceptions to this rule.
145 Including capital assets – equipment, machinery, buildings, structures and so on.
6. Ukrainian tax reform: general proposals and personal view on tax burden analysis

Due to similar objectives (economic growth, horizontal and vertical equity, economic efficiency, simplicity, etc.) Ukrainian tax reform should be in line with reforms which have taken place in other transitional economies and all over the globe during the last two decades. Particularly, Ukrainian tax reform should be focused on the introduction of fair and effective rules of assessment and collection of personal income tax, value-added tax and corporate income (profit) tax. Liberalisation of income and value-added taxation (including introduction of reasonable tax rates) will help to reduce the size and to change the structure of the combined tax burden (see Charts 11 and 31), to avoid substantial gains/losses in the future associated with changes in the tax system, to attract foreign investors (who may value compatibility in tax rules more than difference in tax rates) in order to revive the Ukrainian economy, to accelerate economic growth and to contribute to the prosperity of the nation.

However, there is a lack of long established institutional relationships between government and businesses, and the administrative resources of tax authorities are limited. Consequently, any tax reform will face administrative constraints in terms of transition costs, scale of transformations and administrative culture. Of course, transitional costs of new system implementation will be considerably higher than the steady-state costs of its operation once established. These costs will arise partly as a result of the unfamiliarity of taxpayers and tax officials with the new system, and both current costs (for example, the formal and the informal training) and capital costs (computers and software) may be incurred. There will also be unavoidable revenue costs (losses) because of the incompatibility of the old and modernised tax systems and the lack of experience in operating the modernised tax system.

These various administrative considerations imply that greater initial simplification is necessary and also that a move towards a tax system which requires the minimum of personal judgement and discretion in administration would be desirable. A tax system must be transparent and its transparency is closely linked to general purpose taxes (as opposed to special purpose taxes conveyed to off-budget funds) with clear rules and low rates. Tax administration shall concentrate on those revenue sources which can yield large amounts of revenue at low administrative cost per hryvnia raised. Furthermore, for tax administration and enforcement to function in a way that is compatible with the requirements of a market type economy, it is necessary that the tradition of negotiation and bargaining in taxation should be broken. Tax reform also requires co-ordination between central and local government in terms of preparatory work and reform itself.

In so far as Ukrainian rules of value-added and, especially, income taxation do not contain many standard provisions, these rules must be revised and changed where it is necessary. In Ukraine, commercial law is neither very clear nor consistent with a market type economy and, therefore, taxation shall be based on simple descriptive tax law to reduce economic inefficiencies and get public support. Simple descriptive tax law is a sort of tax law that consists of major provisions which reflect the nature of tax and subordinated provisions, which explain in detail those terms used in the major provisions. Both major and subordinated provisions must be written in simple and clear language to ensure minimum material changes in tax rules in the future. Tax legislation shall require from tax authorities and courts minimum discretion and arbitrary decisions. Obviously, it will greatly reduce direct and indirect administration and compliance costs of taxation.

To lessen the distortions associated with personal income taxation, reform (liberalisation) of personal income tax in Ukraine shall be focused on the introduction of a comprehensive income tax with low rates and a relatively high tax-free allowance or standard deduction.

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146 Changes in the system of social insurance contributions are also desirable.
147 Although the State Tax Administration may not be able to register all forms of personal income now, it must be given power to do so at any time in the future. And as far as taxpayers are aware of it, they will have some time to
Personal income shall be defined as annual accretion of personal wealth in any form that makes it available for acquisition of or for exchange for any tangible and intangible assets in the course of consumption during the current tax (calendar) year or in any other time in the future. Personal income tax law shall treat equally various forms of personal income – wages, salaries, business and professional income, investment income, gifts, prizes, inheritance and other forms of income. There shall be no tax discrimination in terms of net income appraisal rules and/or tax rates between different forms of personal income. The personal income tax system shall be a conduit system, e.g., corporate profits are subject to personal income tax rates whether they have been distributed or not. There must be provisions for indexation, but no deductions (except for standard deduction if it is used instead of tax-free allowance) and minimum use of tax credits (tax credit for foreign income taxes and for childcare expenses may be relevant).

To reduce distortions associated with corporate income taxation, reform (liberalisation) of corporate income tax in Ukraine shall be focused on proportional corporate income tax with a high registration threshold and a single tax rate, which does not exceed the highest effective rate of personal income tax (assuming that the highest effective rate of personal income tax is 34% or less). Corporate income tax law shall treat equally different forms of corporate income – business income, regular and irregular investment income, and other forms of income. There must be no tax discrimination in terms of net income appraisal rules and/or tax rates between different forms of corporate income. Corporate income tax shall be levied on net corporate income computed on an accruals basis. The corporate income tax system shall be a conduit system, e.g., corporate profits are subject to personal income tax rates whether they have been distributed or not. There must be provision for indexation of losses and assets/liabilities. New legislation shall avoid extensive use of deductions and tax credits (tax credit for foreign income taxes may be relevant).

To reduce distortions associated with value-added taxation, reform (liberalisation) of value-added tax in Ukraine shall emphasise the introduction of a European version of value-added tax with a broad base and single reasonable tax rate. Personal subsidies can be used to support low-income taxpayers, particularly single parents and pensioners. The VAT base shall exclude any other indirect taxes levied on taxable supplies where practically possible. As far as exemption from value-added tax does not significantly reduce the VAT burden for consumer and, all other things being equal, it is a privilege granted to the taxpayer, there should be minimum use of VAT exemptions. Tax refunds are another privilege granted to taxpayers and only honest and reliable taxpayers can eventually get a VAT refund.

There are many distortions associated with the present system of social insurance contributions and, therefore, a new system of social insurance contributions must be introduced. New social insurance contributions shall be levied on net personal income (like personal income tax) at low rates. Social insurance contributions (or at least a dominant part of these contributions) shall be transferred to personal social insurance accounts, which can be used as the primary source of personal financial aid (for instance, if the account holder becomes unemployed). Income taxes, value-added taxes and social insurance contributions must be major sources of government revenue. Furthermore, proportions between major taxes (e.g., personal income tax, corporate income tax, value-added tax and social insurance contributions) and other taxes shall be fixed – for instance, 4 to 1. Then the government will be able to control the aggregate tax burden once the tax burden of major taxes has been determined.

\[\text{make necessary adjustments. It will help to avoid substantial and unjustified gains/losses in the future or at least to spread these gains/losses over the longer period of time.}\]

\[\text{And the government has to be prepared to pay back overpaid taxes if all or part of corporate income is allocated to low income taxpayers.}\]

\[\text{Single-rate VAT would reduce administrative costs, allow cross-checking between VAT and corporate tax assessments, and help to avoid rent-seeking activities of producers who wish their products to be included in the lower tax group.}\]
6.1. Personal view on tax burden analysis

It is commonly recognised that a moderate tax burden can lessen the combined negative effect of taxation (compared to high tax burden). Only very rich nations with a large GDP per capita can afford a heavy tax burden whereas a nation with a small GDP per capita shall be taxed moderately. Also, heavy taxation can produce a lot of economic distortions. Of course, it is not easy to measure tax burden even for major taxes. Usually, a huge amount of information on incomes, expenditure and savings of individuals and companies is required to precisely determine the tax burden and often this information is either unavailable or very expensive. There is also a perception that no direct link between effective rates of major taxes and combined tax burden exists.

However, from a chronological point of view, a set of taxes which are applied to corporate and personal receipts (incomes) and expenditure, represent a chain with a certain sequence of links ‘factor taxes – income taxes – consumption taxes – personal property taxes’. Furthermore, it is possible to isolate a segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’ in this chain if the full amount (or, at least, the biggest portion) of corporate income tax is paid by a legal entity or its owners, personal income tax and social insurance contributions are levied on all personal income, value-added tax is shifted to the ultimate consumer and there are no serious market distortions or abnormal changes in personal and corporate behaviour. Then it is possible to measure the combined tax burden for the segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’.

For the segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’, the combined tax burden (CTB) can be calculated: 

$$CTB = \frac{TD + PIT + SIC + VAT}{GPI} \text{ (Equation 1)}$$

where TD is the tax on dividends (distributed profits), PIT is personal income tax, SIC is social insurance contributions based on income, VAT is value-added tax, GPI is gross personal income. Of course, equations for personal income tax and social insurance contributions will be different for imputation and classical systems of dividend taxation.

$$TD = ND \times TD^* / (1 - TD^*) \text{ (Equation 2)}$$

$$PIT = GPI \times PIT^* - TD \text{ (imputation system)} \text{ (Equation 3)}$$

$$PIT = (GPI - TD) \times PIT^* \text{ (classical system)} \text{ (Equation 4)}$$

$$SIC = GPI \times SIC^* \text{ (imputation system)} \text{ (Equation 5)}$$

$$SIC = (GPI - TD) \times SIC^* \text{ (classical system)} \text{ (Equation 6)}$$

$$VAT = (GPI - TD - PIT - SIC) \times CC \times VAT^*/(1 + VAT^*) \text{ (Equation 7)}$$

To obtain a reduced-form equation for combined tax burden (CTB_{imp}) within the so-called imputation system of dividends taxation we shall substitute Equation 2 for tax on dividends, Equation 3 for personal income tax, Equation 5 for social insurance contributions and Equation 7 for value-added tax into Equation 1. Then we obtain Equation 8 –

$$150 \text{ Technically, a similar formula can be used to measure an aggregate tax burden for the whole tax chain “factor taxes - income taxes – taxes on consumption – personal property taxes” and not for its segment only.}$$

$$151 \text{ Social insurance contributions and personal income tax might have an identical tax base. In such a case, social insurance contributions shall be considered as income type tax levied with a special objective.}$$

$$152 \text{ This equation can be used to measure a combined tax burden for an individual and to measure an average tax burden for all population for the specified period of time.}$$

$$153 \text{ Here the so-called imputation system of dividends taxation implies that the final amount of personal income tax liabilities can be reduced by profit taxes attributed to dividends. However, for personal income tax purposes gross amount of dividends must be included in taxable income. Instead, so-called classical system of dividends taxation implies that for personal income tax purposes net amount of dividends must be included in taxable income and no credit is available for profit tax attributed to dividends.}$$
CTB_{imp} = PIT* + SIC* + (1 – PIT* – SIC*). CC. VAT*/ (1 + VAT*), \text{ Equation 8}

where PIT* is the effective (weighted average) rate of personal income tax, SIC* is the effective (weighted average) rate of social insurance contributions, VAT* is the standard (weighted average) rate of value-added tax, CC is the consumption ratio (i.e. share of consumption in disposable personal income), TD* is the standard (weighted average) rate of tax on distributed profits, and ND is the net distributed profits (i.e. net amount of dividends received by individual).

To obtain a reduced-form equation for combined tax burden (CTB_{clas}) within the so-called classical system of dividends taxation we shall substitute Equation 2 for tax on dividends, Equation 4 for personal income tax, Equation 6 for social insurance contributions and Equation 7 for value-added tax into Equation 1. Then we obtain Equation 9 –

\begin{align*}
\text{CTB}_{clas} &= \text{PIT*} + \text{SIC*} + (1 – \text{PIT*} – \text{SIC*}). \text{CC. VAT*/} (1 + \text{VAT*}) + \\
&+ (1 – \text{PIT*} – \text{SIC*}). [1 – \text{CC. VAT*/} (1 + \text{VAT*})]. \text{ND. TD*} / [(1 – \text{TD*}). \text{GPI}],
\end{align*}

\text{Equation 9}

A comparison of Equations 8 and 9 shows that, all other things being equal, a combined tax burden under the classical system will be higher than a combined tax burden under the imputation system.\text{\footnote{Ukraine uses neither imputation system nor classical system. Personal income tax in Ukraine can be found from equation PIT = (GPI – GD). PIT*. Thus, The Ukrainian system of dividend taxation is somewhere between imputation system and classical system.}} The difference is reflected in Equation 10:

\begin{align*}
\text{CTB}_{clas} – \text{CTB}_{imp} &= (1 – \text{PIT*} – \text{SIC*}). [1 – \text{CC. VAT*/} (1 + \text{VAT*})]. \text{ND. TD*} / [(1 – \text{TD*}). \text{GPI}].
\end{align*}

\text{Equation 10}

Equations 9–10 support the notion that (1) the combined tax burden is less depressing in the case of an imputation system of dividends taxation, (2) standard (weighted average) rate of tax on distributed profits does not render any influence on combined tax burden if a country uses the imputation system and (3) standard (weighted average) rate of tax on distributed profits renders some influence on combined tax burden if a country uses the classical system. Also all other things being equal, the combined tax burden will grow if there is an increase in (1) the ratio between consumption and savings, and/or (2) the ratio between ‘high’ personal income and gross personal income, and/or (3) personal income tax rates, and/or (4) social insurance contributions rates, and/or (5) standard (weighted average) VAT rate, and/or (6) ratio between gross amount of dividends and gross personal income (if classical system used), and/or (7) standard (weighted average) corporate income tax rate (if classical system used).

Graphically, the growth of combined tax burden is shown in Figure 1, where area ABC reflects a size of gross personal income. The entire ABC area corresponds to high income whereas part of the ABC area corresponds to either low income (below the lowest dotted line) or mid-sized income (below the highest dotted line). As proportions of distributed profits (gross amount of dividends) in gross personal income increase and/or as the standard (weighted average) rate of corporate income tax increases, segment ED will move downward and area ABED (which reflects an amount of corporate income tax associated with distributed profits) will enlarge.

\text{\footnote{Here disposable personal income is gross personal income less tax on dividends, personal income tax and social insurance contributions.}}

\text{\footnote{Influence of standard (or weighted average) rate of corporate income tax on combined tax burden under the classical system can be measured by Equation 10.}}

\text{\footnote{Here the ‘high’ private income is a fraction of total income associated with top rate of personal income tax and social insurance contributions. An increase in ‘high’ income/total income ratio will cause increase in effective (weighted average) rate of personal income tax and effective (weighted average) rate of social insurance contributions.}}
Figure 2 An illustration of tax burden growth

As proportions between ‘high’ personal income and gross personal income increase and/or as effective rate of personal income tax increases and/or as effective rate of social insurance contributions increases segment FG will move to the right and area AFG, which reflects an amount of personal income tax and social insurance contributions, will enlarge. As the ratio between consumption and saving increases and/or as standard (weighted average) VAT rate increases, segment HJ will move upward and the shape of figure, which reflects an amount of VAT paid on purchase of goods and services, will change (i.e., area CHJ will turn into area CGHJ) and the area of this figure will enlarge as well.

In any case (under the classical system) and in most cases (under the imputation system) there will be a growth of combined tax burden and, consequently, proportions of personal disposable income will reduce. It may negatively affect personal behaviour in terms of personal consumption, saving, speed of personal response and/or preferences. Personal behaviour often affected or it can be affected by taxes, which depend on variable parameters such as capital, income, consumption, property and so on. It is especially true when the largest portion of combined tax burden is associated with personal income tax, social insurance contributions, value-added tax and corporate income tax (under the classical system).

As far as corporate income taxation does not affect combined tax burden under the imputation system and it may have some effect on the combined tax burden under classical system, it is obvious, that the major influence on the combined tax burden will be associated with effective rates of personal income tax, social insurance contributions and value-added tax. Hence, the minimum size of combined tax burden can be found from Equation 8:

$$CTB_{\text{min}} = CTB_{\text{imp}} = PIT^* + SIC^* + (1 – PIT^* – SIC^*). CC. \frac{VAT^*}{1 + VAT^*}$$

Consumption/disposable income ratio (CC) on average is about 100% for the poor population and less than 100% for the wealthy population. Therefore, the minimum size of combined tax burden for the poor population can be found from Equation 11 – $CTB_{\text{poor}} = PIT^* + SIC^* + (1$

158 Excises, customs duties and other indirect taxes can often influence behaviour of individuals and even companies.

159 It is assumed that behaviour of taxpayers is not influenced by taxes, which depend on permanent or rather stable parameters like sex, age, citizenship, religion and so on.

160 Maximum size of combined tax burden will be equal to minimum size of combined tax burden plus corporate income tax burden associated with dividends under the classical system of dividends taxation (Equation 10) plus burden of all other taxes.
– PIT* – SIC*). VAT*/ (1 + VAT*) while the minimum size of the combined tax burden for the wealthy population can be found from Equation 12:

\[
CTB_{\text{rich}} = k_1 \cdot \text{PIT}^* + k_2 \cdot \text{SIC}^* + (1 - k_1 \cdot \text{PIT}^* - k_2 \cdot \text{SIC}^*) \cdot \text{CC} \cdot \text{VAT}*/ (1 + \text{VAT}*)
\]

where parameters k₁ and k₂ reflect proportions between effective (weighted average) rates of personal income tax (k₁, PIT*) and social insurance contributions (k₂, SIC*) for wealthy population and effective (weighted average) rate of personal income tax (PIT*) and social insurance contributions (SIC*) for the poor population.

In such a case, progressive taxation can be set by assigning different values to parameters k₁ and k₂, and personal consumption/personal disposable income ratio (CC) will serve as a measure of personal poverty or personal wealth here. Logically, the consumption ratio on average is a more reliable indicator of personal poverty/wealth than the absolute amount of gross personal income, because the lifestyle of wealthy people forces them to incur certain costs (like high costs of meals, clothes, furniture, construction and/or house improvement and so on) which reflect their status within the society and can be large in terms of absolute value.

If the tax system incorporates value-added tax, personal income tax and social insurance contributions it is possible to develop Equation 13 and Equation 14 from Equation 8 and Equation 12, correspondingly. Then Equation 13 will reflect the relationship between effective (weighted average) rate of personal income tax for poor population and minimum size of combined tax burden for poor population, VAT rate and effective (weighted average) rate of social insurance contributions, –

\[
PIT^* = CTB_{\text{poor}} \cdot (1 + \text{VAT}*) - \text{SIC}^* - \text{VAT}^*, \quad \text{Equation 13}
\]

and, consequently, Equation 14 will reflect the relationship between weighted average rate of personal income tax and social insurance contributions for the wealthy population (hence, parameters k₁ and k₂ and VAT rate), consumption ratio and size of minimum combined tax burden for the wealthy population:

\[
k_1 \cdot \text{PIT}^* + k_2 \cdot \text{SIC}^* = \left[CTB_{\text{rich}} + \text{VAT}^* \cdot (CTB_{\text{rich}} - \text{CC})\right] / \left[1 + (1 - \text{CC}) \cdot \text{VAT}^*\right]. \quad \text{Equation 14}
\]

Equations 1–14 have been used to measure the combined tax burden and to recognise relationships between:

1. combined tax burden and effective (weighted average) rate of personal income tax;
2. combined tax burden and effective (weighted average) rate of social insurance contributions;
3. combined tax burden and standard (or weighted average) rate of value-added tax;
4. combined tax burden and standard (or weighted average) rate of corporate income tax (if classical system of dividends taxation in place);
5. combined tax burden and ratio between personal consumption and saving; and
6. combined burden of personal income tax and social insurance contributions and standard (weighted average) rate of value-added tax for a given size of combined tax burden for poor and wealthy population and personal consumption ratio.

In addition, equations 1–10 can be used to calculate the average combined tax burden based on macroeconomic data about income, expenditure and saving of individuals (and legal

161 Equation 12 can accommodate the “middle” group of population placed between “poor” and “rich” population groups in terms of gross and disposable personal income.

162 It must be also taken into account that the “middle” and “rich” population usually pays more in property and indirect taxes (other than VAT).

163 If it is preferred, politicians can establish a size of combined tax burden for “poor” and “rich” population groups.
entities) in the country or combined tax burden for the individual taxpayer based on his/her personal income declaration. And, what is of primary importance, Equations 11–14 give an excellent opportunity to develop a rate schedule for personal income tax and social insurance contributions, which is based on the desired size of combined tax burden and the ratio between personal consumption and saving (Table 2).

Table 2. Effective (weighted average) rates of personal income tax and social insurance contributions (VAT single rate is 13%)

<table>
<thead>
<tr>
<th>Ratio between personal consumption and disposable income</th>
<th>Arbitrary size of minimum combined tax burden for a given group of population (imputation system of dividends taxation)</th>
<th>Effective rate of social insurance contributions (rounded)</th>
<th>Effective rate of personal income tax (rounded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Poor’ population – 100%</td>
<td>13%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>‘Middle’ population – 80%</td>
<td>21%</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>‘Rich’ population – 60%</td>
<td>34%</td>
<td>8%</td>
<td>21%</td>
</tr>
</tbody>
</table>

The average amount of gross personal income (annual) based on macroeconomic data on personal income, expenditure and saving, and effective (or weighted average) rate of social insurance contributions for ‘poor’, ‘middle’ and ‘rich’ population groups, derived from Equation 13 and Equation 14, can be used to develop a rate schedule for social insurance contributions (Table 3).

Table 3. Rate schedule for social insurance contributions

<table>
<thead>
<tr>
<th>A group of population</th>
<th>A fraction of gross personal income (annual), local currency</th>
<th>Rate of contributions</th>
<th>Effective rate of contributions (weighted average), marginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Poor’</td>
<td>Up to 2,500</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>‘Middle’</td>
<td>2,501 – 6,500</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>‘Rich’</td>
<td>6,501 – 16,500</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>‘Rich’</td>
<td>Over 16,500</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

The average amount of gross personal income (annual) based on macroeconomic data on personal income, expenditure and saving, and effective (or weighted average) rate of personal income tax for ‘poor’, ‘middle’ and ‘rich’ groups of population, derived from Equation 13 and Equation 14, can be used to develop a rate schedule for personal income tax (Table 4).

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164 Equations 11–14 are valid if income taxation incorporates the imputation system for taxation of dividends.
165 Certainly, it does not suggest using the consumption ratio as a basic parameter to construct a rate schedule for personal income tax and/or social insurance contributions, which have to be introduced by tax law. Instead the rate schedule will be based on absolute amount of personal income (See Table 2 and Table 3).
166 Minimum size of combined tax burden, VAT rate, weighted average rate of social insurance contributions and weighted average rate of personal income tax in Table 2 represent so-called Fibonacci numbers, and consumption ratio is a classical proportion between sides of so-called “golden triangle”.
167 Rate schedule for social insurance contributions is based on arbitrary size (Fibonacci numbers) of gross personal income and effective rate of social insurance contributions shown in Table 2.
Table 4. Rate schedule for personal income tax

<table>
<thead>
<tr>
<th>A group of population</th>
<th>A fraction of gross personal income (annual), local currency</th>
<th>Rate of personal income tax</th>
<th>Effective rate of personal income tax (weighted average), marginal value</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Poor'</td>
<td>Up to 2,500</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>'Middle'</td>
<td>2,501 – 6,500</td>
<td>13%</td>
<td>8%</td>
</tr>
<tr>
<td>'Rich'</td>
<td>6,501 – 16,500</td>
<td>30%</td>
<td>21%</td>
</tr>
<tr>
<td>'Rich'</td>
<td>Over 16,500</td>
<td>21%</td>
<td>21%</td>
</tr>
</tbody>
</table>

In conclusion, Equations 1–10 can be used to determine the combined tax burden for a segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’ if effective (weighted average) rates of these taxes are known. Also, the combined burden of major taxes can be a bottom-line indicator for total tax burden. Equations 11–14 can be used to develop tax rate schedules for personal income tax and social insurance contributions to guarantee that the combined tax burden of major taxes (e.g., personal income tax, social insurance contributions and value-added tax) does not exceed certain minimum proportions. Consequently, tax rate schedules for personal income tax and social insurance contributions (based on single VAT rate and minimum proportions of combined burden of major taxes) can guarantee a minimum amount of tax revenues and total amount of tax revenues (and, hence, government expenditures) if there are fixed proportions between major tax revenues and total tax revenues.

7. Summary

Serious structural disproportions in production/trade and an obvious need for additional investments, high profit margins on most durable consumer goods and some services, a negative balance of foreign trade/payments, large public debt, high inflation rates, structural unemployment, the small amount and unhealthy structure of savings/investments all reflect an absence of economic equilibrium in most segments of the Ukrainian economy in 1990–98. Unlike many industrially developed economies, at the very beginning of transition the Ukrainian economy did not have any market forces which can work towards economic equilibrium and prevent severe economic disequilibrium. Besides which, development of market forces in Ukraine was restrained by the large public sector, industrial and/or regional monopoly of some companies (including public companies, first of all), the vast size of the informal economy, a weak financial sector, imperfect tax, labour, land, bankruptcy and securities legislation and so on.

Steady economic growth (an increase in real GDP) and economic equilibrium in Ukraine can only be reached if macroeconomic policy will target, on one hand, a reduction of money supply and an increase in real interest rates, and, on the other hand, a decline in the tax burden, an increase in capital inflow to the country and growth of export of goods and services. While some successful administrative decisions, price adjustments, fiscal or monetary policies could mitigate the negative consequences of economic disequilibrium, these measures alone would not improve the situation very much. International experience suggests that it is difficult to encourage economic growth and establish economic equilibrium without economic liberalisation.

A reduction in inflation rate, increase in real interest rates, promotion of export activities and inflow of foreign investments could significantly improve the balance between supply and

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168 Rate schedule for personal income tax is based on arbitrary size (Fibonacci numbers) of gross personal income and effective rate of personal income tax shown in Table 2.
demand in foreign trade and money market. These measures have acted to promote the financial stabilisation and reduction of the economic recession rate in Ukraine in 1995–98. However, financial stabilisation and economic recovery will never be sustainable without public sector reforms. IMF experts proclaim that many countries (including countries in transition) could probably strengthen their economic performance by reducing the shares of government expenditures and taxes in GDP.

In a market type economy, taxes influence the distribution of income and the allocation of resources and play an important role in stabilising the economy. Forms of taxation and the amount of tax burden have a direct impact on the amount and structure of consumption and saving, on the amount and structure of domestic and foreign investments, on production and trade and so forth. The combined negative effect of taxation depends on the size and structure of the aggregate tax burden and encompasses economic phenomena such as industrial and regional disproportions in production of goods and services and/or significant and constant outflow of domestic investments and/or reduction in amount and growth rates of foreign investments in the country and/or contraction of tax revenues and/or growth of the informal economy and so on.

As far as taxation is the most progressive form of regular, stable and certain public revenues and many taxes can be neutral to allocation of national resources, the reduction of the combined negative effect of taxation should be an ultimate goal of modern tax policy. Governmental monetary and fiscal policy (and, particularly, tax policy) can significantly influence economic recovery in Ukraine. In Ukraine, the reduction of the combined negative effect of taxation can be achieved through the contraction of the informal economy and liberalisation of tax rules. Tax liberalisation must be based on new tax legislation and it must ensure (1) sufficient, stable and even tax revenues, and flexibility of tax system (opportunity to change the size and/or terms of tax payments without considerable economic and social costs); (2) internal and external harmony for the given set of taxes; (3) political, economic and social stability of the tax system.

In the last two decades, many nations have been forced to start tax reforms. Generally, the dominating motive for tax reform has been to minimise distortions, to improve efficiency (in terms of allocation of resources in the economy) and to stimulate economic growth. A tax system was expected to be neutral and to interfere as little as possible with market forces. Tax reforms in the 1970–90s were part of fiscal reforms aimed at the elimination of budget imbalances, reduction of aggregate tax burden, improved income distribution, and simplified tax assessment and collection rules. While there were specific objectives of tax reforms in every country, most countries declared equity, economic efficiency, and simplicity as priorities. These objectives were expected to be achieved mainly with (1) expansion of the personal income tax base and the reduction of personal income tax rates; (2) expansion of the corporate income tax base and reduction of corporate income tax rates; (3) adoption of value-added tax and changes in the structure of tax revenues; (4) enhancement of tax administration and anti-avoidance legislation.

Tax reforms in the 1970–90s reflected major trends in income and value-added taxation at the end of the 20th century such as:

- a move towards tax neutrality between sources of income and forms of business organisation, augmentation and indexation of tax-free personal allowance (or standard deduction) combined with elimination of other exemptions and deductions (or transformation of deductions into tax credits), reduction of tax rates and number of steps in the personal income tax scale, extensive integration of personal and corporate income taxation – in personal income taxation;
- elimination of exemptions and deductions, reduction of tax rates and number of steps in the corporate income tax scale (and introduction of single-rate corporate income tax), elimination of investment tax credit and some other ineffective tax preferences, indexation and extensive integration of corporate and personal taxation – in corporate income taxation;
• elimination of many exemptions and zero-rated supplies, move towards fewer tax rates and some increase in tax rates – **in value-added taxation.**

Nowadays many tax systems are based on value-added tax, personal and corporate income tax. Similar trends can be observed in Ukraine – value-added tax, personal and corporate income tax revenues made up 43% of total government revenues in Ukraine in Q3 1998. The Ukrainian negative economic phenomena suggest that there is an explicit need for tax reform. Ukrainian tax reform must address issues of fairness, efficiency, simplicity and transparency of taxation. Due to similar objectives (economic growth, horizontal and vertical equity, economic efficiency, simplicity, etc.) Ukrainian tax reform should be in line with reforms which have taken place in other transitional economies and all over the globe during the last two decades.

Particularly, Ukrainian tax reform should be focused on the introduction of fair and effective rules of assessment and collection of personal income tax, value-added tax and corporate income (profit) tax because income and value-added taxation produced numerous economic distortions in Ukraine – growth of non-registered economic activities and barter transactions, capital outflow, extensive use of foreign currency, reduction of real bank deposits, uneven distribution of tax burden, tax evasion, etc. Liberalisation of income and value-added taxation (including introduction of reasonable tax rates) will help to reduce the size and to change the structure of the combined tax burden, to avoid substantial gains/losses in the future associated with changes in the tax system, to attract foreign investors (who may value compatibility in tax rules more than difference in tax rates) in order to revive the Ukrainian economy, to accelerate economic growth and to contribute to the prosperity of the nation.

However, there is lack of long established institutional relationships between government and businesses, and the administrative resources of tax authorities are limited. Consequently, any tax reform will face administrative constraints in terms of transition costs, scale of transformations and administrative culture. Of course, transitional costs of a new system implementation will be considerably higher than the steady-state costs of its operation once established. These costs will arise partly as a result of the unfamiliarity of taxpayers and tax officials with the new system, and both current costs (for example, formal and the informal training) and capital costs (computers and software) may be incurred. There will also be unavoidable revenue costs (losses) because of incompatibility of old and modernised tax systems and lack of experience in operating the modernised tax system.

These various administrative considerations imply that greater initial simplification is necessary and indicates that a move towards a tax system which requires minimum personal judgement and discretion in administration is desirable. A tax system must be transparent and its transparency is closely linked to general purpose taxes (as opposed to special purpose taxes conveyed to off-budget funds) with clear rules and low rates. Tax administration shall concentrate on those revenue sources, which can yield large amounts of revenue at low administrative cost per hryvnia raised. Furthermore, for tax administration and enforcement to function in a way that is compatible with the requirements of a market type economy it is necessary that the tradition of negotiation and bargaining in taxation should be broken. Tax reform also requires co-ordination between central and local government in terms of preparatory work and reform itself.

International experience suggests that success in tax system reform depends critically on public demand, political will, scrupulous preparation, publicity, ‘package’ approach, appropriate momentum, speed and sustainability. Prior to any tax reform there must be clear awareness that any form of taxation (whether income or value-added taxation) often requires adaptation of general rules to local economic and social conditions. Ukrainian tax legislation is rich in unique provisions, which reflect compromise(s) between certain political groups, between politicians and population, between pure theory and real economic and social environment. However, by design any tax has a number of ‘critically important elements’, which ascertain the tax nature and fix the amount of tax burden. In other words, there are provisions in national tax legislation, which must be standard, complete and as precise as
possible in order to ensure economic efficiency and low compliance costs. And the most essential are provisions, which define taxpayers and registration procedures, size and structure of tax base, calculation and redemption of tax liabilities.

In so far as Ukrainian rules of value-added and, especially, income taxation do not contain many standard provisions, these rules must be revised and changed where it is necessary. In Ukraine, commercial law is not very clear and consistent with a market type economy and, therefore, taxation shall be based on simple descriptive tax law to reduce economic inefficiencies and get public support. Simple descriptive tax law is a sort of tax law that consists of major provisions, which reflect the nature of tax, and subordinated provisions, which explain in detail those terms used in the major provisions. Both major and subordinated provisions must be written in simple and clear language to ensure minimum material changes in tax rules in the future. Tax legislation shall require from tax authorities and courts minimum discretion and arbitrary decisions. Obviously, it will greatly reduce direct and indirect administration and compliance costs of taxation.

To lessen distortions associated with personal income taxation, reform (liberalisation) of personal income tax in Ukraine shall be focused on the introduction of comprehensive income tax with low rates and relatively high tax-free allowances or standard deductions. Personal income shall be defined as the annual accretion of personal wealth in any form that makes it available for acquisition of or for exchange for any tangible and intangible assets in the course of consumption during the current tax (calendar) year or in any other time in the future. Personal income tax law shall treat equally various forms of personal income – wages, salaries, business and professional income, investment income, gifts, prizes, inheritance and other forms of income. There shall be no tax discrimination in terms of net income appraisal rules and/or tax rates between different forms of personal income. The personal income tax system shall be a conduit system, e.g., corporate profits are subject to personal income tax rates whether they have been distributed or not. There must be provisions for indexation, but no deductions (except for standard deduction if it is used instead of tax-free allowance) and minimum use of tax credits (tax credit for foreign income taxes and for childcare expenses may be relevant).

To reduce distortions associated with corporate income taxation, reform (liberalisation) of corporate income tax in Ukraine shall be focused on proportional corporate income tax with a high registration threshold and single tax rate which does not exceed the highest effective rate of personal income tax (assumed that highest effective rate of personal income tax is 34% or less). Corporate income tax law shall treat equally different forms of corporate income – business income, regular and irregular investment income, and other forms of income. There must be no tax discrimination in terms of net income appraisal rules and/or tax rates between different forms of corporate income. Corporate income tax shall be levied on net corporate income computed on accruals basis. Corporate income tax system shall be a conduit system, e.g., corporate profits are subject to personal income tax rates whether they have been distributed or not. There must be provisions for indexation of losses and assets/liabilities. New legislation shall avoid extensive use of deductions and tax credits (tax credit for foreign income taxes may be relevant).

To reduce distortions associated with value-added taxation, reform (liberalisation) of value-added tax in Ukraine shall emphasise the introduction of a European version of value-added tax with a broad base and single reasonable tax rate. Personal subsidies can be used to support low-income taxpayers, particularly, single parents and pensioners. The VAT base shall exclude any other indirect taxes levied on taxable supplies where it is practically possible. As far as exemption from value-added tax does not significantly reduce the VAT burden for the consumer and, all other things being equal, it is a privilege granted to the taxpayer, there should be minimum use of VAT exemptions. Tax refunds are another privilege granted to the taxpayer and only honest and reliable taxpayers can eventually get a VAT refund.
There are many distortions associated with the present system of social insurance contributions and, therefore, a new system of social insurance contributions must be introduced. New social insurance contributions shall be levied on net personal income (like personal income tax) at low rates. Social insurance contributions (or at least a dominant part of these contributions) shall be transferred to a personal social insurance account, which can be used as primary source of personal financial aid (for instance, if account holder becomes unemployed). Income taxes, value-added taxes and social insurance contributions must be major sources of government revenues. Furthermore, proportions between major taxes (e.g., personal income tax, corporate income tax, value-added tax and social insurance contributions) and other taxes shall be fixed – for instance, 4 to 1. Then government will be able to control the aggregate tax burden once the desirable proportions of tax burden for major taxes have been determined.

Of course, it is not easy to measure tax burden even for major taxes like income taxes, value-added taxes and so forth. However, from a chronological point of view, a set of taxes which are applied to corporate and personal receipts (incomes) and expenditure, represent a chain with a certain sequence of links ‘factor taxes - income taxes – consumption taxes – personal property taxes’. Furthermore, it is possible to isolate a segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’ in this chain if the full amount (or, at least, the biggest portion) of corporate income tax is paid by a legal entity or its owners, personal income tax and social insurance contributions are levied on all personal income, value-added tax is shifted to the ultimate consumer and there are no serious market distortions or abnormal changes in personal and corporate behaviour. Then we can measure the combined tax burden for the segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’.

For the segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’, the minimum size of combined tax burden (\( CTB_{\text{min}} \)) can be found from the following equation:

\[
CTB_{\text{min}} = \frac{\text{PIT}^* + \text{SIC}^* + (1 - \text{PIT}^* - \text{SIC}^*) \cdot \text{CC} \cdot \text{VAT}^*}{1 + \text{VAT}^*},
\]

where \( \text{PIT}^* \) – effective (weighted average) rate of personal income tax, \( \text{SIC}^* \) – effective (weighted average) rate of social insurance contributions, \( \text{VAT}^* \) – standard (weighted average) rate of value-added tax, \( \text{CC} \) – consumption ratio (i.e., share of consumption in disposable personal income), \( \text{TD}^* \) – standard (weighted average) rate of tax on distributed profits, \( \text{ND} \) – net distributed profits (i.e., net dividends received by individual).

Corporate income taxation does not influence combined tax burden under imputation system and it may have some effect on combined tax burden under classical system. Therefore, a major effect on combined tax burden will be associated with effective rates of personal income tax, social insurance contributions and value-added tax. Also, all other things being equal, combined tax burden will grow if there is an increase in (1) ratio between consumption and savings, and/or (2) ratio between ‘high’ personal income and gross personal income, and/or (3) personal income tax rates, and/or (4) social insurance contributions rates, and/or (5) standard (weighted average) VAT rate, and/or (6) ratio between gross amount of dividends and gross personal income (if classical system used), and/or (7) standard (weighted average) corporate income tax rate (if classical system used).

The model of combined tax burden can be used to determine combined tax burden for a segment ‘corporate income tax – personal income tax – social insurance contributions – value-added tax’ if effective (weighted average) rates of these taxes are known. The combined burden of major taxes can be a bottom-line indicator for total tax burden. Also, some equations can be used to develop tax rate schedules for personal income tax and social insurance contributions to guarantee that the combined tax burden of major taxes (e.g., personal income tax, social insurance contributions and value-added tax) does not exceed

\[169\]

Here the ‘high’ private income is a fraction of the total income associated with the top rate of personal income tax and social insurance contributions. An increase in ‘high’ income/total income ratio will cause an increase in the effective (weighted average) rate of personal income tax and the effective (weighted average) rate of social insurance contributions.
certain minimum proportions. Consequently, tax rate schedules for personal income tax and social insurance contributions (based on a single VAT rate and minimum proportions of combined burden of major taxes) can guarantee a minimum amount of tax revenues and total amount of tax revenues (and, hence, government expenditures) if there are fixed proportions between major tax revenues and total tax revenues.

Bibliography


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