

Journal of Tax Reform

T. 4, № 3

2018

Vol. 4, no. 3

Научно-аналитический журнал

Выходит 3 раз в год

Основан в 2015 г.

Scientific and Analytical Journal

Three times a year

Founded in 2015

Учредители и издатели журнала

ФГАОУ ВО «Уральский федеральный университет имени первого Президента России Б. Н. Ельцина» (620002, г. Екатеринбург, ул. Мира, 19)

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Издание зарегистрировано в Федеральной службе по надзору в сфере связи, информационных технологий и массовых коммуникаций (Роскомнадзор). Свидетельство о регистрации средства массовой информации ПИ № ФС77-61465 от 10.04.2015 г.

Founder and publisher

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The Journal is registered by the Federal Service for Supervision in the Sphere of Telecom, Information Technologies and Mass Communications. Registration Certificate ПИ № ФС77-61465 от April 10, 2015

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Цели:

- создание информационной площадки для обнародования результатов исследований социально-экономических и иных последствий налоговых реформ и анализ ожидаемых эффектов от преобразований налоговых систем;
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Editorial policy

Objectives:

- creation of an information platform to make public the results of studying socio-economic and other consequences of tax reforms and analysis of the effects of transformations of tax systems;
- growth of scientific and theoretical knowledge in the fields of public finance and taxation as a science aimed at searching new constructive solutions in the taxation sphere;
- development of practical, legal and organizational measures for increasing the efficiency and justness of taxation and tax reforms;
- international cooperation of representatives of the scientific community, the public, the business sector and government agencies in the improving the tax system.

Strategic tasks:

- comprehensive analysis of the national and the international experience in reforming tax systems;
- development of measures to prevent tax evasion;
- support of the inter-disciplinary approach to studying taxation and tax reforms;
- cooperation of scholars of various sciences (economics, mathematics, sociology and psychology) with the aim of improving taxation and tax systems.

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Administrative and managerial issues of tax reforms

Административно-управленческие проблемы налоговых реформ

DOI [10.15826/jtr.2018.4.3.052](https://doi.org/10.15826/jtr.2018.4.3.052)

Original Paper

Pakistan: wither tax reforms – the case of large taxpayers’ unit, Islamabad

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ABSTRACT

Pakistan tax system reforms carried out during 2001–2010, were overwhelming, expensive, and a failure. The reforms were financially afforded and technically assisted by World Bank. While both Government of Pakistan and World Bank agreed on the failure of tax reforms, each blamed the other for the failure. A consensus, however, does exist as regards the fact that the reform program left the tax system more gridlocked, retrofitted, and incapacitated than before to generate both sufficient and healthy revenues. The paper adopts case study approach to explore into the factors of failure of the reform program. The study is anchored in Large Taxpayers’ Unit, Islamabad – a flagship taxing field formation established under the reform project. The data are produced from Large Taxpayers’ Unit, Islamabad, to assess its jurisdictional, functional, and operational capacity and explain why its tax collection curve flattens after 2012. The insights so derived at micro-level are made to feed back into macro-canvas of the program and enhance our holistic understanding and see its failure in a different and closer-to-reality light. The analysis is extrapolated to the national level to argue that as soon as political ownership and donor oversight – the key drivers – were omitted from the equation, the resultant resource constraints were enough to frustrate and fail the entire reform program. The conclusions drawn are generalizable to most similarly-circumstanced developing countries and their rigidly underperforming tax systems.

KEYWORDS

Pakistan tax system; tax reforms; Large Taxpayers’ Unit; World Bank reforms; Federal Board of Revenue; tax administration

JEL H1

HIGHLIGHTS

1. The evaluation of a tax reform program being essentially subjective could well be undertaken by adopting case study approach that generates empirics at micro-level, which get fed into the analytics at the macro-level
2. In order for the tax reform evaluation to stay comprehensively meaningful, it covers the micro locale being evaluated across its full spectrum i.e. jurisdictional, functional, and operational capacity
3. Continued political ownership and donor oversight are key variables of a tax reform program, and their elimination from the equation mid-stream potentially results in reversing and even perverting the entire reform agenda

УДК 336.225.2

Провал налоговых реформ в Пакистане: анализ деятельности подразделения по работе с крупными налогоплательщиками Исламабада

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АННОТАЦИЯ

Реформы налоговой системы Пакистана, проведенные в 2001–2010 гг., были масштабными, дорогостоящими и неудачными. Реформы финансово и организационно поддерживались Всемирным банком. Правительство Пакистана и Всемирный банк одинаково оценивают результат налоговых реформ как провал, но ответственность за него каждый возлагает на противоположную сторону. По общему мнению, проведенные реформы привели налоговую систему Пакистана в тупик, сделав ее более модернизированной, но недееспособной для достаточной и разумной мобилизации государственных доходов. В статье на основе анализа конкретных случаев, рассматриваются причины провала реформ. Исследование основано на анализе фактических данных о деятельности подразделения, работающего с крупными налогоплательщиками Исламабада, созданного в рамках налоговой реформы и являющегося лидером в работе с крупными налогоплательщиками Пакистана. Результаты исследования позволяют оценить юрисдикционный, функциональный и оперативный потенциал данного подразделения и объяснить, почему налоговые доходы остановились на уровне 2012 г. Выводы, полученные на микроуровне, позволяют понять ситуацию в целом и реально оценить последствия налоговых реформ. Анализ экстраполирован на национальный уровень, что позволило утверждать, что, как только политическая заинтересованность и контроль со стороны доноров — ключевые движущие силы программы реформ — были исключены из процесса, ограниченности внутренних ресурсов оказалось достаточно, чтобы сорвать и провалить всю программу налоговых реформ. Полученные результаты характерны для большинства развивающихся стран, со схожей экономической ситуацией и отсталыми налоговыми системами.

КЛЮЧЕВЫЕ СЛОВА

налоговая система Пакистана; налоговые реформы; подразделение по работе с крупными налогоплательщиками; реформы Всемирного банка; Федеральный совет по доходам, налоговая служба

ОСНОВНЫЕ ПОЛОЖЕНИЯ

1. Изучение конкретных случаев на микроуровне и их анализ на макроуровне позволяют проверить кажущиеся ошибочными субъективные оценки реализации программы налоговых реформ
2. Комплексная оценка налоговой реформы на микроуровне должна содержать данные о юрисдикционном, функциональном и оперативном аспектах потенциала налоговых служб
3. Политическая заинтересованность властей и контроль со стороны доноров являются ключевыми движущими силами налоговых реформ, их устранение из процесса может привести к прекращению или извращению всей программы реформ

Introduction

Pakistan tax system went through major reforms during the first decade of the present century. The tax reforms were charted out by the Task Force on Reform of Tax Administration, which was appointed by the government of Pakistan in June, 2000. The Task Force was headed by Syed Shahid Hussain, an economist by profession with extensive exposure at the international level¹. The World Bank chipped in with a grant sum of US \$500,000 for the preparation of the Task Force report², which was presented in May, 2001. The Government of Pakistan approved the Task Force report immediately with the directions to devise an implementation strategy in respect of the viable prescriptions. The report was shared and discussed with cross-sections of the society as well as Pakistan's donors with a view to seeking their inputs on various reform measures prescribed. On Government of Pakistan's request for input on Federal Board of Revenue's tax reform program, an International Monetary Fund Mission also visited Pakistan in August, 2001 [1]. The Task Force had been set extensive terms of reference³,

¹ The TFRTA also included Dr. Wasim Azhar, Dr. Altamash Kamal, Khawar Anwar Khawaja, Ahsan M. Saleem, Naem Akhtar Sheikh, Badar F. Vellani, Syed Shabbar Zaidi, and Syed Riaz Hussain Naqvi as its members; and Ahmad Khan as both a member and secretary.

² Ahmad Khan. Personal Interview – February 5. Islamabad, 2014

³ The TFRTA was tasked to review the: (i) existing management and policies of CBR and its subordinate organizations to evaluate their effectiveness; (ii) management of human resources, i.e. recruitment, training, promotion, evaluation of performance and discipline; (iii) the compensation system for its effectiveness in attracting and motivating qualified persons and ensuring integrity; (iv) the causes of corruption among staff and management of the tax administration and recommend measures to eliminate corruption; (v) system and processes, for the management of information as a key ingredient in improving the effectiveness of the tax machinery; (vi) the organization and structure of the tax administration in relation to the needs of cost minimization, speedy processing and decision-making, engendering a sense of service and responsibility; & (vii) legal and administrative status of CBR and its subordinate organizations.

but it claimed to have majorly “focused on human resources, business process and organization, corruption and information technology”⁴. At the implementation stage, the reform program, both financially and technically, was assisted by the World Bank through the Tax Administration Reform Project (TARP)⁵, which carried a total budgeted allocation of US\$ 149 million – disbursed between 2004 and 2011.

The reform program looked to percolate with the tax system in most areas, including but not limited to, the injection of information technology into the processes; workforce recruitment, training and remuneration; promulgation of new tax laws and rules; induction of professional members at the Federal Board of Revenue; large-scale procurement of work logistics; computing hard- and soft-wares; acquisition of short-term consultancy services in thematic deficiency areas; autonomization; and shifting of focus from hard revenue numbers to ancillary soft areas like grievance-redressal, speedy refund process, and taxpayers' facilitation etc. On business reengineering, the reforms helped roll back the entire network of field formations numbering 757 Circles, 139 Ranges, 32 Commissionerates (Zones), and 5 Regions⁶, vertically integrated [2], and spatially squeeze it into only 15 major cities in the name of functionalization⁷.

In fact, tax reforms have a long history in Pakistan and a large body of literature has been created on the subject by various tax reform commissions appointed

⁴ GOP, The Task Force on Reform of Tax Administration Report. Islamabad: Ministry of Finance, 2001. (ii).

⁵ The TARP was approved (and launched) on December 7, 2004, and closed on December 11, 2011.

⁶ The «Circle» being the basic unit of assessment was headed by Deputy Commissioner, «Range» by Additional Commissioner, «Zone» by Commissioner, and «Region» by Regional Commissioner – the highest IRS officer in the field – with all being vertically integrated into a pyramid.

⁷ See, for a full range of tax reform initiatives, GOP.

over the past 70 years⁸. It has been argued that not only that all of the reform initiatives failed but also that they left the system more gridlocked and retrofitted than before on their completion [3], with TARP-driven reforms not proving to be any different. In fact, TARP were rated a failure, *inter alia*, since “no focus could be given to building departmental capacity to give quantum jump to revenue collection; rent-seeking remained rife, morale of the Service dropped down to abysmal levels, and tax delinquents had a hay-day” [3, p. 403]. Interestingly, while both the Government of Pakistan and the World Bank agreed that the reform program had failed to achieve its avowed objectives, at least, up to a desired level, they counter-blamed each other for the failure. Measuring “World Bank’s performance as highly unsatisfactory” Federal Board of Revenue took the position that the reforms “failed to produce desired results due to weak supervision of the World Bank”, which was “strong at the beginning of the project but overtime became weaker”, and because of the fact that “requests for clearances took longer, leading to many procurement delays” [4].

The World Bank, on the other hand, reckoned Federal Board of Revenue’s performance as “unsatisfactory,” arguing that the “quality at entry was affected by major shortcomings, such as insufficient

identification of critical risk factors and mitigation measures, inadequate technical support on key reform areas, and misclassification of environmental category”, and “criticized the government of Pakistan for inconsistent commitment to tax administration reform agenda, which affected project’s implementation” [4]. At the closure of the reform program, it was remarked that “simple average of the ‘tax to gross domestic product (GDP)’ ratio in Bangladesh, India, Nepal, and Sri Lanka, countries with similar tax policies and administration, is systematically higher than in Pakistan, and (that) the gap increased during this decade” [5, p. 549]. Additional evidence to the fact that the tax reforms failed miserably comes from the fact that yet another tax reform commission was established as soon as Pakistan Muslim League-Nawaz government took office in 2013 – and well before curtains had fallen on many of TARP-propelled reform initiatives⁹.

Against the backdrop of an across-the-board generalized battering of the TARP-driven tax reform program’s hopeless failure, this paper is an attempt to explore into the specifics of how did the reforms actually come by, and then how did they fail? The required empirics are generated by reducing the focus from the overall tax reforms to just one strand, namely, establishment of Large Taxpayers’ Units (LTUs), and then by developing a case study in respect of LTU-Islamabad. The paper consists of seven sections – excluding introduction and conclusion. After a brief literature review in section 1, section 2 sets the national tax reform in context by covering its various dimensions. Section 3 seminally treats the process of establishment of LTUs as LTU-ization in Pakistan’s context by accentuating its preponderant weightage within the overall reform package, and its percolation impact on the state’s revenue function. The next three sections i.e. section 4, 5, and 6, deal with jurisdictional, functional and

⁸ See, for instance, The Sales Tax Committee Report (1950); The Taxation Enquiry Committee Report (Vol. 1–2) (1960); The Sales Tax Committee Report (1960); The Commission on Taxation and Tariff (First Report) (1965); The Commission on Taxation and Tariff (Second Report) (1966); The Commission on Taxation and Tariff (Third Report) (1967); The Commission on Taxation and Tariff (Fourth Report) (1967); The Commission on Taxation and Tariff (Fifth Report) (1967); The Taxation Commission Report (Vol. 1–2) (1974); The National Taxation Reform Commission Report (Part 1–3) (1986); The Committee on Tax Reforms Report (1991); Study of Direct Taxation (1989); The Resource Mobilization and Tax Reforms Commission Report (1994); The Task Force on Fiscal Reforms Report (1996); The Commission on Tax Reforms Report (1998); The Committee to Revise Income Tax (Policy and Law Report, 2001 (2001); The Task Force on Reform of Tax Administration Report; Tax Reform Commission Report (2016).

⁹ The Tax Reform Commission was established vide FBR’s Notification No. 6(5)Co-ord/2014, dated September 25, 2014, captioned as «Constitution of Tax Reforms Commission».

operational capacities of LTU-Islamabad as an institution – drawing out critical deficiencies, which negatively tell on the revenue operations. The Conclusion sums up the debate by drawing insights from the case study and feeding them back into the overall tax reforms so as to infer that the reforms failed because of the drying up of three key input ingredients i.e. governmental ownership, donor oversight and adequate resource supply to sustain the reforms in post-donor withdrawal phase. The summations so derived could then be generalized to other developing countries with struggling tax systems.

1. Literature review

The term “tax reforms” as used in literature, refers to the process of changing the way government manages taxes and administers its tax machinery. The objectives of tax reforms may vary in differing spatial and temporal zones. But in a given situation, a typical tax reform may be driven by any or any subset of a broad set of tax reform objectives, including but not limited to reducing the level of taxation on all or some persons; rendering the tax system more or less progressive; simplifying the tax system to increase compliance; making the tax administration more transparent, corruption-free, and accountable; and bringing efficiency to the tax system so as to enable it to decrease externalities and increase production. Thus, the design of any tax reform would predominantly depend upon what it is intended to achieve, but in reality, there could be apparent and not-so-apparent objectives of a given tax reform process.

Grossman and Helpman argue that the process of state-formation is strongly associated with its capacity to tax as political organizations play a key role towards developing a tax-culture in a society. They identify political economy strains, colonial overhang, and administrative constrictions in fiscally struggling economies as impacting their extractive effort [6]. Bird argues that any meaningful initiative launched to reform a tax system must look to address the problems like understaffing, inadequate skill-set, logistical

shortages, complexity in tax codes, lack of punitive and prosecutive action, inappropriate 3rd party information collection and collation, and risk-profiling that are generally associated with fiscally struggling economies [7]. Gordon and Li hold corruption and red-tape as responsible factors for the poor performance of tax systems in developing countries, which need to be arrested, if the extractive effort is to be enhanced [8].

After comprehensively appraising various theories of taxation, Ahmad and Stern go onto prescribed a general theory of reforms, which makes use of the concept of welfare loss associated with an increase in i^{th} tax sufficient to raise Rs. 1 in revenue, and discounts a differentiation of the structure given distributional, incentive and revenue concerns by a judicious balancing of tax instruments such as a single or dual rate value added tax (VAT) together with systems of excises [9]. Ahmed and Stern’s theory of tax reforms further prescribes that it can, at times, be misleading to look at one set of tax tools in isolation of what is happening elsewhere in the tax system¹⁰; that, the focus of indirect taxation should be final consumption implying that intermediate goods should not be taxed unless there is difficulty in taxing final goods¹¹; that given a natural trade-off between efficiency and equity with well-functioning schemes for income support generally absenting, there is no prescription for uniformity of the indirect system and that, in principle, the economic rationale, for corporate income tax, as distinct from personal income tax, lies in taxing foreign incomes and monopoly rents [9].

¹⁰ For instance, redistribution should not be allocated to income taxes and revenue raising to indirect taxes. Both taxes affect distribution and resources allocation and raise revenue. In particular, the desirability of the differentiation in commodity taxes on distributional grounds is closely related to other policies towards distribution. The stronger the other tools, the smaller the redistributive role for commodity taxes.

¹¹ It must be recognized that the elimination of tariffs except for protection is a long term goal which for revenue reasons cannot be achieved in the short or medium term in countries with very few tax handles.

This is quite apparent that there are no monolithic models of an “ideal” tax system and societies try to approach and conceive their “ideal” tax system as per their own needs and aspirations. The characteristics of an “ideal” tax system for a developing country, as generally prescribed by Bretton Woods institutional framework, include: (a) heavy reliance on a broadly-based sales tax e.g. VAT, preferably with a single rate and least exemptions, and excise taxes on petroleum products, alcohol, tobacco and perhaps a few luxury items; (b) zero reliance on export duties, except possibly as a proxy for income tax for hard-to-tax sectors such as agriculture; (c) reliance on import duties for protective purposes only – since the domestic sales tax is assigned the revenue-raising function – with a low average rate and a limited dispersion of rates to minimize effective rates of protection; (d) an administratively simple form of personal income tax, with exemptions limited, if possible, to personal dependents’ allowances, a moderate top marginal rate, an exemption limit large enough to exclude persons with modest incomes, and a substantial reliance on withholding; and (e) a corporate income tax levied at only one moderate-to-low rate, with depreciation and other non-cash expenditure provisions uniform across sectors and minimal recourse to incentive schemes for new ventures [10].

The prescription traces its origins in the neo-economic liberalism as enshrined in the so-called Washington Consensus [11]. Over the past couple of decades, international financial institutions (IFIs) across the globe, have been advising their client countries to extricate themselves from the welfare function, try to balance their budgets, and fall back upon international frameworks only for balance of payments purposes. Accordingly, fundamental focus on role of taxation appears to have shifted of late, when both academicians and IFIs started to assign much narrower a role to the tax system that it “should focus on raising revenues” [12, p. 1]. It has also been exhorted, “that taxation creates distortions and the main object of tax policy is to design a system that raises enough

revenue to meet a Government’s revenue target while minimizing the level of associated distortions” [13]. It follows that the main purpose of taxation is to raise resources to finance government expenditure, and therefore, a tax system ought to be designed and reformed in a manner which is administratively and politically feasible and which promotes equity and efficiency as far as possible. The IFIs-sponsored prescriptions targeted at raising revenues – that too VAT-propelled revenues – have been widely challenged at the intellectual plain, but the countries facing BOP constrains had no alternative but to walk into implementing the recommended design of the tax system, and Pakistan has been no exception.

To Robina and Mark, revenue effort in Pakistan’s particular case is seriously hampered by shortage of human resource, inadequate skill-set, logistical insufficiency, legal complexities, lax enforcement of penal and prosecutive regimes, ineffectual identification system of taxpayers, below par tax collection by sub-national governments, and that a comprehensive reform program must look to address both policy and administrative side inadequacies [14]. Pasha believes what a country can achieve by launching a process of tax reforms is squarely determined by its overall governance capacity. He contextually defines ‘governance’ as “the capacity of the state to organize the tax system according to some basic and universal principles, and to enforce compliance with rules... (and) implies a minimum degree of autonomy from pressure of special interests in the formulation of policy” [15]. In turn, political will and ability of the ruling elites to articulate the need for reform within an integrated economic and social vision, cohesion and co-ordination among government agencies, success in putting together support coalitions and mechanisms for compensation of losers (if necessary), and presence of capable bureaucratic cadres committed to the proposed reforms, are the vital ingredients of a given state’s governance capacity [15]. Islam holds that a structured framework for working out the benefits of corporate tax reform is not yet

available and, at present, guiding principles should be simplicity, practicality and neutrality [16, p. 7]. Thirsk undertakes a comprehensive analysis of all major taxes i.e. income tax, sales tax, federal excise, wealth tax, and customs revenue from imports, and the way those are levied on individuals, association of persons (AOPs), corporates, and proposes measures for improvement in all areas [17].

Wahid and Wallace focus on the distribution and effective tax rate of all current major taxes in Pakistan to provide a detailed analysis of the incidence of the tax burden by type of tax, and suggest options for tax reform to rectify distortions [18]. Michielse looks at the international dimension of Pakistan tax system in detail, identifies areas needing improvement and recommends policy interventions [19].

2. Research context

The paper argues that, in overall terms, TARP-led tax reforms reflected a fortuitous coincidence of wants on part of Government of Pakistan and World Bank. The Musharraf regime, in the post-9/11 period, had seamlessly aligned itself with US in the global war on terror. This politically correct alignment in the temporal context not only helped trigger the economy, but also propelled the bilateral and multilateral donors to scramble to Pakistan and handhold it in many key development and governance areas. The mutual urge both on part of Pakistan and World Bank was a key factor of the tax reform program, which, in turn, was nested in the international system. At the turn of the decade, however, Pakistan saw its relevance and role in war on terror nosedive. This, coupled with Musharraf regime's end and the dawn of a new democratic dispensation in Pakistan resulted in almost complete dissipation of ownership of the tax reforms program which was still in a phase of implementational infancy. Periodic monitoring of the reform program by the World Bank also seized in December 2011 when TARP was formally closed down.

This way the change of government in Islamabad and closure of TARP took

out two key dynamics and drivers of the reform program, that is, political ownership and donor oversight. This not only meant virtual abandonment of the tax reforms mid-stream, but also a sudden squeeze on resource allocation that were, in fact, needed to continue implementation of various reform measures. The bureaucratic leadership having a sense of fiscal imperatives also vanished with the change of political leadership giving the tax reform initiative a critical blow. It goes without saying that tax reforms have always been hard to conceive, harder to implement, and hardest to sustain. Once implemented, tax reforms require on-going supply of political will, administrative leadership, and investment of resources both in terms of men and means to sustain them over rather a longish period of time to have them seeped into and become part of the main system. This did not occur in Pakistan's context.

At the beginning of 2010, a slackening economy, sky-rocketing oil prices in the international market, launch of the operation *Zerb-e-Azab* in Federally Administered Tribal Areas to root out terrorism, and below par revenue effort, resulted in an exploding fiscal deficit, which, in turn, led to an increased demand on the tax administration for ever more revenues pushing it into a brute number-chasing machine. This is how the TARP-driven tax reform program was never implemented full-length with some of the measures that had been completed getting rolled back; others never getting close to the finish line; and still others still being in an embryonic stage when the orphanage struck it in 2011. Resultantly, the reversions on part of the tax administration to pre-reform mores started to take place under the hammer of steep revenue targets, which not only went steeper by the year but also that their periodicity turned evermore frequent – from annual to quarterly, from quarterly to monthly, from monthly to weekly, and of late, from weekly to daily. Finance Minister Ishaq Dar had repeatedly claimed to have fixed tough targets for the revenue administration so that it stretched itself a bit and was always on its toes. No doubt,

he appears to be completely oblivious of implications of fixing irrationally steep targets, which were completely divorced from the operating economic fundamentals, potential, and realities. The top revenue mandarins having no orientation of the economy in holistic terms then get unleashed on the taxpayer to hunt down the targets madly pursuing them on “beg, borrow, or steal” basis. It has been argued that in pursuance of brute revenue targets, the entire tax system has been withholdin-gized, which is generating not only insufficient but also unhealthy revenues with serious fall outs for the system, economy and the society [20]. The tax administration, it is posited, has become a tail-eating snake in that the greater the amount of revenue it generates, the more harm it causes to the economy [20].

It is against the backdrop of this botched tax reform program that LTU-Islamabad is being put to a comprehensive micro-level institutionalist analysis with a view to drawing empirically-based insights to validate macro-level summations. The question that the paper looks to answer is if the absence of continued political will on part of the government and sustained monitoring on part of the donor causes failure, reversal, or even perversion of a tax reform program? A subsidiary thematic thread that seams the study together is how come, absent both of the critical ingredients, a state as hungry for revenues as Pakistan, could afford to be so casually oblivious of its own fiscal imperatives – as evidenced by flagrant refusal to invest in the revenue administration.

3. LTU-ization of the tax system

The TARP’s flag-ship initiative was the creation of three LTUs in Karachi, Lahore, and Islamabad¹². This essentially meant establishment of highly specialized taxing organizations in metropolitan centers with earmarked catchment areas. The LTUs were designed to exercise jurisdiction over all cases having high revenue-yielding potential located in their

respective catchment areas; be adequately staffed with well-trained and qualitatively superior human resource; and get allocation of funds good enough to conveniently undertake revenue operations. At some level, the creation of LTUs also implied that the remainder of the field formations would operate primarily as a breeding ground for new cases, officers, and officials to be fed annually to these frontline revenue-spinning behemoths in a dynamic manner, that is, simultaneously taking deadwood out of LTUs. The *stated* objectives of the establishment of LTUs were to provide one-window facilitation to the taxpayers with revenue contribution above a definite threshold, extend better service to major taxpayers, improve tax collector-taxpayer relationship in qualitative terms, ensure transparency, mitigate risks in the handling of major revenue-yielding cases, reduce compliance costs by speeding up the dispute resolution mechanisms, and inject standardization in the implementation of tax laws across sectors and regions. The *pursued* objectives of creation of LTUs, however, were to target revenues full-throttle where they actually lay through realignment of resources in a forceful and focused manner.

The establishment of LTUs having been a key component of most World Bank, IMF and other multilateral and bilateral donor-sponsored tax reform programs, was not unique to Pakistan. In Pakistan’s case, however, it proved to be a lot more than mere establishment of a few LTUs; it bordered on LTU-ization of the entire tax system in that not only that the LTUs were designed to harvest a bulk of the state revenues upto around 75 percent, but also that a major portion of the tax machinery was rolled back from the length and breadth of the country and concentrated into 15 major urban centers, and whatever little was left was assigned a tertiary role of taxpayers’ facilitation, survey of new tax cases, monitoring of withholding taxes, and raising of deterrence against evasion through sparse audit and detection. Moreover, since geographic spread of the tax administration was massively curtailed greatly limiting its footprint and

¹² In 2016, another LTU, Karachi-II was established reinforcing confidence in the LTU-ization of the tax administration.

capacity to leverage itself for proper revenue generation mass withholdingization of the system compulsively took place [20]. The intensity of LTU-ization of the tax system can be gauged from the fact that within years of their establishment the total tax collection by the LTUs rose up to be above 65 percent of the total internal taxes as also plotted in Figure 1.

What the data shows is that the LTUs' contribution to total inland taxes conservatively hovering around 43 percent in 2008 touched the peak point of 65.4 percent by 2012. In fact, the LTUs' contribution touched the 60 percent mark in 2009 and for the next four years stayed above it, before slipping down in 2014, and falling down to 55.5 percent in 2016; slightly recovering in 2017 to 58.5 percent. This is a vivid evidence of the fact that not only that reforms were not implemented with full thrust and integrity but also that they lost the momentum well before attaining the required trajectory intended and required. A dissection of LTUs' performance in ab-

solute numbers vis-à-vis total inland revenues collected as plotted in Figure gives more revealing insights.

It would be seen that LTUs' revenue curve starts to pick up around 2008, when their contribution reached 279 billion out of the total inland tax collection of Rs. 647 billion. The LTUs' revenue curve attains the highest water mark in 2012 when its contribution at Rs. 802 billion constitutes 65.4 percent of the total inland taxes to the tune of Rs. 1227 billion. Then on not only that LTUs' revenue curve tends to flatten out but also that the gap between total inland taxes and LTUs' contribution curves starts to widen incessantly. It is interesting to note that while the (exponential) trendline of the total inland taxes curve broadly follows the actual numbers, that of the LTUs' contribution curve first lags behind between 2008 and 2013, and then 2014 onwards overtakes the actual number line. A simple arithmetic calculation results in a minimum loss of Rs. 148 billion if worked out on the mutual ratios attained in 2012.

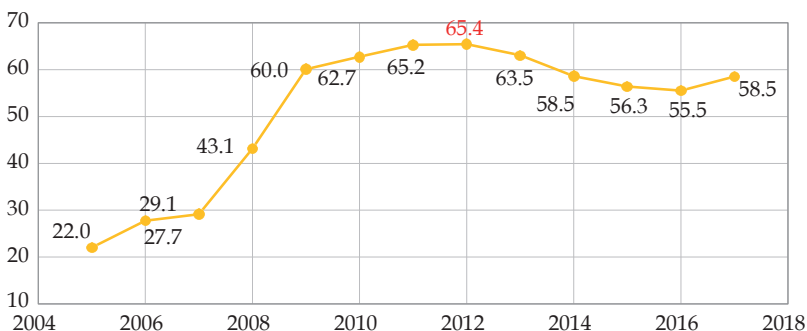


Figure 1. LTUs' Contribution as % of Total Revenue

Source: FBR – DRS Year Books

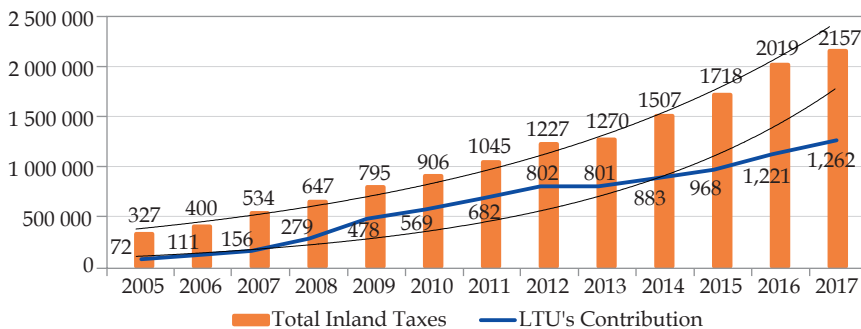


Figure 2. Total Revenue vis-à-vis LTUs' Contribution, Rs. in billion

Source: FBR – DRS Year Book

This is the result of a botched, failed, and half-way abandoned tax reforms.

4. LTU-Islamabad

If measured purely in terms of revenue numbers, establishment of LTUs fully justified itself as the revenue growth rate of the three LTUs remained greater than the national revenue growth rate until, of course, 2012; where-after it plummeted. In sharp contrast to LTU-Karachi, and LTU-Lahore, it is generally argued that LTU-Islamabad, has not performed even closer to its real potential. This insinuation is not all that misplaced when analyzed against the backdrop of LTU-Islamabad’s performance over the past decade. The comparative revenue growth trajectories of all four LTUs are plotted in Figure 3.

It would be seen that all three LTUs exhibit positive trends in revenue generation though at varying rates. It is in-

triguingly evident that LTU-Islamabad’s revenue curve rises in leaps between 2008 and 2012, but then the line gets straightened and stubbornly starts to move range-bound around the figure of Rs. 350 billion. This certainly is an abnormality when compared with the revenue curves of LTU-Karachi and LTU-Lahore, which continue to rise unabated. The paradox gets further complicated when the three LTUs’ performance is compared on the basis of the simple efficiency-output criterion i.e. total revenue generated per case per annum. On this rather a simple yardstick, LTU-Islamabad’s performance turns out the best as per the data presented in Figure 4.

It is evident that LTU-Islamabad’s performance defined in terms of revenue generated per case at Rs. 901 million followed by that of LTU-Lahore at Rs. 380 million, LTU-Karachi at Rs. 325 million, and LTU-

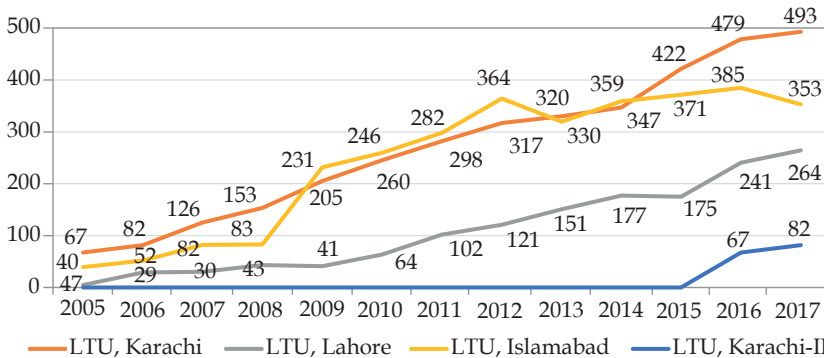


Figure 3. LTU Karachi, Lahore, Islamabad, & Karachi-II – Revenue Contribution, Rs. in billion

Source: FBR – DRS Year Book

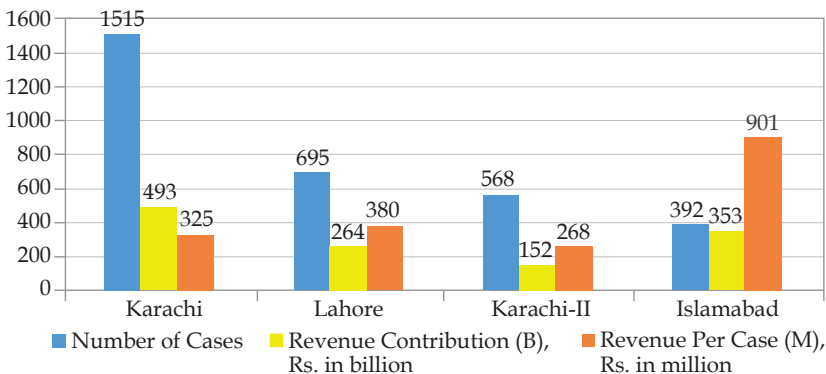


Figure 4. Revenue Generation per Case – T/Y 2017

Source: FBR – DRS Year Book

Karachi-II at Rs. 268 million far stands out and outperforms its closest competitor LTU-Lahore, by a staggering revenue differential of Rs. 521 million per case. Thus, the paradox that – despite LTU-Islamabad’s ability to extract far greater revenue per case in comparison with other LTUs, it is not being able to keep and sustain an upward trajectory of its revenue curve – warrants serious and comprehensive analysis. It is premised that the straightening of LTU-Islamabad’s revenue curve in Figure 3 – notwithstanding its higher per case yield as in Figure 4 – is due to abandoning of the foundational caveats of the reform program whereby the outfit was flagrantly denied adequate financing, feeding of fresh case portfolio, and staffing on an annual basis.

The required testation of the hypothesis is undertaken from the triple-perspective of jurisdictional, functional, and operational capacity as constrained by a lack of political ownership, manifesting in non-allocation of adequate number of tax cases, adequate funds, logistics, and suitable human resource. The paper also takes an intermittent cursory view of the national dynamics, which, directly or indirectly, affect LTU-Islamabad’s performance.

5. Jurisdictional capacity

Presently there are a total of 392 tax cases that have been assigned to LTU-Islamabad, out of which 293 are corporate case, 50 are firms, and remaining 53 are individual taxpayers’ cases¹³. Recently, however, the jurisdiction of the directors of all corporations whose tax jurisdiction lies with LTU-Islamabad was also reposed therein, whereby an approximate tally of 1500 individual cases of indeterminable value have also been added¹⁴. However, in practical terms the case records of only 150 cases were got actually transmitted, leaving the status of the remaining 1300

cases of varying revenue potential uncertain. It will not be out of place to mention that as per the original scheme of reforms, LTUs were to have jurisdiction over large revenue-yielding corporate cases only. It is premised that LTU-Islamabad’s revenue curve in Figure 3 has flattened majorly because the case portfolio that was required to be assigned to it dynamically on an annual basis was not assigned. This plausibly could have happened on four counts.

5.1. Non-operationalization of “catchment area” concept

The underlying purpose of establishing LTUs at geographically dispersed locations was to earmark their catchment areas with the understanding that all major cases above a prescribed threshold in that entire region would fall in some LTU – Karachi, Lahore or Islamabad. Thus, while LTU-Karachi’s catchment area was supposedly entire provinces of Sindh, and Baluchistan, and LTU-Lahore’s entire central and south Punjab, LTU-Islamabad’s catchment area was restrictively defined in terms of Islamabad Capital Territory, and Rawalpindi Division – although, initially Khyber Pakhtunkhwa was also taken to have been earmarked as LTU-Islamabad’s catchment area. This meant that all “large” cases located in Khyber Pakhtunkhwa fell out of the nexus of any LTU, and were consequently peacefully perched in Regional Tax Office, Peshawar and Regional Tax Office, Abbottabad¹⁵. This happened in complete derogation to the very concept, *raison d’être*, and the purpose of LTU-ization. Going by the tax declarations filed for T/Y 2017, there were a total of 80 cases in Khyber Pakhtunkhwa with a turnover in excess of Rs. 1,000 million – the qualifying condition for a case to be assigned to an LTU. Accordingly, all those 80 cases legitimately belonging to LTU-Islamabad are currently lying in Regional Tax Office, Peshawar and Regional Tax Office, Abbottabad. In tax terms, the jurisdictional locale of a case can have

¹³ This was done vide FBR’s Order F. No. 5(26)Jurisdiction/2016/91894-R, dated July 13, 2016.

¹⁴ The tax jurisdiction of directors’ individual cases was transferred to LTU, Islamabad, vide FBR’s Notification No. 5(26)Jurisdiction/2016/91894, dated July 13, 2016.

¹⁵ Jurisdictionally, the entire KP is divided between RTO, Peshawar and RTO, Abbottabad.

concrete consequences — both for the taxpayer as well as for the exchequer, which means that given LTU-Islamabad's ability to generate relatively greater revenues, these cases would have been put to a harder audit squeeze resulting in substantial additional contribution.

5.2. Erosion of LTU-Islamabad's tax jurisdiction

Since re-energization of LTU-Islamabad's jurisdiction did not take place at regular intervals, the bulk of its cases have lost their vibrancy, vitality, and revenue potential. Resultantly, LTU-Islamabad, is currently left with only 138 cases above Rs. 1,000 million threshold. It will not be out of place to mention that out of these 392 cases 119 did not even file their tax returns for T/Y 2017. Another factor that may have contributed to the erosion of LTU-Islamabad's jurisdiction is that due to intense oversight of the cases, most of the major taxpayers have established their subsidiaries in close-by Regional Tax Offices to divert revenues and get assessed. This particular issue, though recent in nature, yet highly detrimental to the cause of revenue collection, has yet to be systematically analyzed and arrested through proper administrative and legal interventions.

5.3. LTU-Islamabad's cases in regional tax offices, Rawalpindi & Islamabad

A substantial number of cases that otherwise qualify on the basis of Rs. 1,000 million to be in LTU-Islamabad, are conveniently operating well below the departmental radar in Regional Tax Office, Rawalpindi and Regional Tax Office, Islamabad. The number of such cases on the basis of T/Y 2017 is 24 and 51, respectively. The abandoning of the cardinal principles of reforms led to steep fixation of revenue targets for Regional Tax Offices as well that bred a perverse tendency in the management of the Regional Tax Offices to protect those cases under their jurisdiction, and since the arrangement also suits those taxpayers, it is quite easier for those cases to stay out of LTU-Islamabad.

5.4. Jurisdictional manipulation

Then there are tax cases which, purely on the basis of their potential to contribute to the national exchequer, should be in LTU-Islamabad. However, due to deft manipulation, they manage their declarations so as to keep themselves out of LTU-Islamabad's jurisdiction, and resultantly an enhanced focus, oversight, and audit squeeze. In fact, such cases require greater administrative focus, tracking and adequate response.

Thus, going by the set threshold of turnover of Rs. 1 billion, there are currently more cases at 144 that lie outside LTU-Islamabad than inside at 138, and this is happening right in the face of LTU-Islamabad's unparalleled performance on per case basis and an equally flat revenue curve. Likewise, the eroding jurisdictional capacity of LTU-Islamabad on account of fragmentation of corporations and manipulation of account can be construed to have a lowering impact on its revenue curve as plotted in Figure 3, could be substantial.

6. Functional capacity

One of the key thematic pillars of tax reform initiatives under TARP, and by implication of the LTUization was the reconfiguration of tax field formations i.e. LTUs and Regional Tax Offices on functional lines under which specialized stand-alone Commissionerates for audit, enforcement, prosecution, information processing, taxpayers' facilitation, and human resource management were to be established. The functional system remained in place until around 2013, and then at different occasions it was rigged and reversed sans any legwork and due diligence, and the archaic pre-reform configuration was reintroduced whereunder everybody would do everything. The support Commissionerates went redundant as the roles assigned to them were essentially monopolized by Chief Commissioner's office having been vested with little or no legal powers under the taxing statutes. These heretic deviations from the tax reforms cardinal principles had their implications for both the revenue and the revenue system. With

these perversions in the backdrop, LTU-Islamabad’s functional capacity can be analyzed from the perspective of its two critical constituents – the Commissionerates and the Functional Units.

6.1. Commissionerates

Functionally, LTU-Islamabad is configured into four revenue Commissionerates, with each Commissionerate consisting of two Additional Commissionerates and six Functional Units headed by Deputy Commissioner, Inland Revenue Service. Figure 5 depicts the deployment of Deputy Commissioners in each Commissionerate as of December 31, 2017.

It can be noted that LTU-Islamabad is currently operating at only 50% of its prescribed strength as far as the critically important tier of Deputy Commissioner is concerned. Resultantly, out of 24 Functional Units, 12 are being manned on ad-hoc basis by assigning additional charge to other incumbents. Deputy Commissioners being over-worked are unable to make qualitative difference at the time

of making assessment of tax liability in large cases. They feel alienated from the organizational goals – a key input in the context of any target-oriented enforcement outfit.

6.2. Functional units

Likewise, the capacity of Functional Units is further sapped and becomes questionable when viewed from the perspective of deployment of proper workforce in there. The workforce deputed in each Functional Unit of each Commissionerate is plotted in Figure 6.

The revenue administration may not have yet prescribed the standard (and adequate) size of a Functional Unit having a critical mass and functionality¹⁶, yet the deployment of both *professional* and *support* staff in each Functional Unit is alarmingly scanty. The non-availability

¹⁶ This, in itself, may be an evidence of the fact that the tax reforms remained truncated and the work on apparently insignificant but critically important issues was not carried out or completed.

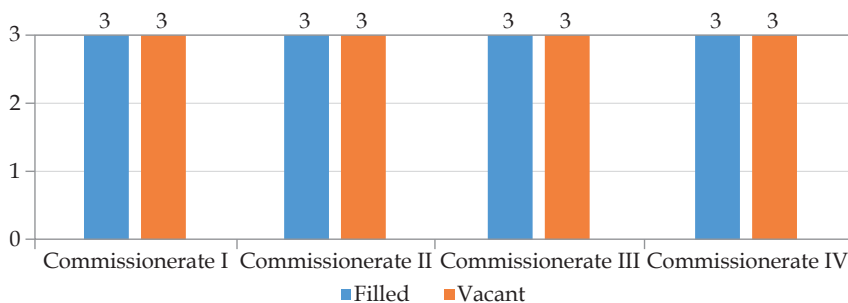


Figure 5. Functional unit occupancy

Source: LTU-Islamabad

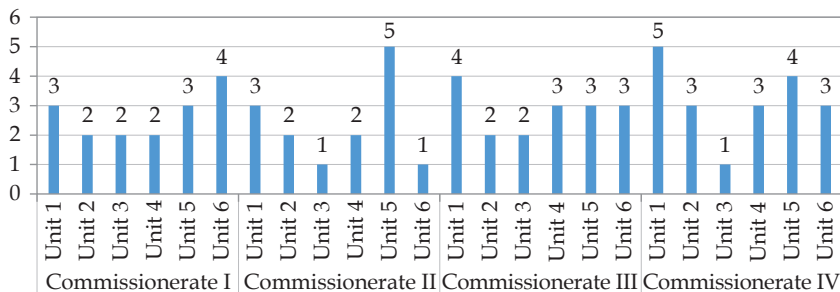


Figure 6. Functional unit – workforce gap

Source: LTU-Islamabad

of qualitatively superior and motivated workforce appears to have operated as a key pull-back factor on LTU-Islamabad’s revenue effort over the past decade. LTU-Islamabad’s four revenue Commissionerates, which currently are operating at exactly 50 percent of their sanctioned strength, cannot reasonably be expected to achieve the assigned targets in a healthy and wholesome manner and give required growth in revenues, and if they continue to do so under duress, LTU-Islamabad’s revenue curve in Figure 3 might soon even start to nose-dive from the current descending trend. The Functional Units – the very lynchpin of the taxation system – are operating with scant or no professional support with some of them being headed by Deputy Commissioner as one-man army, and would, therefore, be unfair to expect of them any quantum jump in revenue, which LTU-Islamabad desperately needs to resurrect its declining revenue curve.

7. Operational capacity

LTU-Islamabad’s operational capacity can be analyzed in terms of cost of collection (CoC), workforce insufficiency, and logistical deficiencies defined in terms of transportation, system hard and software, and office space availability.

7.1. Cost of collection

One of the key ingredients of any organization’s performance is as to how much it has in overhead cost allocations. LTU-Islamabad’s CoC in absolute terms alongside total revenue collected over the past one decade or so is plotted in Figure 7.

It is intriguing to note that during LTU-ization’s first phase i.e. 2008-2012, the revenue curve and the CoC curve rise in tandem, but then around 2012-13, CoC curve starts to lag behind though both lines maintain their respective trajectories. In overall terms the gap between the curves continues to widen slowly but steadily. It appears that the stress on the CoC curve starts to impact the revenue curve around 2017, when both lines begin to take a downward trend. The standard yardstick of CoC as percentage of total revenue collected when inducted into the analysis can sharpen our understanding of the issue. LTU-Islamabad’s CoC as percentage of revenue collection is plotted in Figure 8.

Against the world average of around 1.5 percent in CoC, and Pakistan’s overall CoC of 0.7 percent, LTU-Islamabad’s CoC is currently embarrassingly below 0.1 percent meaning thereby that it does not even have a Paisa¹⁷ to spend to collect Rs. 100 in revenue. During the first half of LTU-Islamabad’s life, CoC was above 1 Paisa but then it drops below 1 Paisa. The oppressive implication of lower CoC gets

¹⁷ Pakistan rupee is divisible into 100 paisas; over time, the devaluation of currency due to inflation, the Central Bank (State Bank of Pakistan) has stopped producing coins denominated in paisa, but rupee continues to be consisting of 100 paisas notionally.

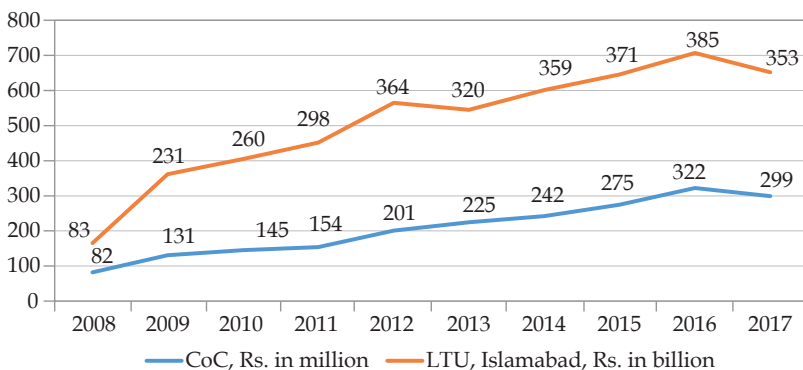


Figure 7. Revenue collection & CoC comparative trajectories

Source: LTU-Islamabad

more pronounced in cases where wages (and other fixed costs) constitute a bigger portion of the total CoC. Figure 9 bifurcates LTU-Islamabad’s CoC between wages and residual resources available to the management to undertake revenue operations.

It is observed that currently the portion of CoC going into salaries and wages is as high as 80 percent. Higher salaries add to the welfare of the workforce but conversely it means availability of less resources for actual revenue operations. The ratio of residual CoC to wages was 34 percent in 2009, which went down to 19 percent in 2013, rose to 28 percent in 2016, but again has dropped to 20 percent, with both lines taking divergent trends. The drop in wage bill is attributable to increasingly scantier workforce deployed at the LTU-Islamabad, and not due to any excess allocations in operational costs. In reality, things come to such a pass that no

funds are reported to fuel the transportation fleet and process other routine matters. At one stage, the officers even had to contribute from their own pocket to file urgent suits in the Supreme Court to protect revenue from going down the drain since no funds in the relevant account head were available.

7.2. Workforce gap

LTU-Islamabad, much like LTU-Karachi and LTU-Lahore, was supposed to be a flagship Inland Revenue Service filed formation with quality human resource in sufficient quantity to process top revenue-yielding cases. At least, in quantitative terms, this premise held its ground at the onset when the workforce deployed slightly exceeded the workforce assigned. However, soon thereafter the deployment of human resource started to lag behind even the sanctioned workforce as plotted in Figure 10.

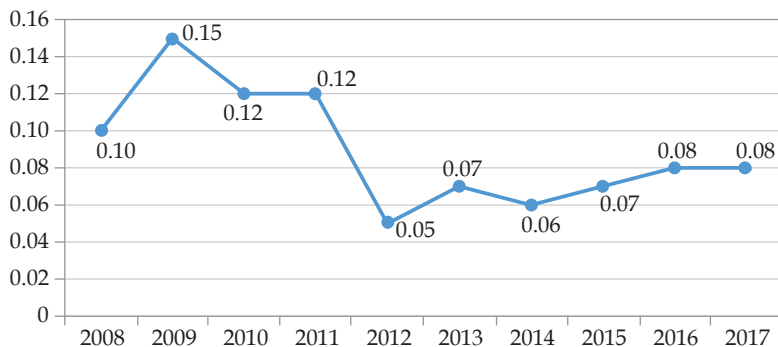


Figure 8. CoC as % of revenue collected

Source: LTU-Islamabad

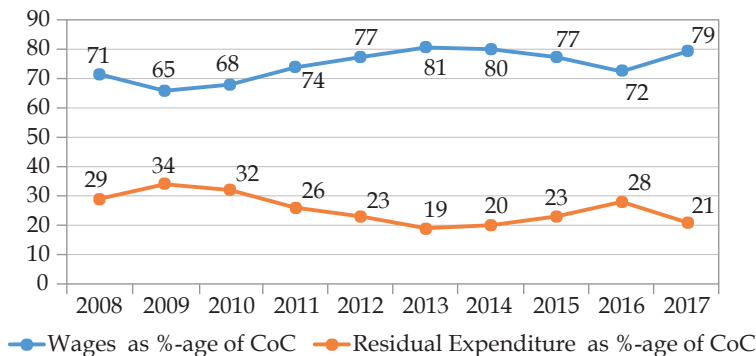


Figure 9. CoC – wages & residual

Source: LTU-Islamabad

The data reveals that not only that workforce deployment has been less than the required levels but also that the former has come down from its highest mark of 381 in 2009 to 242 in 2017. In this respect, a concomitant serious issue confronting LTU-Islamabad is that of workforce ageing, which currently turns out about 50 on the average. The ageing factor attains further significance in view that it is even higher in professional cadres – Inspectors and Auditors. The cadre-wise ageing pattern at the workforce level is plotted in Figure 11.

The data presented in Figure 11 vividly reveals that average age in the professional cadres like Inspectors and Auditors etc. is 47 and 50, respectively. It goes without saying that ageing adversely impacts output and performance of the employees, and by implication, of the organization. The cumulative effect of the foregoing factors renders LTU-Islamabad, stressful and unpleasant place where few are willing to work, and give their best. This, of course, could not have been one of the desired outcomes of the reforms, in general, and LTUization, in particular.

lamabad, stressful and unpleasant place where few are willing to work, and give their best. This, of course, could not have been one of the desired outcomes of the reforms, in general, and LTUization, in particular.

7.3. Logistical deficiencies

Logistical deficiencies confronting LTU-Islamabad, are being analyzed in terms of transportation facilities, the quality of computing hard- and software, and office-space available to carry out revenue operations.

7.3.1. Transportation

The total existing CC capacity of LTU-Islamabad’s transportation fleet consisting of 30 vehicles comes to CC 31,000 as of December 31, 2017, which is extremely meagre vis-à-vis its revenue contribution. The transportation fleet by year of make/model is plotted in Figure 12.

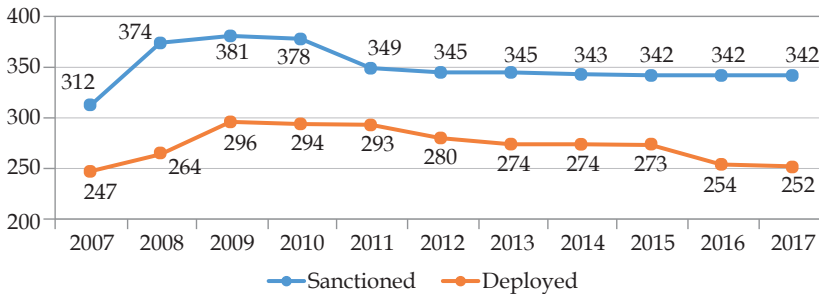


Figure 10. Sanctioned & deployed workforce gap

Source: LTU-Islamabad

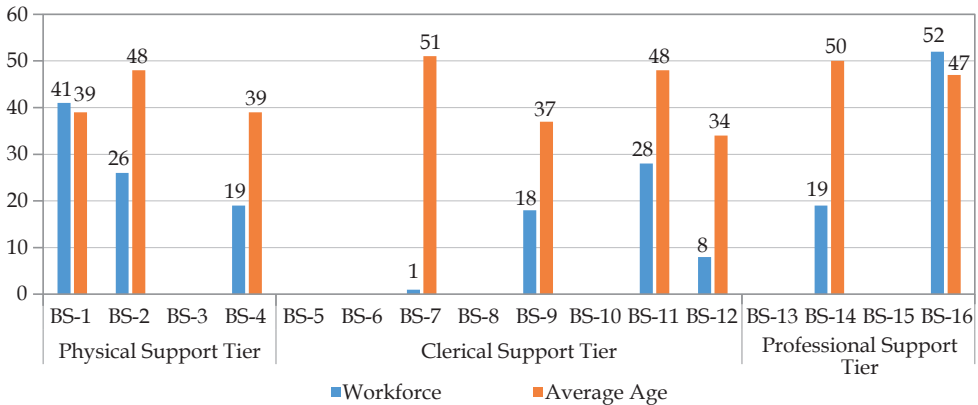


Figure 11. Workforce aging pattern

Source: LTU-Islamabad

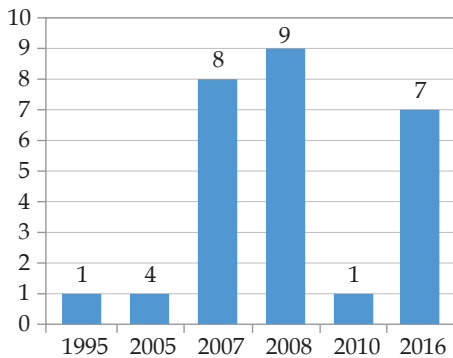


Figure 12. Transport fleet by model (year)

Source: LTU-Islamabad

Out of the total fleet of 30 vehicles only 7 are of recent make and, therefore, less operational cost-intensive. Going by the government's own rules which allows depreciation @ rate of 20 percent, the remainder of the entire fleet of LTU-Islamabad, has already been depreciated; hence outdated. Its compulsive retention by the management eats into the financial allocations on account of fuel and operational maintenance at a rapid pace, which then do not get replenished resulting in stress on revenue operations.

7.3.2. Computing hard & software

Contrary to Government of Pakistan rules stipulating that no pirated software could be used at any of its properties, LTU-Islamabad is compelled to use software which does not necessarily conform to the standard of propriety and lawfulness in its fullest sense. The situation is equally grim when it comes to hardware facilities. Both hard and soft-wares being used by LTU-Islamabad are risk-prone, hazardous and relatively deficient in reliability and robustness. Quite often the systems get stalled, crashed, broken down bringing revenue operations to a grinding halt.

7.3.3. Workspace availability

LTU-Islamabad is one of those sparsely lucky public sector organizations that are housed in their own premises. A Plan-

ning Commission 1 (PC1)¹⁸ was prepared in 2004 for a total projected cost of Rs. 29.450 million to be spent over the next two years. Originally, it meant to be the office building for the Regional Commissioner, Income Tax/Wealth Tax (Northern Region), Islamabad. It was noted that the "building is of paramount importance to achieve the objectives of projecting the image of the organization", and, therefore, an effort was "made to produce a structure where the real amenities and aesthetics of the building are shared and enjoyed by the users and visitors alike"¹⁹. The economic life the building was estimated to be 60 years at a recurring cost of Rs. 0.790 million per annum. The project was approved in the Departmental Development Working Party meeting held on April 28, 2004, by observing that "this building meant for Regional Commissioner Income Tax's office would also be utilized for "Large Taxpayers' Unit" to provide quality services to the taxpayers at single access point under the tax administration reform project"²⁰. The project having gone into time overrun for a couple of years was completed in 2008. Interestingly, only a gray structure was completed and then handed over leaving the entire premises to be partitioned on open-floor basis. At the long last, LTU-Islamabad moved to its present premises in late 2008.

At the outset, gross office space available was 105 square yards per employee; it came down to 98, and then 87 square yards in 2009, and 2010, respectively. Nevertheless, still in the spirit of the reforms and LTU-ization, all amenities like cafeteria, potable water, mosque and parking lot were conveniently made available. Suddenly, however, in 2011, the space available per employee nosedives down to 29 square yards as also depicted in Figure 13.

¹⁸ "PC1" stands for Planning Commission 1 and means the basic blueprint of a project to be funded under Public Sector Development Programme (PSDP).

¹⁹ PC1 of the project titled «Construction of Office Building for Regional Commissioner Income Tax/Wealth Tax (Northern Region), Islamabad».

²⁰ Minutes of the Departmental Development Working Party Meeting held on April 28, 2008, in CBR (HQs), Islamabad.

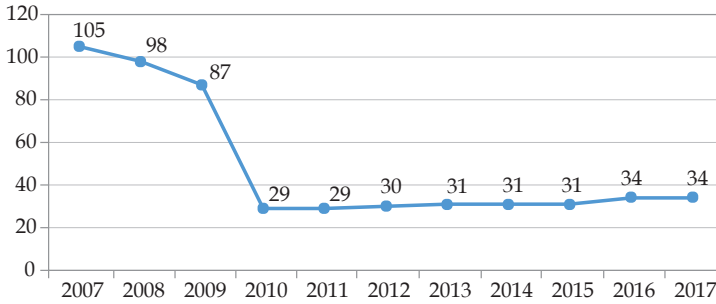


Figure 13. Office space available per person

Source: LTU-Islamabad

In fact, FBR had written in 2009, enquiring of LTU-Islamabad, “to intimate whether Regional Tax Office, Islamabad, can be adjusted in the newly constructed Income Tax House”²¹. LTU-Islamabad, promptly responded by stating that “for the proper functioning, LTU-Islamabad, requires all of the 2nd, 3rd, and 4th floors in the LTU Complex to accommodate its sanctioned strength, record (Income Tax & Sales Tax), miscellaneous storage, staff cafeteria etc.” and therefore, “it may not be possible to accommodate/adjust Regional Tax Office, Islamabad, in LTU, Complex”²². However, in late 2010, FBR bulldozed Regional Tax Office, Islamabad’s placement in the LTU-Islamabad’s premises, sending the entire reform-compatible inner lay-out in a total disarray. The office space available also hit the rock-bottom at 29 square yards in 2010, but then slightly improved to 34 square yards per person in 2017, which, in fact, is not due to any increase in the office-space available but due to reduction in the manpower available on account of transfer and superannuation.

At some level, workforce attrition may have been induced by workplace reduction. Quite contrary to the original designs, LTU-Islamabad, on a closer look, paints a run-down, untidy and stuffy place with water-leaking in facility areas, choking power systems, and insufficient

cramped service areas. People eat at their desk or in clusters, and offer prayers at the retrofitted mosque established in the parking area externalizing vehicles and bikes parking. The basement level which was originally supposed to be a parking lot, now caters to more than half of LTU-Islamabad’s workforce, and since it lacked built-in design features for such usage, it is eternally stuffy, less airy, dark and unpleasant creating health hazards for large number of employees housed there. It may, therefore, not be astonishing that LTU-Islamabad’s medical bill has exponentially gone up over the past half-decade, unfinanced at any given point in time. In the process, the biometric system installed at the entrance has also been rendered redundant as people are moving in and out at multiple times during the day for multiple legitimate purposes.

Thus, the stress on LTU-Islamabad’s revenue curve in Figure 3 can be explained in terms of the stress on its CoC curve as plotted in Figure 7 and Figure 8. Workforce deficiency consistently running one-fourth of the prescribed strength, in combine with other related variables like workforce training and motivation – coercively imping on LTU-Islamabad’s revenue operations as a substantive constraining factor. Logistical deficiencies of grave nature as gleaned not only undermine the very rationale of LTU-ization of the tax administration, but also adversely affect the taxpayer perception – a key element for any tax administration.

²¹ FBR’s Memorandum No. 7(1)CBR/Est-ate/07, dated July 14, 2009.

²² LTU-Islamabad’s Memorandum No. DG/LTU/2009/321, dated August 5, 2009.

Conclusion

It can thus be summarized that LTU-Islamabad's consistently static performance for the past five years stubbornly staying below Rs. 400 billion mark is explainable in terms of its triple-deficiency of jurisdictional, functional, and operational capacity constraints. These constraints directly stem from the polity's jettisoning of the tax reforms well before the finish-line. Astonishingly, LTU-Islamabad's uncanny ability to generate far more revenue per case as compared to other LTUs has either never been propagated or heard by the decision-making structures. The "catchment area" concept being the cornerstone of the LTU-ization process has paid off through relatively high-trajectory revenue-generation over the past one decade or so elsewhere but the same conveniently got hushed up with reference to LTU-Islamabad; it certainly had a definite price-tag in terms of revenues foregone. It has also convincingly been brought out that LTU-Islamabad's jurisdiction stands undermined to such a level that currently it may not only be insufficient to lift up the revenue curve but also that it may not even be able to maintain its current trajectory – until, of course, tax revenues pertaining to future periods are pulled up as is the vogue presently. The continued non-assignment of LTU-worthy cases to LTU-Islamabad may have its consequences not only because of the potential additional revenues being squandered on this count but also because its existing portfolio may be losing its vitality through attrition. It is not astonishing that in the wake of non-rule-based assignment of cases to LTU-Islamabad, some of the existing taxpayers may have wriggled out of it to softer taxing organizations e.g. any of the Regional Tax Offices.

One of the most critical blow that the TARP-pushed tax reform program received before some of its key interventions adequately gelatinized was the polity's complete shift of focus from *reform* to *revenue* towards the onset of Pakistan Muslim League-Nawaz government in 2013. Finance Minister Dar systematically

applied a reset button on the tax reforms by appointing a brand new tax reform commission summarily abandoning the still ongoing reforms. Fixation of monthly targets and their frantic chasing on "beg, borrow, steal" basis crept in partly due to mounting fiscal stress, partly due to the merger of income tax and sales tax departments, and partly due to wanton ways of dealing with the state's revenue function. This way the traditional culture of making proper assessments, and defending them at appellate fora became almost extinct over the past one half decade. Monthly target fixation led to monthly accountability of failures – which took the entire workforce into a frenzied mode of taxation whereby holding back of refunds and pulling forward of tax on future earnings has become the new normal – changing the very DNA of the tax machinery and reversing the role of FBR from that of revenue-generator to part debt-creator a la Ministry of Finance, Economic Affairs Division, National Savings Organization, and even the State Bank of Pakistan. It was remarked that now the only difference between money printed by State Bank of Pakistan and taxes collected by FBR was that the latter was cheaper, as during F/Y 2016 State Bank of Pakistan had spent Rs. 9.1 billion on printing money [21], while FBR had spent far less. Alm and Khan survey Pakistan's tax policy effects on business incentives, evaluate its corporate taxation, compare it with worldwide trends in the taxation of corporates, and suggest ways and means to reforming the system of business taxation in Pakistan [22].

The analysis carried out in the paper divulges a few key take-homes, which carry robust potential of generalizability to other similarly-circumstanced developing countries, their tax systems, and the World Bank and IMF-driven tax reform programs. Firstly, the tax reforms have no chance of making to success levels if political ownership dissipates mid-stream as happened with the process of LTU-ization in Pakistan. At some level, mere political ownership may not be enough, but an overarching consensus across the political divide may be required to ensure con-

tinued political sanction of the reforms to hedge against the hazards of government changes. Secondly, donor-driven reforms do require continued donor-ownership, oversight and monitoring particularly if it involves behemoths like IMF and World Bank. The inclusion of TARP-type tax reforms as an agenda item in International Monetary Fund's Article IV consultations even after the closure of project on part of the World Bank, could have made a difference. This is because political elites of the developing countries, as soon as they get a chance, choose to have a go at the tax system. It has been argued that monopolization of the tax system is of utmost importance if the ruling elites have to protect their riches and further enhance the extant status quo [23]. Lastly, it is evi-

dently in developing countries' interest to allocate adequate resources to their tax systems enabling them to constantly upgrade themselves as well as undertake their routine operations without any financial constraints simply because eventually it is their own tax systems that can generate the most cost-effective revenues needed to maintain the routine state functions as well as implement programs for the much-needed economic development. Alternatively, if adequate investments are not made in the tax machinery as in LTU-Islamabad's case, in particular, and post-TARP national tax reforms, in general, developing countries would have to compulsively opt for debt-creating resource-generation with all its multifaceted inimical implications.

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For citation

Ahmed M. A. Pakistan: wither tax reforms — the case of large taxpayers' unit, Islamabad. *Journal of Tax Reform*, 2018, vol. 4, no. 3, pp. 202–222. DOI: [10.15826/jtr.2018.4.3.052](https://doi.org/10.15826/jtr.2018.4.3.052)

Для цитирования

Ахмед М. А. Провал налоговых реформ в Пакистане: анализ деятельности подразделения по работе с крупными налогоплательщиками Исламабада / Мухаммад Ашфак Ахмед // *Journal of Tax Reform*. — 2018. — Т. 4, № 3. — С. 202–222. — DOI: [10.15826/jtr.2018.4.3.052](https://doi.org/10.15826/jtr.2018.4.3.052)

Article info

Received August 30, 2018; accepted December 9, 2018

Информация о статье

Дата поступления 30 августа 2018 г.; дата принятия к печати 9 декабря 2018 г.

The reform of vertical arrangements of tax administrative agencies in China

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ABSTRACT

The decentralized tax administration has been in place for over two decades in China since 1994. In March this year, National People's Congress of China reviewed and approved the State Council Institutions Reform Plan and decided "we will reform the tax administrative system by merging the tax administrations on state and sub-national levels and assume it both tax and non-tax revenue administrative responsibility in the corresponding jurisdictions". The article aims to explain to readers that China's tax authorities have to a large extent absorbed common international practices and general experience. The history of the vertical arrangements of China's tax administration is revisited through descriptive and comparative analysis. The reasons for the cancellation of the sub-national tax bureaus in China are analyzed followed by the international experience of the vertical structure of the tax administration. It is contended in the article that the reform of the vertical arrangements of the tax authorities is an attempt to deepen the reform of the fiscal system and promoting tax administrative agencies reform in the broad sense from the perspective of the modernization of the state governance system and governance abilities. The article concludes with a summary of several features of this reform.

KEYWORDS

tax administration, China's tax authorities, vertical arrangement of tax agency, reform the tax administrative system, international practices of the tax administration, China

JEL H30

HIGHLIGHTS

1. Since 2018 year the subnational tax agencies in China will be abolished gradually and the separate system of vertical administrative agencies will officially end
2. The removal of the subnational tax agencies is the result of balancing on the advantages and disadvantages of the separate tax collection agencies and new overall goal of reform in China. It is part of the reform of government institutions aimed at promoting the modernization of the state's governance
3. The reform is making full use of the advanced experience of foreign countries
4. The reform is based on the construction of a general public service supply system, with tax administration agency as part of it. It is a step forward in the direction of specialization and independence of tax administrations

УДК 336.025

Реформа организационной структуры налоговых органов Китая

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АННОТАЦИЯ

Децентрализация налоговых органов существует в Китае уже более двух десятилетий — с 1994 г. В марте этого года Национальный народный конгресс Китая рассмотрел и утвердил План реформирования институтов Государ-

ственного совета. Данный план предусматривает реформирование системы налогового администрирования путем объединения налоговых органов государственного и субнационального уровня и передачи им администрирования налоговых и неналоговых доходов в соответствующих юрисдикциях. В статье показано, что при проведении реформы налоговых органов Китая в значительной степени используются общепринятая международная практика и мировой опыт. История взаимодействия налоговых органов различного уровня в Китае изучается с помощью описательного и сравнительного анализа. Причины ликвидации налоговых органов субнационального уровня рассматриваются в сопоставлении с существующим международным опытом построения вертикальной организационной структуры налоговых органов. В статье утверждается, что реформа вертикальных механизмов взаимодействия налоговых органов различного уровня является попыткой углубить реформу налоговой системы и содействовать реформированию налоговых органов в широком смысле, как части общей модернизации системы государственного управления. Статья завершается кратким изложением нескольких особенностей этой реформы.

КЛЮЧЕВЫЕ СЛОВА

налоговые органы, налоговые органы Китая, вертикальная структура налоговых органов, реформа системы налогового администрирования, международная практика налогового администрирования, Китай.

ОСНОВНЫЕ ВЫВОДЫ

1. С 2018 г. налоговые органы субнационального уровня в Китае будут постепенно упразднены, а отдельная система вертикального построения налоговых органов будет официально ликвидирована
2. Устранение субнациональных налоговых органов является результатом анализа преимуществ и недостатков практики разделения органов налогового администрирования по различным уровням управления и изменения общей цели реформ в Китае и является частью реформы государственных учреждений, направленной на модернизацию государственного управления
3. Реформа в полной мере использует передовой опыт зарубежных стран
4. Реформа налоговых органов является частью формирования общедоступной системы государственных услуг, в части предоставления таких услуг налоговыми органами и является шагом вперед в направлении специализации и независимости налоговых администраций

Introduction

The tax administration serves the tax system and aims to implement the tax law in a fair, efficient and effective manner and to obtain fiscal revenue. If a country lacks a good tax administration system, its tax laws perform practically less even no function. In this sense, the level of a country's tax administration is critical to determine the success of the country's tax system and its reform. For this reason, there are many scholars in the world who call for the goal of tax reform in developing countries and countries in transition to take into account the current situation and potential of their tax administration [1]. China's tax system is at the beginning of a new round of structural reform, and whether its

existing tax administration system can support current and future reforms is an important issue that cannot be ignored. A sound tax administration system is the basis for the implementation of tax administrative concepts and laws.

The term of so-called "structure of tax administrative agencies" usually consists of two aspects:

1. Vertical structure of the tax administrative agencies between the central and the subnational governments. In a country with a multi-level government, do governments at all levels need to set up their own tax administration systems and corresponding agencies to manage their respective revenues? That is, whether the central and the subnational governments should share the same set of tax adminis-

tration systems or have separate ones of their own.

2. Inner structures of the tax administrative agencies. Whether two or one set of agency is adopted for the vertical arrangement of the tax administration, the agencies as an organization should be arranged according to certain principles and operate based on certain models [2; 3]. That is, how the inner organizations should be structured in a modern tax administrative agency.

This paper will center on the first aspect rather than the second one.

Although the state and subnational taxation bureaus were established separately as an important part of China's fiscal and taxation reform in 1994, other reforms related to the vertical structures of the tax administrative agencies have remained unchanged afterwards and nearly all the reform initiatives thereafter have been carried out around the modernization of the inner organization of the taxation agencies. State Administration of Taxation of China's 2012 strategic goal of modernizing tax administration remains focused on the latter. In contrast, the reform of the vertical structures of the tax administrative agencies lagged behind. Few variations have taken place in this aspect while China's substantial tax laws, tax collection law and administrative technology have changed a lot in the past years. That's why this article centers on this issue.

It was not until March this year that National People's Congress of China reviewed and adopted the Party and State Council of China's plan for Institutional Reform whereby the government has decided to reform the tax administrative system, to integrate the state and local tax agencies at the provincial level and below and to assume it specific responsibilities for both tax and non-tax revenue administration within the corresponding jurisdictions. This means that the subnational tax agencies will be abolished gradually and the separate system of vertical administrative agencies will officially end.

It is still surprising when the reform plan, which was highly confidential before its release, was introduced although

its contents have been discussed a lot for many years. The reasons behind this policy choice of the Chinese government, and how to perfect the tax administrative agencies in the future, are still in need of further discussion in the following reform. The article aims to explain to readers that China's tax authorities have to a large extent absorbed common international practices and general experience. The article reviewed the history of the vertical arrangement of China's tax administration through descriptive and comparative analysis. The reasons for the cancellation of the subnational tax agencies in China were given followed by discussing the international experience of the vertical arrangements of the tax administrations. It is contended in the article that the reform of the vertical arrangements of the tax authorities is an attempt to deepen the reform of the fiscal system and promoting tax administrative agencies reform in the broad sense from the perspective of the modernization of the state governance system and governance abilities. The article concludes with a summary of several features of this reform.

1. The history of vertical arrangement of tax administrative agencies in China

1.1. Before 1994: one set of decentralized agency

During the same period, China implemented the fiscal contract system which actually is an approach to divide revenue between various levels of government. In most of the revenue-dividing schemes the ratio of addition income going to the central government was fixed. This led to most of the newly generated income flowing to the subnational governments. When it comes to tax collection, the tax agencies affiliated with sub-national governments as the agents of central government had a strong opportunistic motive to erode tax revenues of the principal (i.e., the central government) and cause great damage to central government's tax revenues. In the most difficult times, the central government had to borrow money from the subnational governments to meet the needs in expendi-

ture which seriously hurt the authority of the central government [4]. Data show that the proportion of the central fiscal revenue in the national fiscal revenue (excluding debt income) dropped from 38.4% in 1985 to 28.1% percent in 1992 (See Figure 1 below). This Seriously weakened the central government's macro-control capacity.

1.2. 1994–2018: two separate sets of tax agencies

In order to change this situation, strengthen the central government's control of the tax revenues and raise the ratio of the central tax revenues in total tax income, China switched its fiscal system from fiscal contracting system to tax sharing system. The central government decided to establish a special tax administrative agency, the State Administration of Taxation (SAT) with its own branches at subnational level, as one part of the fiscal reform in 1994, thereby introducing the separate state and subnational tax administrative agencies and assigning corresponding administration responsibilities on the basis of the a decentralized tax system. As it turns out, this move has played a critical role in reversing the financial strengths between the central and the subnational governments since 1994. In 1992 and 1993, before the implementation of the fiscal reform, the share of the central revenue in the fiscal revenue was only 28.1% or 22%. In 1994, the share rose to 55.7%, but it remained above 50% percent after 1999, despite a decline in subsequent years.

However, the separation of the tax agencies had negative impacts, too. On the one hand, the number of the personnel at the taxation agencies increased dramatically, resulting in a substantial growth in the costs of taxation; on the other hand, the taxpayers have to face two kinds of tax administrative agencies and the communication and coordination between the two kinds of agencies is insufficient which leads to higher compliance costs for the taxpayers. So the academic and policy circles had begun to explore the problem of restructuring tax administrative agencies as early as the around the year of 2000.

1.2.1. Discussions prior to the tax agency integration

Before then, a controversy has comparison in China between two distinct groups, i.e., the "integration" group and the "separation" group. The former advocated the merge of the state and subnational tax administrative agencies, believing that the agency integration would significantly reduce the administrative costs, save social resources and increase management efficiency and degree of taxpayer satisfaction. The latter, i.e., the "separation" group who favors maintaining the ongoing separation between the state and subnational tax administrations but splitted in how to keep them separate. To sum up, there were two views within the "separation" group generally: one was "collaborative tax administration", i.e., to strengthen cooperation and integration

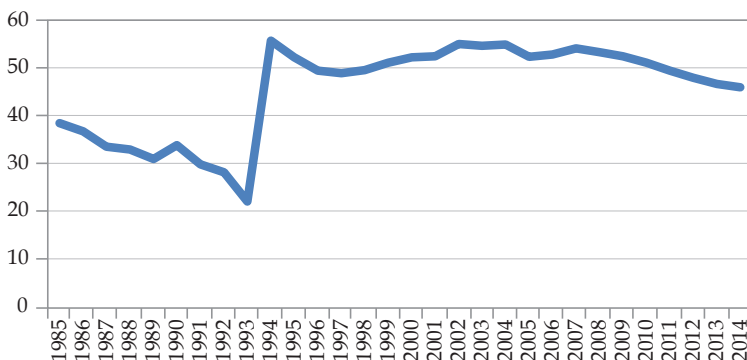


Figure 1. The ratio of central revenue to the total in China (1985–2014), %

Source: China Statistical Yearbook (various years)

during the operational process on the basis of the ongoing agency separation system; the other was to readjust the subnational tax agencies' administrative scope on the basis of the separation between two levels of tax administration. The "separation" group did not advocate to eliminate tax administrative agencies on subnational level mainly with the intention that China would switch its tax system from mail levy upon goods and services to upon individual persons; and subnational tax agencies would still have an important part to play as the proportion of personal income tax and property tax revenues increased. Therefore, from the perspective of development, the shrinking scope of tax administration due to the present "replacement of business tax with VAT" (this will be discussed in detail below) does not justify the assertion to abolish the subnational tax administrative agencies.

1.2.2. Reform in 2015: functional cooperation without agency merger

In terms of the policy, it is proposed in the fifth section of the Decision of the Third Plenary Session of the 18th Central Committee of the Communist Party of China to "deepen the reform of the fiscal and taxation systems" and to "improve the administrative system on the state and subnational levels", yet no details are provided on how to "improve" it. The official issuance and trial implementation of the Working Rules for the Cooperation between the State Taxation Bureaus and Subnational Taxation Bureaus (1.0 Edition) (hereinafter the "Working Rules") as of July 1, 2015 implies the official recognition of "collaborative tax administration based on two separate agencies"), the view of the "separation" group. On November 13 of the same year, the Program on Deepening the Reform of State and Subnational Tax Administration was adopted at the meeting of the Central Steering Group for Comprehensively Deepening the Reform, stressing that the separation of the state and subnational tax administrative agencies will remain unchanged with more cooperation on the one hand and confirming, on the other hand, that the functions

of subnational agencies will expand further and that its role to collect various local charges will be legitimized. This marks a tentative conclusion of the "separation or integration" dispute that has been persisting for years.

1.2.3. Institutional consolidation in 2018-abolition of the subnational tax administrative agency

Nevertheless, the collaborative tax administration based on two separate agencies is only a phase reform measure. The possibility of institutional consolidation is not therefore excluded from the policy option. After two years of silence on the subject, the Central Committee of the Communist party of China (CPC), at its third Plenary Session of the 19th CPC, put forward a proposal on the reform of the party and state institutions. Then the National Congress turned it into law in March, 2018. Its main contents include:

1. The integration of the state and local tax authorities at the provincial level and below. This means that China will have only one set of tax administrative agency in the future.

2. The integration of tax, social security contribution and other non-tax revenue administration operations within the corresponding jurisdictions. This means that the subnational tax agencies will be abolished gradually and the separate system of vertical administrative agencies will officially end.

3. The subnational tax agencies accepts the dual leadership of State Administration of Taxation of China and the provincial government, but mainly by State Administration of Taxation of China.

This article discusses the logic behind this reform. The author points out that the removal of the subnational tax agencies is the result of balancing on the advantages and disadvantages of the separate tax collection agencies and making full use of the advanced experience of foreign countries in the context of changing external environment. It is part of the reform of government institutions aimed at promoting the modernization of the state's governance.

2. Analysis of the reasons for the merger of China's tax administrative agencies

In any country, the vertical arrangement of its tax authorities are not set up in an isolated way. It is an important part of a country's fiscal system, economic institution and state governance system. The aim of separating tax agencies in 1994 is to increase central governments fiscal and macro-regulating capability and to meet the needs of establishing a socialist market economy as well. In the past 20 years, the overall goal of the reform has changed from establishing and improving the socialist market economy to promoting the modernization of the governance system and government capability of the state. The settings of the tax organization should be kept step with this. At the same time, great changes have taken place in the internal and external environment of tax administration, and the shortcomings of the separate structure have been highlighted in the new context.

2.1. Both administrative costs and compliance costs have greatly increased under the separate structure

On the side of administrative cost it is easy to imagine that two separate structure expands office spaces, equipment's, personnel costs, operating costs and the like at least two folded compared with a single agency. Despite the lack of public data, a large number of personal surveys, interviews, and non-disclosure information within the tax authorities support the above view.

As for the compliance costs, tax payers should submit their financial statements and tax returns to two separate tax authorities, and have to deal with two agencies' collection, administration and audits, which will definitely increase the cost of tax compliance.

2.2. The separate structure undermined the uniformity and authority of the tax law

China's tax laws and regulations are too simplified, and even very vague in some aspects. So there is too much room for discretion in tax administration. Be-

cause of the different understanding of the tax law and out of the defense of own interests, two distinct interpretations of the same tax law often appear between the state and subnational tax agencies. This not only leaves taxpayers at a loss but also undermines the unity, the seriousness and the authority of the tax law.

2.3. A reversal of financial relations between the central and subnational governments

One important goal of the fiscal reform of 1994 is to increase the proportion of the central fiscal revenue to the total. Since then the ratio of the central revenues went up rapidly which completely reversed the previous situation of "weak-central government and strong local government". In most subsequent years, the central financial resources accounted for about 50% percent of the country's total fiscal revenue (See Figure 1). Although there has been a decline since 2010, the central government still has a relatively stronger financial position than the subnational authorities in view of the fact that the local government has assumed most responsibility of public service provision in recent years.

Following the reversal of financial strength between the central and subnational governments, the original reasons for establishing separate tax agencies for each governmental level are no longer essential and, in this context, the high costs of keeping two sets of tax administrative agencies even more highlighted.

2.4. The original scope of administration for subnational tax agencies continued to shrink

In the past 24 years, China's tax system has undergone two major changes leading to a reduction in the scope of tax administration by the subnational tax agencies. After the abolition of the agricultural tax in 2006, the administrative scope of the subnational bureaus was contracted for the first time, and this triggered a round of discussion about the issue of the merger of tax administrative agencies. The second round of discussion occurred as a result

of the pilot program to replace the business tax with VAT in selected industries and areas as well as its introduction to all industries and the whole country subsequently. The business tax is the principal tax which once accounted for 20–70% tax revenues of subnational government. Following the progressive incorporation of the business tax as a major local tax into VAT (the reform has been fully implemented since May 1, 2016), the administrative responsibilities of the sub-national tax agencies witnessed a substantial shrinkage. That's why whether the subnational agencies should be retained or abolished becomes more popular since then.

2.5. Electronization and improvement of tax administration system

China has made great progress in tax administrative technology in the past years. In particular, the implementation of the Gold Tax can complete the administration of all taxes, non-tax income, social security contributions and other fees. It helps the state administrative agency to get taxation data on subnational taxes. Technically speaking, the role of subnational agency in collecting subnational taxes since its inception has no effect. At this time, the tax-sharing system still maintain but the current pattern of separate administrative structure is not as indispensable as before. Thus the merger of state and subnational tax authorities at the provincial level and below is a natural consequence.

3. What have we learned from international practices?

The vertical arrangement of tax administrative agency is not a unique problem in China, the experience of other countries, especially advanced market economies, is undoubtedly of great reference to the reform of China's tax administration. Facts shows that China's reform, to a large extent, absorbed international experience. To my opinion, the following three aspects are the most obvious.

3.1. The framework of fiscal decentralization

In the traditional fiscal decentralization theory, whether different governments should establish its own tax administrative agencies severs as a part of tax administration function assignment. In this sense, it is an important part of the fiscal system of a country. Quite a number of documents in support of establishing separate tax administrative agencies emphasize the importance of the separation of agencies to subnational tax revenues rights and corresponding fiscal autonomy. Observing from this perspective, we can find that the assessment on subnational governments' fiscal autonomy or fiscal decentralization consists of an embedded structure as follows [5].

As Figure 2 shows that the fiscal system (or the intergovernmental fiscal relationship) is an integral system which involves a wide range of issues, such as the arrangement of the fiscal expenditure

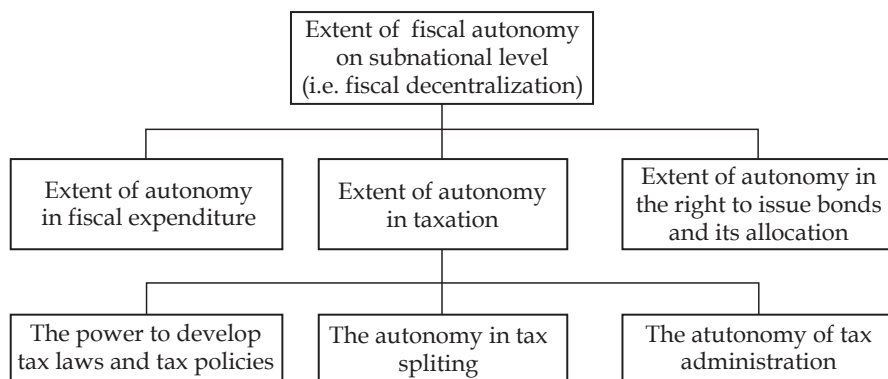


Figure 2. **Extent of fiscal autonomy on subnational level**

Source: Drafted by the author with reference to [5]

rights and responsibilities among governments at various levels, the division of government revenues (including those from taxation), the structure and model of transfer payment between the governments as well as the right to issue bonds and its allocation.

Generally, three parts of fiscal decentralization (Line 2 in the chart) must be coordinated with each other. That is why all the above factors should be taken into account in designing the system of fiscal decentralization [6]. On the basis of this point of view, it is a natural question whether the fiscal decentralization and the tax decentralization as one of the most important parts of the former, should be extended to tax administration? Or, does fiscal decentralization inevitably requires that the governments at different levels have tax administrative agencies of their own and exercise their tax administrative authority independently [7; 8]?

3.2. Inspiration from international experience

Though this question has not been included in the existing fiscal decentralization theory, relevant country-specific studies can provide valuable references for us. From international practices the following consensus has been reached about the vertical structure of tax administrative agencies at various level:

1. *The question whether subnational taxes should be administrated in a decentralized way should be considered within the fiscal system of specific country.* Fiscal decentralization does not necessarily require the decentralization of tax administration, let alone separate tax administrative agencies. Related researches, for instance, [1; 7; 8] indicate that no direct relationship exists between the extent of subnational tax autonomy and the extent of the decentralization of tax administration. That is, the separation of tax administrative agencies is not required necessarily even under decentralized fiscal systems.

2. *The separation of taxation agencies is neither a necessary nor sufficiency condition*

for fiscal decentralization. In practice, nations use many different alternatives for administering subnational taxes [8]. Effective fiscal decentralization should not start from the side of income, not to mention the tax administration authorities, but from the expenditure side instead. Many developing countries did not get the expected returns in the process of fiscal decentralization due to the erroneous sequence of decentralization they chose which gave priority on revenue-sharing rather than governmental responsibility assignment. This also put their financial and political structure into an unsteady, risky situation.

3. *The decentralized agencies leads to the problems of reverse incentives and higher taxation costs even if it is helpful in increasing the autonomy of the local governments, which may result in more complicated tax administration as well.* So all the possible gains and losses of different administrative models should be weighed before the choice is made.

4. *The structure of tax administrative agencies is closely related to the specific political, economic, cultural and historical conditions of particular countries and there is no "one size fits all" model [1; 6].* The specific situation of each country as well as the particular temporal and local conditions must be considered. It's important that the pursuit and imitation of so-called "optimal" or "advanced" models must be avoided.

It is because of such complex factors which affect the vertical structure of the tax administrative agencies in a country that people hold different opinions and cannot reach an agreement in related policy debates and academic discussions. Therefore, each country's specific choice is differentiated according to its national conditions [9].

3.3. Delivery and organizational arrangements of tax administration as a kind of public service

3.3.1. The Nature of Tax Administration

Our understanding of the nature of "tax administration" is of extreme

relevance to the model we choose to deliver “tax administration” as a public service. People instinctively regard tax administration as a unidirectional wealth transfer enforced by the state for its own interest, instead of treating it as general public services. In fact, there is no essential difference between tax administration and other public services such as national security, compulsory education and public health, among others. Tax administration is one of the public services that is mainly provided by the governments at all levels instead of other agents.

The supply of any public service implies the questions of the financing and delivery of such service. The former means the acquisition of needed funds and the latter refers to the course of converting finance into essential inputs to access the process of production and obtain outputs, which inevitably involves the selection and arrangement of the delivering organizations. In respect of the organizing selection for public services delivery, not only a wide range of theoretical frameworks that can be borrowed but also comparative institutional analyses for various kinds of public services are available, both of which lay foundations for the selection of the governance structure for the public goods delivery in practice [10–12]. However, the selection of the delivering organization for tax administration as one kind of public service, has not become a major research area of the theory on public service delivery though this theory has witnessed rapid development in the latest decades and has been applied to the choice of delivery organization of a large number of public services successfully. Therefore, it will make contributions in a couple of ways by applying the theory on the organization of public services delivery to the research of the arrangement of tax administrative agencies. It not only extends the existing perspectives for the research of the vertical structure of tax administrative agencies but also expands the existing applied research fields of the organization theory for public service delivery.

3.3.2. Pluralistic Modes of Public Service Delivery

As same as the financing structure of public services, the organizational structure of their delivery should be pluralistic, too. That means the delivery process of the public services is not enforced by public departments only. This is a consensus that has been reached for long in modern public goods theory. Governments at various levels may adopt the third-party organizations during the course of public services delivery, which is also applicable to delivery of tax administrative as a service. These options include:

1. *Government purchasing.* Also called public service outsourcing, including purchasing from other government organs, the market and social organizations. The government purchasing are applicable to those administrative functions that seem to be obviously “services” to the taxpayers. Among the typical purchasing targets are tax services (e.g., call centers), IT infrastructure support, tax assessment. Those administrative functions, such as tax fraud investigations and enforced tax debt collection, among others, that are not easily regarded as “services” by the taxpayers, are retained for implementation by tax administrative agencies themselves in most nations [13].

2. *Commissioned delivery.* E.g., the state governments commissioned to engage in tax administration on behalf of the federal government, which prevails in Germany; and the central government commissioned by most provinces in Canada to administer the income tax and the goods and services tax [7]. Commissioned delivery may be paid or non-paid, as the case may be. Non-paid commission is more often in cases of mutual commission.

3. *Cooperative delivery.* It often takes place for the consideration to improve the management efficiency and to increase taxpayers’ satisfaction under decentralized tax administrative agencies at various level of government. It is typical in Canada and other federal nations in which the federal, state and local tax

administrative agencies cooperate with each other very effectively in information exchange and tax administration delivery on behalf of each other. This does not exclude the exceptions of some other federal countries, e.g., Australia, among others, with independent separate tax agencies are separate where the administration efficiency is greatly impacted due to the lack of statutory inter-agency cooperation obligations, which can hardly be improved in terms of the systems as a result of the excessively independent tax administrative authority of the governments at various levels under the Constitution [7].

4. *Tax farming* (i.e., administration by private agencies completely). Tax farming is one of the earliest tax administration pattern. When a country lacks sufficient tax administration capacity, it commissions the tax collection task to a person or its agency in the form of contract awarding to ensure its fixed tax revenues; all the tax income other than the contracted amount belongs to the contractor (i.e., the tax collector) and the tax collector bears all the risks in tax revenues and administration. The tax farming system has not become extinct in the modern society and it exists in various forms in some least developed countries or regions where public administration lags behind [14; 15].

3.4. Professionalism and independence of revenue bodies

as an essential public service, tax administration is generally not different from other public services in nature; yet it is distinctive in the following two respects:

Firstly, tax administration is highly professional and technical, which makes the incentive mechanism for the tax administrative personnel more complex. The homogenous incentive focused on administrative promotion in modern bureaucratic system is applicable to universal public service providers. The highly professional public service delivery institutions, such as the taxation bureaus and the customs, among others,

nevertheless, are often gathering places of more professional and technical as well as managerial personnel in more diversified types and such motivation is evidently insufficient if they have to go through the narrow passage to administrative promotion like the public servants in general. The second is about the “negative” nature of tax administrative services relative to other public services. In the modern context of statutory taxation, the tax administrative agencies, as typical law enforcement units, often play their part in a “negative” manner due to the rigid restriction upon their discretionary power.

The professionalism of the tax administrative agencies and the “negative” nature of their administration services lead to the requirement for their relative independence. Whether affiliated to the ministries of finance or not, most of the tax agencies in major OECD countries and non-OECD countries in the investigation mentioned above enjoy a varied extent of independence. There is even a radical point of view that the tax administrative agencies may develop as independent agents outside the governments at all levels which fulfill lawful and highly efficient collection of revenues in a negative manner. Influenced by this idea revenue authorities (RAs) with various level of autonomy and different scope of function have been adopted as an alternative delivery model for improved administration efficiency and their performance on revenues collection has been explored [16].

In the mean time, the separation of the operating divisions from the administrative divisions in tax administrative agencies as well as establishing corresponding independent technical promotion system for the operating departments have become a common option for all countries in the reconstruction of the internal structure of modern tax administrative agencies. Increasing importance has been attached to this trend in the ongoing reform of the inside governance of the tax administrative agencies in China, too. It is explicitly stated in

the Program for Further Improving the Reform of the State and Subnational Tax Administrative System promulgated to the general public in late 2015 that it is imperative to “implement the system of professional ranks of the public servants” and “apply the appointment system to highly professional positions” to “provide solutions to the lack of professional personnel”.

4. Functional integration of revenue bodies

Currently there is an international trend for the unification and integration of tax revenue bodies functions in order to improve the operational efficiency of the tax administrative agencies [17–19]. According to the comparative study issued by [13] on the tax administration in major countries, the taxation agencies are integrated with the customs (or play the role of the customer) in 13 out of 34 investigated OECD members and the same integration of agencies or functions takes place in 6 out of 22 non-OECD members. Moreover, the social security tax is collected by the taxation agencies on behalf in 13 of the 32 OECD members under investigation where the social security tax/fee is collected, and the same happens in 7 out of 18 non-OECD countries in which the social security tax is posed. The majority of the taxation agencies in all investigated countries fulfill the function of the collection administration of non-tax revenues with the tax administrative agencies in some countries also execute the function of welfare project administration.

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Conclusion

Reasonable vertical structure of tax agency serves as the foundation of modern tax administration system. This article analyses the reform of vertical arrangement of China’s tax authorities starting in 2018. It points out that this reform, as a part of China State Council institutional reform, is not just a reform of fiscal system, but aiming at improving the governance system and governance capability of China by integrating tax agencies at central and subnational levels. It shows the following characteristics:

1. The main purpose of the merger is to meet the development requirements of the new era, promote the modernization of the state governance system and governance capacity and provide support for achieving high quality development by improving the efficiency of the government’s operation and the cost of taxpayers’ tax compliance.

2. The reform is a decision made in the light of China’s actual conditions and has fully absorbed international experience.

3. The reform is based on the construction of a general public service supply system, with tax administration agency as a public service production organizations as part of it.

4. The reform, which goes beyond the narrow tax administration, includes the broad tax administration in general. In addition, it is a step in the direction of specialization and independence of tax administrations.

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For citation

Ma Jun. The reform of vertical arrangements of tax administrative agencies in China. *Journal of Tax Reform*, 2018, vol. 4, no. 3, pp. 223–235. DOI: [10.15826/jtr.2018.4.3.053](https://doi.org/10.15826/jtr.2018.4.3.053)

Для цитирования

Ма Цзюнь. Реформа организационной структуры налоговых органов Китая / Ма Цзюнь // *Journal of Tax Reform*. — 2018. — Т. 4, № 3. — С. 223–235. — DOI: [10.15826/jtr.2018.4.3.053](https://doi.org/10.15826/jtr.2018.4.3.053)

Article info

Received *April 24, 2018*; accepted *December 13, 2018*

Информация о статье

Дата поступления 24 апреля 2018 г.; дата принятия к печати 13 декабря 2018 г.

Personal income taxation and income inequality in Asia-Pacific: a cross-country analysis

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ABSTRACT

The article examines analyze current features of personal income taxation, and also the relationship between income inequality, individual income taxes and several labor market indicators in Asia-Pacific countries. The income inequality issue affects basic social and economic terms as equity and equality. The increase in income inequality in countries worldwide led to vigorous debate about efficiency of progressive individual income taxation as a tool for achieving optimal level of social equity. The purpose of the study is to examine the features of progressive individual income taxation and its influence of reduction of income inequality in Asia-Pacific countries. The article analyzes current systems of personal income taxation in countries of this region and their relationship with key macroeconomic indicators. The methodology includes cross-country comparisons, principal component analysis, regression analysis. The main theoretical results include identification of causes of inefficiency of progressive individual income taxation in analyzed countries. The empirical results are related to the estimation of influence of macroeconomic factors, including labor market indicators, on individual income tax revenue. The applied methods, notably principal component analysis combined with regression analysis, can be used for estimation of influence of both quantitative and qualitative factors on tax revenue.

KEYWORDS

personal income tax, income inequality, progressivity, Asia-Pacific, Gini coefficient, cross-country comparisons, principal component analysis, regression analysis

JEL C30, D63, H24, 057

HIGHLIGHTS

1. The tax theory suggests that the progressive individual income tax system can be an effective tool for reduction of income inequality
2. For developing Asia-Pacific countries, the progressive personal income tax systems cannot contribute to the reduction of inequality since the tax base is narrow because of high free-tax thresholds and large informal sector of the economy
3. The developed Asia-Pacific countries have relatively high personal income tax revenues and low Gini coefficients, except Singapore with high income inequality level and GDP per capita similar to developed countries. One of the main reasons of high inequality in this country are the features of government tax policy
4. In developing Asia-Pacific countries only statutory nominal gross monthly minimum wage has significant impact on individual income tax revenue, and this impact depends crucially on the GDP per capita; the main reason are high tax-free personal income thresholds in these countries

УДК 330.564+336.226.11

Индивидуальное подоходное налогообложение и неравенство доходов в странах Азиатско-Тихоокеанского региона: сравнительный анализ

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АННОТАЦИЯ

В статье рассматриваются особенности индивидуального подоходного налогообложения, а также взаимосвязь неравенства доходов, индивидуальных подоходных налогов и ряда индикаторов рынка труда в странах Азиатско-Тихоокеанского региона. Проблема неравенства доходов затрагивает базовые социально-экономические понятия как справедливость и равенство. Рост неравенства доходов в странах мира привел к активному обсуждению эффективности прогрессивной системы индивидуального подоходного налогообложения как инструмента достижения социальной справедливости. Цель данного исследования заключается в исследовании особенностей применения прогрессивной системы индивидуального подоходного налогообложения и ее влияния на сокращение неравенства в странах Азиатско-Тихоокеанского региона. В статье проанализированы существующие системы налогообложения индивидуального дохода стран региона и их взаимосвязь с ключевыми макроэкономическими показателями. Методология исследования включает межстрановой анализ, метод главных компонент, регрессионный анализ. Основные результаты теоретического исследования заключаются в выявлении причин неэффективности системы прогрессивного индивидуального подоходного налога как инструмента сокращения неравенства доходов в анализируемых странах. Результаты эмпирического исследования связаны с оценкой влияния макроэкономических факторов, в том числе показателей функционирования рынка труда, на уровень поступлений от индивидуального подоходного налога. Методика исследования, в частности, применение метода главных компонент в сочетании с регрессионным анализом, может в дальнейшем быть использована для оценки влияния количественных и качественных факторов на уровень налоговых поступлений.

КЛЮЧЕВЫЕ СЛОВА

индивидуальный подоходный налог, неравенство доходов, прогрессивность, Азиатско-Тихоокеанский регион, коэффициент Джини, межстрановой анализ, метод главных компонент, регрессионный анализ

ОСНОВНЫЕ ПОЛОЖЕНИЯ

1. Одно из предположений теории индивидуального подоходного налогообложения заключается в том, что прогрессивность этого налога может быть эффективным инструментом сокращения неравенства доходов
2. Для развивающихся экономик Азиатско-Тихоокеанского региона прогрессивная система индивидуального подоходного налогообложения не способствует сокращению неравенства, возникающей вследствие установления высоких пороговых значений дохода, освобожденного от налогообложения, и значительного неформального сектора экономики
3. Развитые страны Азиатско-Тихоокеанского региона характеризуются относительно высокими доходами от индивидуального подоходного налога, при одновременно низком индексе Джини, за исключением Сингапура, который

характеризуется высоким показателем неравенства доходов при ВВП на душу населения, сравнимом с развитыми странами. Такая ситуация сложилась, в том числе и под влиянием налоговой политики правительства

4. В развивающихся странах Азиатско-Тихоокеанского региона значимое влияние на уровень поступлений от индивидуального подоходного налога имеет только номинальная валовая минимальная ежемесячная заработная плата и это влияние критически зависит от уровня ВВП на душу населения, что обусловлено высокими пороговыми значениями дохода, освобожденного от налогообложения, в этих экономиках

Introduction

The problem of income (economic) inequality affects all sections of society, since changes in inequality levels have explicit consequences for standards of living of households. Also they affect such basic social and economic terms as equity and equality.

The increase in income inequality in countries worldwide led to vigorous debate about this problem in its various aspects.

According to the World Inequality Report 2018, in recent decades, income inequality has increased in nearly all countries worldwide, but at widely different rate. In 2016 the share of total national income accounted for by just that nation's top 10% earners was 37% in Europe, 41% in China, 46% in Russia, 47% in US-Canada, and around 55% in sub-Saharan Africa, Brazil, and India, and 61% – in the Middle East [1, p. 9].

The tax policy can be considered as one of the main tools to reduce inequality by redistributing the tax revenue. Taxes are the source of revenue, aimed to finance public spending on education and health care, and also social benefits through transfer programmes. The government spending increases the wealth of low-income households, and also contributes to the development of infrastructure, ensuring the economic growth. The mentioned factors are suggested to be crucial, while achieving the optimal level of social equity.

Progressive tax rates are able to reduce not only after-tax income inequality, but also before-tax income inequality by reducing motivation of high-salaried individuals to increase their income using, particularly, an aggressive bargaining.

The paper is structured as follows. Section 1 provides literature review of theoretical and empirical studies related to the income inequality and progressive personal income taxation. Section 2 briefly describes theoretical background and main causes of failure of progressive personal income tax to address inequality in Asian countries. Section 3 provides results of empirical analysis of relationship between income inequality, individual income taxes and several labor market indicators in Asian countries.

1. Literature review

The reduction of income inequality, e.g. through fiscal policy measures, is an important direction of macroeconomic research. The increasing income gap between rich and poor determined the study of causes of relative inequality, and also the development of sustainable and effective policy aimed to reduce income inequality and poverty.

The inequality of income in countries worldwide, its causes, consequences, and approaches to adjust, are subjects of research of both economic theorists and experts of international economic financial organizations.

A. Deaton, the 2015 Nobel Prize in Economics winner, in his work *The Great Escape: Health, Wealth, and the Origins of Inequality* analyzed historical and ongoing patterns of inequality in countries in the world. Notably, he examined the United States, China and India. For the last two countries he argued that international aid has been ineffective and even harmful, leading to the growth of income inequality, while lifting trade restrictions would be better tool for achieving optimal level of social equity [2].

Another Nobel Prize in Economics winner J. Stiglitz analyzed the influence of inequality on economic growth. He concluded that the income inequality is a key factor deepening the economic problems of rich countries. According to J. Stiglitz, in order to reduce such inequality countries should focus on the wide range of policies, notably investment in public goods, better corporate governance, anti-trust and anti-discrimination laws, and more progressive tax policy [3].

A series of works of T. Piketty, one of the most likely Nobel Prize in Economics winners in 2015, are also devoted to the analysis of theories of persistent inequality and wealth across generations [4].

The theories of genesis of economic inequality, its causes and effects, became the subject of study of G. Garvy [5], S. Durlauf [6], K.-K. Lee [7], D. Krueger & F. Perri [8].

A significant number of research studies, provided by experts of leading international financial and economic organizations (UN, IMF, the World Bank), analyze income inequality in developing countries. They showed that policies that focus on the poor and the middle class, including reforms to increase human capital and skills, coupled with making tax systems more progressive, can mitigate inequality [9–11].

The methodology of estimation of income inequality as a whole was investigated empirically in A. Heshmati [12], N. C. Kakwani [13], J. L. Gastwirth [14], R. I. Lerman & S. Yitzhaki [15].

The level of income inequality in countries worldwide was estimated in E. Helpman et al. [16], S. Anand & P. Segal [17], U. Panizza [18], and also by OECD experts [19–20].

A significant series of works consider the influence of taxation on the level of income inequality in countries. The impact of personal income tax on both the distribution of income and the inequality level in USA was investigated in B. Okner [21], G. Auten & D. Splinter [22], D. Puy et al. [23]. Their results showed the ambiguous and often oppositely directed effects of fiscal policy on

inequality level for U.S. households with different income levels.

A. Paulus & A. Peichl investigated the consequences of the introduction of a flat tax as a tool to reduce income inequalities in Western Europe countries. Using simulation models, authors concluded that revenue and inequality neutral flat tax rates tend to be higher in Continental European countries (Austria, Germany, Luxemburg, Netherlands) than in Southern European countries (Greece, Portugal, Spain), while being little affected by different measures of income inequality [24].

The investigation of effects of progressive personal income taxation on inequality has a fundamental importance for Asian countries because of significant dispersion of values of indicators of economic inequality in region.

T. Tachibanaki discussed history and the causes of Japan's increasing income inequality in 1990–2000s, considering among other things the influence of government tax policy on households' income distribution [25].

H. Ohta provided an analysis based on simulation of changes in expenditures of Japanese households with different income levels. He concluded that the introduction of more progressive tax system should have positive effects on total consumption, thereby raising growth rate in country and improving the fiscal balance [26]. M. J. Sung examined the redistributive effects of Korea's government fiscal policies in mid-2000s. He find that taxes and transfers reduce income inequality in Korea by 13.8%. Contrary to the popular belief that direct taxes are the key tool for redistribution, in-kind benefits, direct taxes, and social security contributions all decrease the inequality (expressed by Gini coefficient) by 6.7%, 4.7%, and 2.9%, respectively [27].

While an opposite results were obtained by Y. Chang et al., who concluded that a more progressive income tax schedule along with a higher capital tax rate can increase average welfare by as much as 0.86% of permanent consumption. But the limitations of their quantitative heterogeneous agent general

equilibrium model do not take into account possible capital outflows and the increased administrative costs caused by higher taxes [28].

With this background, the purpose of the paper is to analyze current features of personal income taxation, and also the relationship between income inequality, individual income taxes and several labor market indicators in in Asia-Pacific countries.

2. Theoretical background

The policy related to the reduction of inequality and poverty, is often motivated by government's aspiration to achieve horizontal and vertical equity. With regard to fiscal policy, the horizontal equity means that all individuals in equal financial conditions have equal opportunities to pay taxes, and, therefore, should be taxed by equal rate.

The vertical equity suggests that wealthy individuals should be taxed by higher tax rates than poorer ones.

The degree of tax progressivity influences on level of income inequality. Moreover, the adjustment in the degree of inequality resulting from change in tax policy, due to economic agents' asymmetric responses to policy changes, may be postponed before becoming effective [29].

The results of current research related to the consequences of fiscal policy measures aimed to reduce inequality, can be summarized as follows.

1. Both taxes and transfers reduce income inequality in countries worldwide. Furthermore, in OECD countries the transfers suppose to reduce $\frac{3}{4}$ of inequality, while direct taxation of household income doesn't play an important role in this process.

2. The systems of personal income taxation traditionally are progressive, while consumption taxes and property taxes often absorb the large part of income of disadvantaged population.

3. Some tax and transfer reforms yield double dividend in terms of reducing inequality and increasing GDP per capita. In particular, the reduction of tax incentives,

used generally by low-income households, contributes to equity objectives, allowing simultaneously the reduction in tax rates.

4. Other reforms, on the contrary, may entail trade-offs between reduction of inequality and economic growth. Shifting the tax mix to less-distorting taxes, notably, away from labor towards consumption taxes, would improve incentives to work and savings, but simultaneously would raise inequality [30].

The personal income tax (PIT) is widely considered as the main component of progressive tax system. In developed countries such a tax is supposed to be not only a major government revenue source, but also influences significantly to income redistribution as a tool to achieve equity and equality objectives.

But in many Asian countries the situation differs from above. The PIT revenue is largely stagnant and low, compared to that of industrialized economies. Such low PIT income restricts opportunities for redistribution, contributing thereby to increase of inequality. In addition, the greatest share of personal income, subject to tax, came from labor income, while individual income from capital and other economic activity, including self-employment, often is not taxed. As a result, middle-income working households bear more PIT burden, than the high-income working class. Moreover, the redistributive objectives did not realize, since in a large part of Asia-Pacific countries the PIT schedules are progressive only for certain types of income.

Furthermore, in many Asian developing countries face a problem of lack of effective tax-related infrastructure, i.e. accounting, auditing, data collection, etc., and also of limited opportunities for PIT administration. Combined with high level of corruption, this leads to the high administrative costs and high tax compliance costs of progressive personal income tax systems [31; 32, p. 7].

So, for example the average PIT revenue in Asian developing countries makes about 2% of GDP, which is or less than a quarter of OECD average (Figure 1).

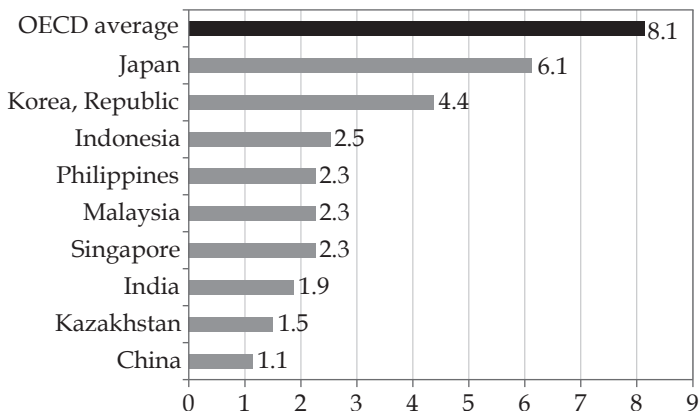


Figure 1. Personal income tax revenue in Asian countries and OECD average, % of GDP, 2015¹

Source: based on OECD, The World Bank, Bloomberg, Asian Development Bank, statistics of local revenue authorities [33]

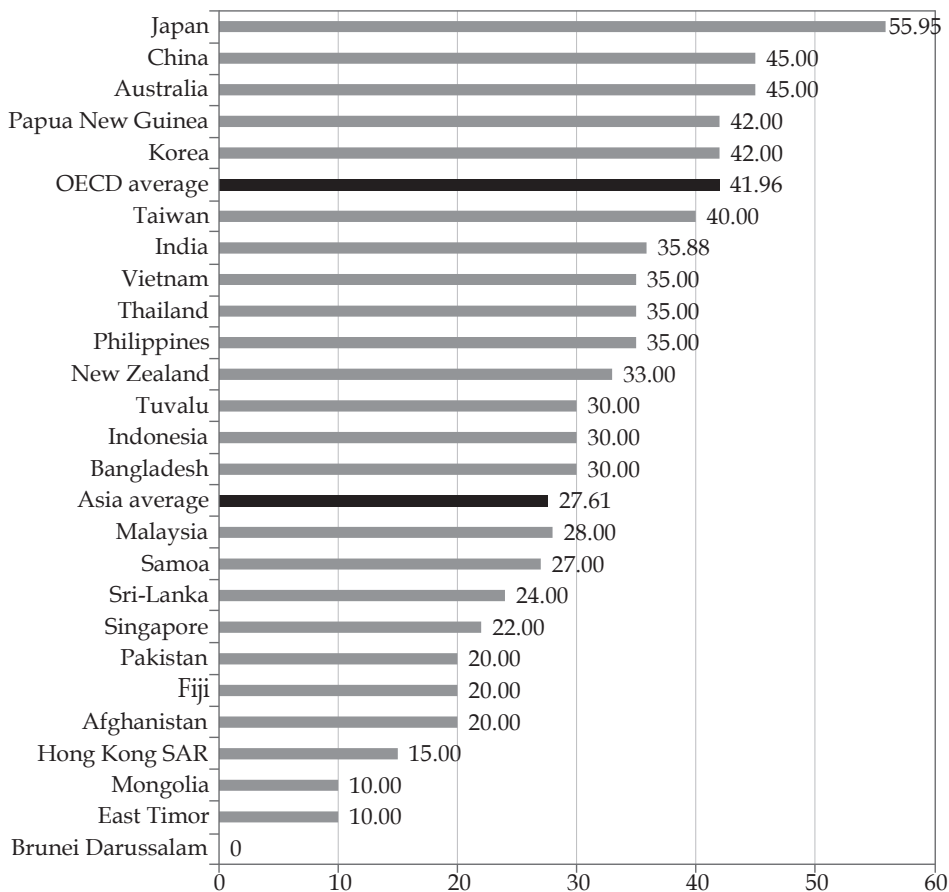


Figure 2. Personal income tax rates in East Asia and Pacific, and South Asia countries, 2018

Source: based on KPMG

¹ Here and henceforth we use the latest available data.

To compare, in Russia this value is 3.4% of GDP, which is higher than in developing Asian countries (on average by 1.4%), but lower than in developed economies in region (on average by 1.8%), and substantially lower than in advanced OCED economies (on 5%).

At the same time, Asian economies according to the global trend are reducing the PIT rates. From 1981 to 2015, in a number of Asia-Pacific countries the average top individual income tax rate was almost halved, achieving the level less than about a third of OECD average (Figure 2).

Figure 2 demonstrates that Japan has the highest top PIT rate, which exceeds Asian average by 28% and OECD average by almost 14%.

In Russia the personal income tax rate is 13%, but it should be taken into account that the government applies flat individual income tax scale, which does not provide various tax brackets, and hence, the opportunity to change the progressivity level by reducing tax rates for separate tax brackets.

One of the fundamental provisions of current tax theory suggests that reduction in tax rates with simultaneous enlargement of the tax base can improve the economic efficiency, reduce the level of inequality and economic distortions in order to move closer to the social equity.

Currently the PIT base in Asia-Pacific countries remains narrow due to two main contributing factors:

- the high threshold of exemption from individual income tax, and
- the presence of large informal sector in developing Asian countries.

The maximum ratios of such tax-free threshold/GNP per capita in Asia-Pacific countries are in Nepal and Pakistan – 3.8% and 3.95% respectively, while OECD average is 0.25%. The ratios in Cambodia, the Republic of Korea, and Japan are closer to this value.

The higher is such a threshold, the large number of individuals are exempted from paying PIT, and the higher are statutory tax rates, stated by government in order to finance public expenditure.

In addition, the individual income tax revenue depends on PIT design. For example, India has PIT thresholds (as a share of GNI) higher than in China, and slightly lower PIT rates (10–30% in India, and 3–45% in China). But in India the share of revenue from individual income tax makes 1.9% of GDP, while China collects only 1.1% of GDP.

The main reason of this difference is a comprehensive PIT model in India. This means that the individual income is taxed based on the aggregate value of all different income sources rather than on only a few income items as in China, where different income types are taxed separately [34, p. 187–189], whereby part of them are taxed by flat rate, another part – by progressive schedule, and several types of income are excluded from taxation at all.

Besides the informal sector, the narrowness of the tax base is determined by non-compliance and tax evasion of some high-income individuals through tax loopholes.

For example, in 2012 Federal Board of Revenue of Pakistan discovered that more than 1.5 million people, who had traveled abroad at least once a year, and about 0.5 million people, who had multiple bank accounts, are not registered as PIT payers. Moreover, only 90 members of the National Assembly of Pakistan (of 341) had filled annual tax returns [35, p. 10–12].

In Indonesia in 2010–2012 3% of households paid more than 80% of individual tax revenues. High- and middle-income households in often underreported their taxable personal income, while the self-employed persons were not covered by a withholding system. This resulted in difficulties to assess their taxable income. But a number of both administrative and economic measures, related to the improvement of registration of taxpayers led to the increase of the number of individual taxpayers from 3.25 million to almost 17 million people [32, p. 24].

The study of A. Claus et al. showed that individual income tax has the expected negative impact on income inequality. Moreover, this effect is significantly higher in Asian countries than in the rest of the

world. For example, the 1% increase in PIT rate in Asia reduces income inequality by around 0.573% compared with 0.041% in other countries worldwide. In other words, in Asia the marginal impact on income redistribution is higher than in other regions of the world. Such an effect is determined by above-mentioned factors: high tax-free thresholds and larger informal sector, notable informal unemployment.

The impact of progressive income tax scale on income redistribution is modest, and in several Asian countries is smaller than in the rest of the world. The 1% increase in PIT rate due to change in progressivity level reduces income inequality by around 0.002% in Asia compared with 0.005% in other countries worldwide [36, p. 187–190].

Figure 3 presents the results of comparative analysis of several Asia-Pacific countries, OECD average and Russia regarding the income inequality (Gini coefficient), personal income tax revenue and GDP per capita.

Figure 3 shows that Russia has similar values of GDP per capita and PIT revenue as Republic of Korea, but at the same time Gini coefficient in Russia exceeds Korean by 8% – this corresponds to the level of income inequality in Philippines and Indonesia.

Also Figure 3 demonstrates that countries with high GDP per capita have relatively high PIT revenues and low Gini coefficients. Except Singapore with high income inequality level (as in Malaysia, which is exceeded only by China and India), while having GDP per capita as in developed countries.

The reasons of such high income inequality in Singapore can be summarized as follows.

1. The patterns of economic development in the framework of globalization, which differ from those of USA, Taiwan, and Hong Kong. In 1960s–1970s, the industrialization strategy of Singapore focused on labor intensive manufacturing for the export market, while the small size of domestic market did not promote an import

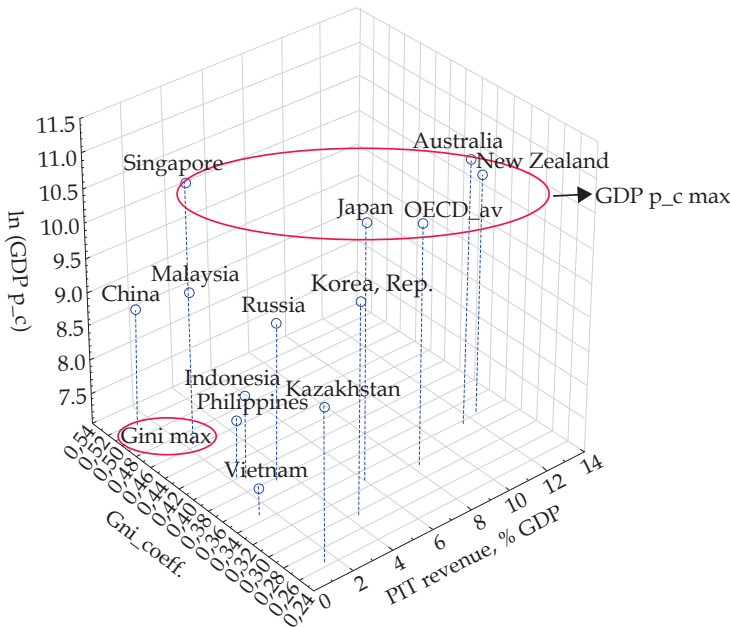


Figure 3. Income inequality, PIT revenue and GDP per capita in Asia-Pacific countries, OECD average and Russia, 2015

Note: ln (GDP p_c) is the natural logarithms of GDP per capita indicator

Source: based on OECD, The World Bank, Bloomberg, Asian Development Bank, statistics of local revenue authorities

substitution [37]. This led to the increase of inward foreign direct investment, and, as a consequence, to economic growth, reduction of unemployment and poverty. As a result, the high-skilled workers benefited all advantages on the labor market (workplaces, high salaries, social benefits etc.), while low-skilled and unskilled persons not only faced to the structural unemployment, but also had little time to adapt to the economic changes. And this gap has been increasing every year.

2. Policy of meritocracy in educational system. Under such scheme only bright pupils can benefit the entrance in high-rated country's universities. For other scholars the scope of universities to choose is limited.

3. Policy towards foreign workers, under which the high-skilled foreign workers from developed countries like Japan, USA, Western Europe are paid wages equivalent to their remuneration in their home country. While low-skilled and unskilled workers from developing and LDC countries like Bangladesh, India, Sri Lanka, and Philippines, receive salaries lower, that Singaporeans, having the same position.

4. Tax policy. The individual tax system in Singapore is progressive. Moreover, the low-income households do not pay any income tax and receive simultaneously the social services. The tax-free threshold is 20,000 SGD per year, while if the individual income exceeds 320,000 SGD per year, it is subject to the highest personal income tax rate – 22%².

The changes in Singapore's tax policy, which led to the increase of inequality, are the following.

Firstly, Singaporean government has never taxed capital gain, i.e. the rich can transfer a large part of their wealth to the next generation, raising the asset incomes of high-income households;

Secondly, the top marginal individual income tax rates have declined gradually

in 2004–2005 from 22% to 20% in order to encourage savings. Upper-middle income and high income households benefited more, than low-middle and low-income families from such a reduction of PIT base. Moreover, the interest income was exempted from individual income tax. As a result, in order to mitigate the negative effects on inequality, the government increased the top marginal PIT rate until 22% in 2016.

And finally, starting from 1960s–1970s, the corporate income tax has been gradually reduced from over 40% in the 1960s to 17% currently in order to attract foreign direct investment. To compensate the revenue losses, the Goods and Services Tax (GST) was introduced in 1994. It is a consumption tax on all goods and services, except sales or lease of property and financial services. Simultaneously with reduction in corporate and individual income tax rate, the GST rate has been gradually increased from 3% in 1994 to 7% currently. But like any other widespread direct consumption tax, GST is regressive in nature. It equally affects all consumption of high-income and low-income households, distorting the equity principle of taxation. And such a cumulative effect also contributed to the high income inequality in Singapore, compared to other Asian countries with high GDP per capita.

3. Empirical analysis

The purpose of the empirical analysis is to estimate the relationship between income inequality, individual income taxes and several labor market indicators in Asian countries. The methodology includes principal components analysis (PCA) and regression analysis.

At the first stage we use principal components analysis – the factor model in which the factors are based on summarizing the total variance. The computation of factors in PCA basically consists of diagonalizing a symmetric matrix: correlation matrix or covariance matrix. We use correlation matrix (Table 1) because variances of individual variables and units of measurement differ fundamentally.

² *Singapore Personal Income Tax Guide*. Available at: <https://www.guidemesingapore.com/business-guides/taxation-and-accounting/personal-tax/singapore-personal-income-tax-guide>

We introduced the last variable since several studies argued that the impact of tax policy on labor income depends on labor-market institutions, such as minimum wage laws, wage bargaining, and unemployment benefits (see for example [38; 39]).

Eigenvalue is the column sum of squared loadings for a factor, i.e., the latent root. It conceptually represents that amount of variance accounted for by a factor and it is calculated only for active variables.

Table 1 shows that the factor corresponding to the largest eigenvalue (1,340) accounts for approximately 66.99% of the total variance. The second factor corresponding to the second eigenvalue (0.660) accounts for approximately 33.01% of the total variance.

Figure 4 represents the plot of factor (PIT revenue and Gini coefficient) coordinates.

Because the current analysis is based on correlations, the largest factor coordinate that can occur is equal to 1.0; also, the

sum of all squared factor coordinates for a variable (i.e., squared correlations between the variable and all factors) cannot exceed 1.0. Figure 4 provides visual indication (scale) of how well each variable is represented by the current set of factors.

All analyzed variables, except self-employed workers, are positively related with personal income tax revenue: the larger is the share of self-employed, the smaller is the PIT revenue. This is especially true for developing countries in region.

Figure 4 also demonstrates the proximity of variables to the first factor – personal income tax revenue. The closer a variable is located to the unit circle, the better is its representation by the current coordinate system.

So, personal income tax revenue was chosen as dependent variable for the next stage of the analysis – determining variables with significant impact on individual income tax revenue in analyzed countries, by means of regression analysis.

Table 1

Correlation matrix and eigenvalues

	PIT_rev	Gini_coeff.	*LP	*SNGMW	*WSW	*SE	*LFI	Eigen	Total variance
PIT_rev	1.000000	-0.339707	0.712140	0.824718	0.447954	-0.381958	0.471208	1.340	66.99
Gini_coeff.	-0.339707	1.000000	-0.238370	-0.226671	-0.055715	-0.246534	0.024914	0.660	33.01
*LP	0.712140	-0.238370	1.000000	0.962222	0.753615	-0.598694	0.700804		
*SNGMW	0.824718	-0.226671	0.962222	1.000000	0.660711	-0.602753	0.666950		
*WSW	0.447954	-0.055715	0.753615	0.660711	1.000000	-0.811068	0.849999		
*SE	-0.381958	-0.246534	-0.598694	-0.602753	-0.811068	1.000000	-0.625265		
*LFI	0.471208	0.024914	0.700804	0.666950	0.784999	-0.625265	1.000000		

Explanatory notes:

* denotes supplementary variables

PIT_rev is an active variable, which denotes the share of revenue from personal income tax in GDP.

Gini_coeff. is an active variable, measuring income inequality.

LP – is the labor productivity, which according to the ILO definition represents the total volume of output (measured in terms of GDP) produced per unit of labor (measured in terms of the number of employed persons) during a given time period.

SNGMW denotes harmonized statutory nominal gross monthly minimum wage. According to ILO methodology, data are converted to a common currency, using exchange rates for the series in U.S. dollars and using 2011 purchasing power parity rates for the series in constant 2011 PPP \$.

WSW denotes wage and salaried workers, as a share of total employment, i.e. employees who work for employers in the public or private sector and receive compensation in forms of salary, wage, commission, or in kind that is not directly dependent upon the revenue of the unit for which they work.

SE denotes self-employed workers, as a share of total employment, i.e. workers who, working on their own account or with one or a few partners or in cooperative, hold the type of jobs defined as a “self-employment jobs” i.e. jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced. According to ILO methodology, self-employed workers include four sub-categories of employers, own-account workers, members of producers’ cooperatives, and contributing family workers.

LFI is the labor freedom index (estimated by the Heritage Foundation), characterizing the quality of labor market institutions, which is the quantitative measure considering different aspects of the legal and regulatory framework of a country’s labor market, notably ratio of minimum wage to the average value added per worker; hindrance to hiring additional workers; rigidity of hours; difficulty of firing redundant employees; legally mandated notice period, and mandatory severance pay.

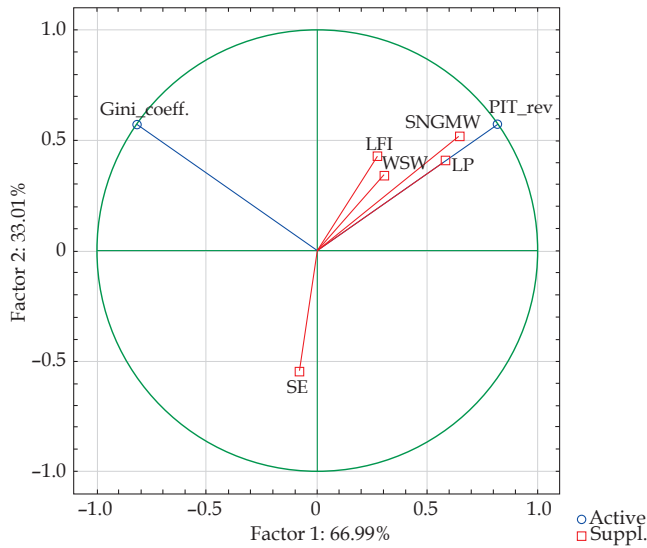


Figure 4. Projection on the variables on the factor-plane

The countries chosen for the analysis are Australia, China, Japan, Indonesia, Kazakhstan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, and Vietnam. The choice of countries was limited by availability of comparable data. For developing, and especially, least-developed countries, the data on individual income tax revenue as well as other indicators of labor market are not available. The set of independent variables includes labor productivity, statutory nominal gross monthly minimum wage, share of wage and salaried workers, share of self-employed workers, and labor freedom index.

The results of regression analysis are presented in Table 2.

The Durbin-Watson statistic showed the absence of autocorrelation in residuals, and also the partial correlation for all independent variables is not significant, i.e. they do not correlate to each other.

Table 2 shows that for the chosen set of countries only statutory nominal gross monthly minimum wage has significant impact on individual income tax revenue.

The theoretical analysis suggested about high tax-free income thresholds in Asian developing countries that limit the positive impact of personal income tax progressivity.

Table 2

Regression summary, PIT revenue

	<i>b</i> *	Std.Err. of <i>b</i> *	<i>b</i>	Std.Err. of <i>b</i>	<i>t</i> (6)	<i>p</i> -value
SNGMW	2.74535	0.836889	0.0065	0.001985	3.28042	0.021944
LP	0.78128	0.523714	0.2067	0.138531	1.49180	0.195956
WSW	0.56339	0.356056	0.1309	0.082745	1.58231	0.174425
SE	-0.18158	0.299644	-0.0443	0.073093	-0.60597	0.570987
LFI	-2.05373	0.926643	-0.0003	0.000119	-2.21631	0.077487

R = 0.92239941

R² = 0.85082068

Adjusted R² = 0.70164136

F(5,5) = 5.7033

p < 0.03945

Std.Error of estimate: 2.2190

*b** and *b* denote the standardized regression coefficients and the raw regression coefficients respectively.

We empirically tested this suggestion in terms of personal income tax revenue, using GDP per capita as a grouping variable, and labor productivity, statutory nominal gross monthly minimum wage, share of wage and salaried workers, share of self-employed workers, and labor freedom index as independent variables. The results demonstrated no significant effect on the dependent variable.

This allowed us to suggest that for analyzed countries the impact of statutory nominal gross monthly minimum wage on personal income tax revenue depends crucially on the level of economic development in terms of GDP per capita. The main reason is the high tax-free personal income thresholds in Asian developing countries.

Conclusion

The progressive individual income tax system is suggested to be an effective tool for achieving optimal level of social equity by reducing income inequality. The progressivity of personal income tax is able to reduce not only after-tax income inequality, but also before-tax income inequality by reducing motivation of high-salaried individuals to increase their income using an aggressive bargaining and accumulated assets.

Currently personal income tax systems in most of Asia-Pacific countries are progressive, but the tax base is narrow,

compared to other regions of the world, particularly, Europe and Americas, because of high free-tax thresholds and large informal sector of the economy, providing large informal employment. This means that in practice the progressivity of current personal income tax systems cannot contribute to the reduction of inequality, which is significant in Asia countries.

The results of cross-country comparison demonstrated that Asia-Pacific countries with high GDP per capita (Australia, Japan, New Zealand) have relatively high PIT revenues and low Gini coefficients. Except Singapore with high income inequality level (as in Malaysia, which is exceeded only by China and India), while having GDP per capita as in developed countries. The further analysis showed that one of the main reasons of high inequality in this country are the features of government tax policy: absence of capital gain taxes, regressive GST which was not able to compensate the losses of revenue from reduced PIT and CIT rates etc.

The empirical study demonstrated that in analyzed countries only statutory nominal gross monthly minimum wage has significant impact on personal income tax revenue, and this impact depends crucially on the level of economic development in terms of GDP per capita. The main reason is high tax-free personal income thresholds in Asia-Pacific developing countries.

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For citation

Belozyorov S. A., Sokolovska O. V. Personal income taxation and income inequality in Asia-Pacific: a cross-country analysis. *Journal of Tax Reform*, 2018, vol. 4, no. 3, pp. 236–249. DOI: [10.15826/jtr.2018.4.3.054](https://doi.org/10.15826/jtr.2018.4.3.054)

Для цитирования

Белозёров С. А. Индивидуальное подоходное налогообложение и неравенство доходов в странах Азиатско-Тихоокеанского региона: сравнительный анализ / С. А. Белозёров, Е. В. Соколовская // *Journal of Tax Reform*. — 2018. — Т. 4, № 3. — С. 236–249. — DOI: [10.15826/jtr.2018.4.3.054](https://doi.org/10.15826/jtr.2018.4.3.054)

Article info

Received July 17, 2018; accepted August 20, 2018

Информация о статье

Дата поступления 17 июля 2018 г.; дата принятия к печати 20 августа 2018 г.

Research on tax risks in the development of the New Silk Road

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ABSTRACT

The paper is studying the tax risks of the Silk Road Economic Belt. Since President Xi Jinping proposed an initiative to jointly build the Silk Road Economic Belt in 2013 when he visited Kazakhstan, the process of regional cooperation on the Silk Road Economic Belt has been further accelerated. With the advancement of the economic and trade exchanges between China and the 16 countries along Silk Road, tax distribution relations have become complicated, and tax risks become an important issue that cannot be ignored. Based on the theory of international tax and using the comparative analysis and empirical analysis, the paper firstly studies the spatial scope of the Silk Road Economic Belt and the institutional environment of the countries along the route, and then mainly analyzes tax risks in the development of the Silk Road Economic Belt and their sources. The study has revealed that there exist large differences in the tax system among the 16 countries along the Silk Road and poor coordination in the tax system, especially in respect of corporate income tax. Coupled with the influence of language barriers, it is difficult for countries to grasp each other's taxation policies and regulations in a timely and comprehensive manner. Finally, the paper proposes the path to prevent the risks of the Silk Road Economic Belt. The main conclusions are: the countries along the Silk Road Economic Belt have hugely different tax system and incomplete tax treaty system, implying big risks for Base Erosion and Profit Shifting (BEPS); the risk sources are that lack of tax collection and management capacity to adapt to international tax rules, and neither enterprises nor tax service departments pay due attention to tax risks; the countries along the Silk Road Economic Belt should optimize open and friendly taxation policies, promote tax coordination, and improve tax collection and management capacities to prevent tax risks.

KEYWORDS

the Silk Road Economic Belt, tax risk, tax treaty, tax capacity

JEL F15, H73

HIGHLIGHTS

1. Regional economic cooperation is always accompanied by tax risks. Accordingly, to effectively prevent tax risks will become a booster for the prosperity and development of the Silk Road Economic Belt
2. There are three main tax risks in the development of Silk Road Economic Belt: differences in the tax system, the incompleteness of the tax treaty system, and the risks under the background of BEPS
3. Tax risks of the Silk Road Economic Belt mainly stem from two aspects. First, weak tax collection and management capacity, and second, lack of sufficient attention to tax risks
4. Based on the current development status and tax risks for Silk Road Economic Belt, strengthening the tax risks prevention can be respectively planned from three perspectives, including domestic tax system, international coordination, tax collection and management

УДК 336.025; 339.972

Исследование налоговых рисков реализации проекта Нового Шелкового пути

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АННОТАЦИЯ

В статье рассматриваются налоговые риски реализации проекта Нового Шелкового пути. В 2013 г. во время визита в Казахстан президент Си Цзиньпин предложил инициативу по совместному строительству экономического пояса Шелкового пути, и процесс сотрудничества в зоне проекта значительно ускорился. С развитием торговых и экономических связей между Китаем и 16-ю странами вдоль Нового Шелкового пути усложняются проблемы распределения налогов и возникают налоговые риски, которые уже нельзя игнорировать. Исследование основано на теории международного налогообложения и применении сравнительного и эмпирического анализа. В статье анализируются пространственные характеристики экономического пояса Шелкового пути и институциональная среда входящих в него стран, а также налоговые риски, возникающие при реализации проекта и их источники. Исследование выявило значительные различия в налоговых системах 16-ти стран в зоне Шелкового пути и их плохую координацию, особенно в отношении корпоративного налога на прибыль. Указанные различия в сочетании с языковыми барьерами затрудняют взаимопонимание в области налоговой политики и налогового регулирования. На основе проведенного анализа, предлагаются пути предотвращения выявленных налоговых рисков. Основные выводы заключаются в следующем: налоговые системы стран, расположенных в зоне экономического пояса Шелкового пути, имеют существенные различия не урегулированные налоговыми соглашениями, что создает дополнительные риски для противодействия эрозии налогооблагаемой базы и перемещению прибыли (BEPS); недостаточная собираемость налогов и отсутствие управленческих ресурсов для адаптации к международным налоговым правилам также являются источниками риска, но ни предприятия, ни налоговые службы не уделяют налоговым рискам должного внимания; для предотвращения налоговых рисков страны, расположенные в зоне экономического пояса Шелкового пути, должны проводить более открытую и дружественную налоговую политику, содействовать координации налогов, повышать сбор налогов и управленческий потенциал в налоговой сфере.

КЛЮЧЕВЫЕ СЛОВА

экономический пояс Шелкового пути, налоговые риски, налоговые соглашения, налоговая нагрузка, налоговый потенциал

ОСНОВНЫЕ ПОЛОЖЕНИЯ

1. Межрегиональное экономическое сотрудничество всегда сопровождается налоговыми рисками. Соответственно, эффективное предотвращение таких рисков станет дополнительным стимулом развития экономического пояса Шелкового пути
2. Выделены три группы налоговых рисков при реализации экономического пояса Шелкового пути: различия налоговых систем, неполнота налоговых соглашений, риски в сфере противодействия эрозии налогооблагаемой базы и перемещению прибыли (BEPS)
3. Налоговые риски экономического пояса Шелкового пути в основном связаны с двумя причинами: во-первых, низкая собираемость налогов и низкий управленческий потенциал, а во-вторых, недостаточное внимание к налоговым рискам

4. Анализ существующего состояния и налоговых рисков реализации экономического пояса Шелкового пути, показывает, что усиление предотвращения налоговых рисков возможно в трех направлениях, включающих изменение национальной налоговой системы, международную координацию, повышение собираемости налогов и улучшение управления ими

Introduction

Ever since the 21st century, the trend of regional integration and economic globalization is continuously enhanced, and China's exchanges and cooperation with countries along the Silk Road have become increasingly closer. Particularly, since President Xi Jinping proposed an initiative to jointly build the Silk Road Economic Belt in 2013 when he visited Kazakhstan, the process of regional cooperation on the Silk Road Economic Belt has been further accelerated. As of July 2017, Silk Road Fund had signed 17 projects with a commitment to invest USD 7 billion, and projects supported by it involved a total investment of USD 80 billion¹. In addition, a number of infrastructure projects undertaken by China in Central Asia had been completed, such as the establishment of Central Asia's longest tunnel Kamchiq Tunnel (19.2 kilometers in length), China-Central Asia natural gas pipeline A, B, C lines with a plan of the D-line project. A special fund for Sino-Kazakhstan capacity cooperation was set and the "Moscow Week" event was held in Beijing. All these cooperation and exchange activities have made the ancient Silk Road once again full of vitality after years of vicissitudes.

Most regional economic cooperation originates from free trade, and its biggest obstacle is the tariff and non-tariff barriers. Therefore, regional economic cooperation is always accompanied by tax risks. According to a survey conducted by the Ministry of Foreign Affairs in 2014 on the economic and trade fields of an African country, 60% of the problems faced by "going global" enterprises are related to tax. In addition, a survey conducted by the National Taxation Bureau of a mu-

nicipality directly under the jurisdiction of 50 overseas investment enterprises in the area indicated that 43% of enterprises faced major tax issues such as tax-related disputes and tax discrimination when they were investing and operating overseas [1]. With the advancement of exchanges and cooperation among countries along the Silk Road Economic Belt, the transnational flows of economic elements such as commodities, capital, technology, and labor force are increasingly frequent, tax distribution relations have become complicated, and tax risk has become an important issue that cannot be ignored in the development of the Silk Road Economic Belt. In the future, there are problems like how to reduce tariff and non-tariff trade barriers, how to avoid double taxation caused by differences in tax systems, tax jurisdiction, and how to prevent multinational corporations from abusing tax concessions and other measures to pay less or even not pay taxes. These problems are increasingly becoming obstacles for the further development of the Silk Road Economic Belt. Accordingly, to effectively prevent tax risks will become a booster for the prosperity and development of the Silk Road Economic Belt.

1. Spatial scope of the Silk Road Economic Belt and the institutional environment of countries along the route

1.1. Spatial scope of the Silk Road Economic Belt

More than 2,100 years ago in the Western Han Dynasty, Zhang Qian led a group of pilgrims to the West, forming a major artery on the Eurasian continent across the west to the east, which is called "the Silk Road". The ancient Silk Road, as an important link between China and the West for business contacts and cultural exchanges, now still has a profound impact on the development and cooperation be-

¹ Ministry of Commerce. "The Belt and Road" Data Review: "The Belt and Road" in 2017. 12 January 2018. Available at: <https://www.yidajiyilu.gov.cn/xwzx/gnxw/43662.htm> (accessed 9 February 2018).

tween Asian and European countries. The Silk Road Economic Belt is a new area of economic development based on the concept of the Ancient Silk Road. It connects the Asia-Pacific economic circle to the east, the European economic circle to the west, stretching over 7,000 kilometers. It is called “the longest and most promising economic corridor in the world”. In the narrow sense, this region contains a total population of about 2.175 billion, accounting for 30.87% of the world’s total population, and its total economic scale is about USD 16 trillion, accounting for 22.1% of the world’s total economy, so it has great potential for development [2].

The current Silk Road Economic Belt mainly includes three lines: the northern line, the central line and the southern line², which are characterized by “anti E” and cross a number of countries. From the perspective of spatial scope, Bai Yongxiu and Wang Songji divided them into three levels of core area, expansion area and radiation area (detailed in Table 1) [3]. According to the basis of cooperation and geopolitics, the concept of the narrow and broad sense Silk Road Economic Belt is distinguished. The core area and the expansion area constitute the narrow Silk Road Economic Belt together. This is also the keystone of this paper (hereinafter referred to as the 16 countries along the Silk Road) Most of the 16 countries along the Silk Road are adjacent to our country and have certain historical cooperative foundation. They are our important trading partners. In recent years, the economic and trade exchanges between China and the 16 countries along Silk Road have increasingly enhanced. Taking Kyrgyz-

² Specifically speaking, the three lines of the Silk and Road Economic Belt are: the north line starts from China, goes through Kazakhstan, Northern Russian, Ukraine, and The Republic of Belarus, reaches Germany via some eastern European countries such as Poland, and connects with Western Europe; the middle line starts from China, goes through some Central Asian countries such as Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, goes along the south coast of the Caspian Sea, and reaches Europe via Turkey; the south line starts from China, goes through Afghanistan and Pakistan, enters Arabian Peninsula via Iran, and then enters North Africa via Egypt.

stan as an example, China, as the largest trading partner and the largest importer of Kyrgyzstan, had a trade volume of USD 1.5976 billion in 2017, accounting for 25.5% of its total trade volume and it increased 3.2% over the last year, of which China’s exports volume were 1.5001 billion USD (33.5% of the Kyrgyzstan total import amount) and China’s import volume were 97.5 million USD³. In addition, the 16 countries along Silk Road are also the keystone of overseas investment in China. At the end of 2016, China’s direct investment stock in transition economies was USD 2.3375 billion, of which Russia was USD 1.298 billion, accounting for 55.5%; Kazakhstan was USD 5.432 billion, accounting for 23.2%; Kyrgyzstan was USD 1.238 billion, accounting for 5.3%; Tajikistan was USD 1.167 billion, accounting for 5% and Turkmenistan was USD 249 million, accounting for 1.1%⁴. Therefore, how to ensure the healthy development of the trade and economic exchange between China and the 16 countries become an important part of the Silk Road Economic Belt construction. The prevention of tax risk is an important part of it.

Table 1
An overview of the spatial scope of the Silk Road Economic Belt

Level	Major Countries
Core Area	China, the five Central Asian countries, Russia
Expansion Area	India, Pakistan, Iran, Afghanistan, Mongolia and other countries of Eurasian Economic Community.
Radiation Area	European Union, West Asia and Japan, South Korea

Note: The five countries of Central Asia include Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan and Tajikistan. The other countries of the Eurasian Economic Community include Belarus, Armenia, Ukraine and Moldova.

Source: [3].

³ Ministry of Commerce. A Brief Report of Annual Foreign Trade of Kyrgyzstan in 2017, Belt and Road Portal. 27 February 2018. Available at: <https://www.yidaiyilu.gov.cn/xwzx/hwxw/49096.htm> (accessed 10 April 2018).

⁴ Ministry of Commerce, National Bureau of Statistics, State Administration of Foreign Exchange. Statistical Bulletin of China’s Outward Foreign Direct Investment in 2016. Ministry of Commerce, National Bureau of Statistics, State Administration of Foreign Exchange, 2017, pp. 21.

1.2. The institutional environment of all countries along the Silk Road Economic Belt

Before studying the tax risks of the Silk Road Economic Belt, we should firstly analyze the institutional environment of the countries along the Silk Road Economic Belt to understand the carriers that the tax is relying on. There are many countries along the Silk Road Economic Belt. The difference of resources endowment, economic development level, political and cultural system and the influence of geopolitical factors make the institutional environment complex.

1. The overall competitiveness of the 16 countries along the Silk Road is weak. According to the 2017–2018 Global Competitiveness Index published by the World Economic Forum, only 3 countries in the 16 countries along Silk Road ranked in the top 50, China (27), Russia (38) and India (40)⁵, and the rest of the countries ranked lower. Some countries, for various reasons, did not appear on the list, such as Turkmenistan.

2. There are huge differences in the business environment between the 16 countries along the Silk Road. According to the assessment about the ease of doing business in economies around the world for 190 economic entities issued by World Bank in 2018, we found that there is a big difference between the 16 countries' business environment. Russia (35), Kazakhstan (36) and Armenia (47) have the best business environment, ranking the top 50. On the contrary, Iran (124), Afghanistan (183), Pakistan (147), Tajikistan (123) and other countries ranked more than 100 in business convenience, and the business environment was not ideal⁶.

Generally, the countries along the Silk Road Economic Belt is mostly developing

countries, although it has great potential for development, its competitiveness is weak. The business environment of those countries is uneven, and there are certain political risks in those countries. On these bases, the imperfection of tax system as well as the collection and management environment are unavoidable, especially in international tax governance, most of the countries are still in their initial stage. Tax risk management, especially international tax risk management, poses severe challenges to the tax administration of various countries along the Silk Road Economic Belt.

2. Tax risks and the risk source of the Silk Road Economic Belt

The Silk Road Economic Belt has a wide range of space, complex institutional environment and weak competitiveness. Therefore, it is very necessary to accurately identify the tax risk, which is inevitable, and carry out effective precautions in the construction and development of the Silk Road Economic Belt. From the perspective of a single country, the accurate identification and prevention of tax risk can avoid tax loss and malign competition, at the same time, force the domestic tax reform and improve tax collection and management capabilities, to accelerate the establishment of the tax system that is in line with the international system. To a certain extent, it will promote the progress of the national system. On the other hand, from the perspective of regional development, the countries along the Silk Road Economic Belt have strong complementarity in resources, industries, etc. There is a broad cooperation space with them. Identifying and preventing tax risks will help to reduce risk costs for economic and trade exchanges among countries, and further promote the free flow of production factors such as resources, capital and labor force in the region to optimize the allocation of resources and enhance the overall competitiveness of the region. What's more, with the deepening of market integration, the regional integration process will continue to be accelerated.

⁵ World Economic Forum. Global Competitiveness Index 2017–2018. Available at: <http://reports.weforum.org/global-competitiveness-index-2017-2018/competitiveness-rankings/#series=GCI> (accessed 10 April 2018).

⁶ World Bank. Doing Business 2018 Reforming to Create Jobs. Available at: <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB18-print-report.pdf> (accessed 10 April 2018).

2.1. Tax risks of the Silk Road Economic Belt

2.1.1. Big difference in tax system

There are a lot of countries along the Silk Road Economic Belt and the provisions of the tax law vary widely. In terms of legal system, most countries adopt civil law system, and some countries such as India and Pakistan adopt the Anglo-American law system. In terms of tax jurisdiction, most countries use residential jurisdiction and territorial jurisdiction, that is, they collect tax on their residents' global income and non residents' income derived from their country. In terms of tax type, there are still certain differences between countries. For example, except Russia, the operation of the VAT system in other countries of the Silk Road Economic Belt does not depend on export tax rebate, and gradually deviates from the provisions of international laws and regulations [4].

Taking into account the main cooperation way between countries along the route is cross-border investment, and the corporate income tax burden is one of the important factors that affects international investment. Therefore, the corporate income tax is the most concerned issue of "going global" and "bringing in" in

multinational companies. It is closely related to the development of the Silk Road Economic Belt. However, the regulations of different countries are quite different, which increases the difficulties of cross-border investment.

From the perspective of tax rise standard and taxable income (see Table 2), the 16 countries along the Silk Road are different in judging the taxpayers' type and dealing with taxable income. Most countries adopt a standard (that is, company registration place, such as Russia, Mongolia, etc.) or two standards (that is, company registration place or management control place, such as Pakistan, Kyrgyzstan, etc.) to distinguish between resident and non-resident taxpayers. Of course, there are also some countries with special provisions, such as Kazakhstan, where three standards are adopted to determine the resident taxpayer, that is, the company registration place, management control place, and the actual operation place, while Afghanistan does not publish the criteria to distinguish between residents and non-residents. When considering the treatment methods of taxable income tax, we find that different countries do not have much difference in collecting tax from operating income and other income, but they adopt different ways to deal with

Table 2

The treatment methods of taxable income, taxpayers' judgment criteria of corporation income tax for some 16 countries along the Silk Road

Taxpayers' judgment criteria		
Judgment Standard		Representative Countries
Company Registration Place		Belarus, Russia, Mongolia, Ukraine, Uzbekistan
Company Registration Place or Management Control Place		Pakistan, Kyrgyzstan, Turkmenistan, India
Company Registration Place or Management Control Place or Actual Operation Place		Kazakhstan
The treatment methods of taxable income		
Income Category	Treatment Method	Representative Countries
Dividend Income	Tax exemption	Kazakhstan, Kyrgyzstan, Ukraine, Uzbekistan
	Collect tax according to normal income	Afghanistan, Mongolia
	Collect different tax	Pakistan, Belarus, Russia, Moldova, Turkmenistan, Armenia, India
Capital Gains	Tax exemption	-
	Collect tax according to normal income	Afghanistan, Belarus, Russia, Kazakhstan, Kyrgyzstan, Turkmenistan, Ukraine, Uzbekistan, Armenia
	Collect different tax	Pakistan, Moldova, India

Source: [5].

the tax from dividend income and capital income. For the dividend income, most of the 16 countries along the Silk Road choose special tax collection methods, that is, tax exemption (such as Kazakhstan) or collect different tax (such as India), only a few countries choose to levy taxes according to their normal income, such as Afghanistan and Mongolia. On the contrary, in the treatment of the tax on capital gains, most countries chose to levy taxes according to normal income, such as Russia, Kazakhstan and so on, and only a few countries, such as India, Pakistan, and Moldova choose to levy different tax.

From the perspective of tax rates (see Table 3), except for Mongolia, which adopts a progressive tax rate, all other countries adopt a proportional tax rate. From Table 3, it is easy to see that the tax rates of different countries are quite different. For example, the higher ones,

such as Pakistan, can reach 31% or 35%, and the lower ones, such as Uzbekistan, are only 7.5%. However, most countries have tax rates between 10–20%. In general, the tax rates of corporate income tax in most of the 16 countries is lower than China's corporate income tax rate, but the tax rates in India and Pakistan are significantly higher than that in China, 30%, 31% or 35% respectively. In particular, compared to domestic companies, India imposes 10% higher income taxes on foreign companies and their branches, (the tax rate is 30% for domestic companies and 40% for foreign companies and their branches), which is quite rare worldwide. In addition, some countries have imposed a branch remittance tax on profits, that is, after the branches deduct the corporate income tax paid locally, they must pay tax again once the profits are remitted, such as Kazakhstan, Uzbekistan, Pakistan, and

Table 3

Corporate income tax rates for some 16 countries along the Silk Road

Country	Standard tax rate	Branch profit remittance tax rate	Dividend withholding tax rate	Contracted dividend tax rate
Russia	15.5-20 ¹	0	0/13/15 ²	5/10
Kazakhstan	20	15	15	10
Uzbekistan	7.5	10	10	10
Turkmenistan	8/20/2 ³	-	15	5/10
Kyrgyzstan	10/5/0 ⁴	-	10	10
India	30 ⁵	0	0	10
Pakistan	31/35 ⁶	12.5	12.5	10
Afghanistan	20	-	20	-
Mongolia	10/25 ⁷	20	20	5
Belarus	18/25 ⁸	-	12	10
Armenia	20	-	10	5/10
Ukraine	18	0	15	5/10
Moldova	12	0	6 ⁹	5/10

Note: ¹ The tax rate for education and pharmaceutical companies is 0%. ² The rate of dividend withholding tax paid to other Russian companies or residents is 13%, and the rate of dividend withholding tax paid to foreign companies is 15%. ³ The income tax rate for non-government resident enterprises is 8%, the tax rate for other resident companies is 20%, and the income tax rate for individual proprietorship enterprises is 2%. ⁴ Standard tax rate is 10%, 5% for leasing companies, and enterprises with gold mining, selection, refined alloys, and gold enjoy a preferential tax rate of 0%. ⁵ Domestic corporate tax rate is 30%, and foreign companies and their branches have a tax rate of 40%. Considering additional taxes and local taxes, the effective tax rate is 33.99% for domestic companies and 43.26% for foreign companies. ⁶ The bank is 35% and the rest is 31%. ⁷ Progressive rate is adopted. The part within 3 billion tugrik (MNT) of annual taxable income, the tax rate is 10%. Otherwise, the tax rate is 25%. ⁸ 18% is the standard tax rate, and the tax rate for banks and insurance companies is 25%. ⁹ It was 15% from 2008 to 2011.

Source: Worldwide Corporate Tax Guide 2017. Available at: [http://www.ey.com/Publication/vwLUAssets/Worldwide_Corporate_Tax_Guide_2017/\\$FILE/Worldwide%20Corporate%20Tax%20Guide%202017.pdf](http://www.ey.com/Publication/vwLUAssets/Worldwide_Corporate_Tax_Guide_2017/$FILE/Worldwide%20Corporate%20Tax%20Guide%202017.pdf); Concentric Service Team of The Chinese Certified Tax Agents. An Overview of Tax Issues in "the Belt and Road Initiative" Development Strategy, Beijing: China Taxation Publishing House, 2015.

Mongolia. Undoubtedly it increases tax burden on overseas contracting and labor services. Withholding tax is a direct tax levied on cross-border capital flows. Excluding India, all countries collect dividends withholding tax, and the tax rate is mostly between 10–15%. In particular, the tax rate of dividend withholding tax agreed between most countries and China is lower than that of domestic regulations or equal. This benefits from the bilateral or multilateral tax treaties between China and other countries, which has created a good condition of “going global” for Chinese enterprises.

Through the above analysis, it is not difficult to find that there exist large differences in the tax system among the 16 countries along the Silk Road and poor coordination in the tax system, especially in respect of corporate income tax. Coupled with the influence of language barriers, it is difficult for countries to grasp each other’s taxation policies and regulations in a timely and comprehensive manner. It is prone to cause problems such as irreparable overseas losses, unreliable offshore concessions, failure to implement agreed treatment, unfair foreign tax enforcement, and other issues, which greatly increase the tax risks of the Silk Road Economic Belt.

2.1.2. Incomplete tax treaty system

Tax treaties are important means of regulating the distribution of taxes among countries. Up to now, China has signed a total of 103 double taxation avoidance treaties, of which 99 have come into effect⁷. China’s tax treaty network has already covered 54 countries under “the Belt and Road Initiative”. In 2016, China reduced taxation for foreign investors by RMB 28 billion, and overseas taxation for Chinese financial institutions by RMB 27.8 billion. Besides, a total of 130 bilateral taxation consultations were conducted in 2015, avoiding duplicate taxation of RMB

11.3 billion for “going global” and “bringing in” companies⁸. From Table 4, we can easily see that within the scope of the Silk Road Economic Belt, China’s tax treaty network has been continuously improved. Excluding Afghanistan, China has signed tax treaties with other countries in the core and expansion areas of the Silk Road Economic Belt.

It is worth noting that many of the contents of these tax treaties have lagged behind, which is difficult to meet the development needs of the Silk Road Economic Belt. Firstly, there is a lack of renewal of the tax treaties. China only signed a new tax treaty with Russia in 2014 and began to implement it on January 1, 2017. The rest of the tax treaties were mostly signed before and after the 21st century. They are old and outdated and are difficult to adapt to the new international taxation situation, and they are particularly deficient in the international tax avoidance problems in the context of tax base erosion and profit shifting. Secondly, there is a lack of tax sparing clause. Although China has signed tax treaties with most of the 16 countries along the Silk Road, India and Pakistan are the only countries to apply the sparing clause, and the rest of the countries have no mutually affirmation of the sparing clause. The tax rate of corporate income tax in China is higher than that of most of the 16 countries along the Silk Road, and whether Chinese enterprises can enjoy the preferential tax treatment of the other country depends largely on the tax sparing clause. The absence of this clause increases the hidden costs and tax risks of the enterprises’ foreign investment. Finally, the tax information exchange system is backward. Although the tax treaties involve the tax information exchange system, most of the provisions are simple and perform practically no function. In particular, the “*Multilateral Convention on Mutual Assistance in Tax Collection and Management*” stipulates three forms of mutual assistance in

⁷ State Administration of Taxation. A List of Treaties China Has Signed to Avoid Double Taxation. Available at: <http://www.chinatax.gov.cn/n810341/n810770/index.html> (accessed 9 February 2018).

⁸ Ministry of Commerce. Illustration of Tax Service in “The Belt and Road”. Available at: <http://www.chinatax.gov.cn/n810219/n810744/n1671176/index.html> (accessed 9 February 2018).

Table 4

Tax treaties signed between China and some countries of the Silk Road Economic Belt

Country	Signing date	Production date	Execution date	Is there any sparing treaty?
Russia	May 27, 1994	April 10, 1997	January 1, 1998	×
	October 13, 2014	April 9, 2016	January 1, 2017	–
Kazakhstan	September 12, 2001	July 27, 2003	January 1, 2004	×
Kyrgyzstan	June 24, 2002	March 29, 2003	January 1, 2004	×
Tajikistan	August 27, 2008	March 28, 2009	January 1, 2010	×
Turkmenistan	December 13, 2009	May 30, 2010	January 1, 2011	×
Uzbekistan	July 3, 1996	July 3, 1996	January 1, 1997	×
India	July 18, 1994	November 19, 1994	January 1, 1995	√
Pakistan	November 15, 1989	December 27, 1989	January 1/July 1, 1989	√
Iran	April 20, 2002	August 14, 2003	January 1, 2004	×
Mongolia	August 26, 1991	June 23, 1992	January 1, 1993	×
Belarus	January 17, 1995	October 3, 1996	January 1, 1997	×
Armenia	May 5, 1996	November 28, 1996	January 1, 1997	×
Ukraine ¹	December 4, 1995	October 18, 1996	January 1, 1997	×
Moldova	June 7, 2000	May 26, 2001	January 1, 2002	×

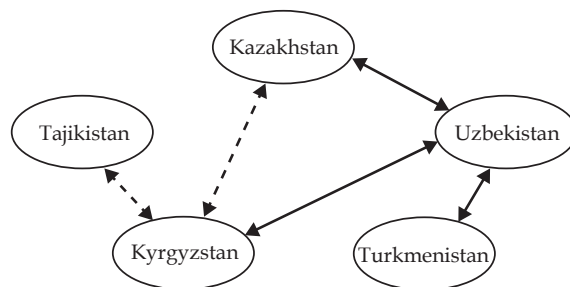
Note: ¹ The treaty entered into force on January 1, 1997 in China. In Ukraine, the dividends, interest, royalties, and personal income taxes took effect on December 17, 1996, and the enterprise income tax part took effect on January 1, 1997.

Source: Data is collated based on the official website of the State Administration of Taxation.

tax collection and management, namely, exchange of tax information, assistance in tax recovery and assistance in the delivery of documents. However, at present, only 6 countries among the 16 countries along the Silk Road have signed this convention, that is, China, Ukraine, Russia, Moldova, Kazakhstan, and India [6]. The tax information exchange system of the Silk Road Economic Belt has lagged far behind the world trend. From a comprehensive perspective, constantly updating and improving the content of tax treaties

is a further goal of perfecting China’s tax treaty network.

At present, China has signed many tax treaties, covering almost all the countries of the Silk Road Economic Belt. However, there are few relevant treaties between other countries of the Silk Road Economic Belt, and it is difficult to meet the demand for trade and investment exchanges between countries. Take the bilateral investment treaties of the five Central Asian countries as an example (detailed in Figure). The process of signing the in-



Bilateral investment treaties between the five Central Asian countries

Note: The solid line in the figure indicates the effective bilateral investment treaty that has been signed, and the dotted line indicates the bilateral investment treaty that has been signed but has not yet entered into force.

Source: [4].

vestment treaties between the five Central Asian countries has already been started, and currently there have already been three effective investment treaties and two signed but not yet effective investment treaties, but full coverage has not yet been reached. For example, there are still no bilateral investment treaties between Kazakhstan and Tajikistan, Turkmenistan and Tajikistan, Uzbekistan and Tajikistan. The absence of tax treaties will be a major tax challenge in the development of the Silk Road Economic Belt.

2.1.3. New risks in the context of BEPS

Driven by the globalization process, the world's economic activities are deeply integrated, and the production and operation activities of enterprises are no longer confined to a certain region, but the production chain is integrated globally. This blurring of borders has given multinational enterprises more and more opportunities to implement radical tax planning measures to minimize their tax burden, and countries are facing increasingly severe tax base erosion and profit shifting. To this end, the leaders of the Group of 20 reached a consensus, calling for the establishment of a fair and modern international taxation system on a global scale, and entrusted the OECD in 2015 to publish the final version of the "Action Plan on Tax Base Erosion and Profit Shifting". The action plan originated in developed countries, and some research acknowledges that the BEPS concerns facing developing countries, may not necessarily be the same as those facing developed countries [7, p. 3]. there are many developing countries along the Silk Road, and their tax collection and management capacities are relatively weak, so they may face greater BEPS risks.

First of all, from the perspective of country, in recent years, China's overseas direct investment (ODI), especially whole or majority-ownership mergers and acquisitions, rose significantly in the belt-road countries, especially the ones along the continental route, Central and West Asia, Western Europe and Russia are favorable destinations of Chinese ODI [8].

And the difference in the transfer pricing rules will provide room for the tax evasion behavior of the company, leading to new-type tax risks. Tax base erosion caused by the improper profit distribution generated by intangible assets of large-scale multinational corporations in the world is a severe challenge for both developed countries and developing countries. For example, the US Apple Inc. shifts its profits to Ireland where the tax rate is lower through the splitting of intellectual property rights, to realize the purpose of tax evasion [9]. To this end, the BEPS action plan advocates that countries implement the transfer pricing country report, that is, the parent company of a multinational company with a global consolidated income of over 750 million euros should report the related transfer pricing information to the tax authority in the country where the parent company is located, and OECD has established a bilateral tax information automatic exchange system on its website, thereby realizing information sharing between the tax authorities of the signatories. At present, 66 countries and regions have signed the *Multilateral Competent Authority Agreement on the Exchange of Country-By-Country Reports*, among which, only China, Russia, India and Pakistan in the 16 countries along the route of the "Belt and Road Initiative" have signed this agreement⁹, as the rest 12 countries lack the capacity to share information due to legislation defects and backwardness in tax collection and management.

Next, from the perspective of enterprise, the unfamiliarity with the tax system of the investment target country may bring additional risks or losses to the enterprise. A survey of some "going global" enterprises based in Beijing shows that lack of professional tax personnel, neglecting the tax management of their overseas branches and prevention and control of international tax risks are the common problems encountering

⁹ State Administration of Taxation. Country Reports of Transfer Pricing. Available at: <http://www.chinatax.gov.cn/n810219/n810744/n2959156/index.html> (accessed 19 April 2018).

these enterprises [10]. In recent years, propelled by the BEPS action plan, more and more countries along the route of the “Belt and Road Initiative” have formulated the related policy to prevent tax base erosion and profit shifting, focusing on the abuse of preferential tax agreement, improper transfer pricing and compulsory disclosure obligation, etc. For example, the Sino-Russian Tax Agreement treatment is superior to that of the domestic tax law of the two countries, but at the same time the interest-restriction clauses are also stipulated to prevent the improper awarding of preferences by the tax agreement¹⁰. Although Kazakhstan has not formally signed the transfer pricing country report agreement, it has promulgated and implemented its domestic “*Transfer Pricing Act*”, clarifying the relevant provisions for the operations by foreign petroleum corporations in Kazakhstan¹¹. Due to the large disparities in the tax systems of countries along the Silk Road, if companies fail to understand them in advance, it may lead to an anti-tax evasion investigation by the tax authority of the host country, which not only causes economic losses in the short term, but also damages the social reputation of the enterprise, and have an adverse effect on the enterprise’s long-term investment activities in the host country.

2.2. Sources of tax risks

Taken together, tax risks of the Silk Road Economic Belt mainly stem from two aspects: first, weak tax collection and management capacity, and second, lack of sufficient attention to tax risks.

¹⁰ State Administration of Taxation. Investment Taxation Guide for Chinese Residents Going to Russia. Available at: <http://www.chinatax.gov.cn/n810219/n810744/n1671176/n1671206/c2069894/part/3317813.pdf> (accessed 1 March 2018).

¹¹ State Administration of Taxation. Investment Taxation Guide for Chinese Residents Going to Kazakhstan. Available at: <http://www.chinatax.gov.cn/n810219/n810744/n1671176/n1671206/c2581971/part/2581990.pdf> (accessed 27 April 2017).

First, from the perspective of tax collection and management capacity, lack of tax collection and management capacity to adapt to international tax rules has always been one of the important challenges facing countries along the Silk Road Economic Belt. Liu Rong et al. examined the tax collection and management competitiveness of countries along the route of “Belt and Road Initiative” from the perspective of tax burden, collection efficiency, and administrative integrity, and pointed out that India, Ukraine, Tajikistan, and other countries are deficient in tax collection and management competitiveness [11]. In the process of actual tax collection and management, influenced by resident identity criteria of different taxpayers, and different tax credit systems and other factors, it is more likely to experience repeated taxation, resulting in an increase in the tax cost of the enterprise. Or some countries’ lack of policies and measures to prevent tax base erosion and profit shifting may result in the loss of tax revenue. According to the IMF data, the average tax revenue of the Central Asian countries accounts for less than 25% of their GDP [4]. The reason lies in their higher geopolitical risk and lower level of economic development. According to statistics, among 48 countries along the route of “Belt and Road Initiative”, countries with a high new-type political risk accounted for 48% [12]. Strong tax collection and management capacity is always based on a stable political environment. In a political environment with a high risk, it is difficult to realize a forceful tax collection and management. In addition, the Silk Road Economic Belt, especially the core area and expansion area, is featured with developing countries, which determines the imperfect tax collection and management system.

Secondly, from the perspective of the importance attached to tax risks, neither enterprises nor tax service departments pay due attention to tax risks. Take China as an example, the survey shows that 82.5% of the “going global” enterprises in China do not understand United States-The People’s Republic of China Income

Tax Convention. Only 2.5% of the enterprises used the mutual consultation process between China and the United States to settle the tax disputes when facing tax disputes or tax discrimination. In addition, only 15%, 12.5%, and 7.5% of the enterprises had an understanding of the OECD Transfer Pricing Guidelines, the American *Foreign Account Tax Compliance Act (FATCA)* and the Base Erosion and Profit Shifting (BEPS) action plan, the automatic exchange of tax information and other hot international tax issues [13]. The tax service department is deficient in terms of establishing the tax platform for “going global” enterprises, strengthening the international level training for these enterprises and releasing the annual risk analysis report, which, to a certain extent, reflects that it does not pay due attention to the international tax risk.

3. Tax risk prevention path selection for countries along the Silk Road Economic Belt — taking China as an example

Based on the current development status and tax risks for Silk Road Economic Belt, strengthening the tax risks prevention can be respectively planned from three perspectives including domestic tax system, international coordination, tax collection and management. We will take China as an example, and propose the specific route choice for tax risks prevention from the above three perspectives.

3.1. Optimizing and opening friendly tax system to guarantee enterprises for going global

The development of Silk Road Economic Belt creates conditions for China to implement open economic development pattern, and reinforces the economic connection between China and the world, which proposes many requirements for China’s tax system. Thus, China shall establish open and friendly tax pattern by starting from the domestic tax system.

1. Consummating domestic tax system and motivating enterprises for going global. Along with the further expansion of

cooperation scope in Silk Road Economic Belt, the comprehensive tax coordination becomes imperative. Hence, it is necessary for China to adjust and consummate the direct and indirect taxes including goods and services tax, income tax, customs duty, and proactively do the preparatory work for tax coordination. Meanwhile, China shall increase the tax incentive to improve enthusiasm of enterprises for foreign investment and motivating them for going global [14]. For example, we can achieve tax incentive by allowing enterprises to take the interest paid to the loan from financial institution as the input tax deduction; exempting the income tax for the income of financial institutions from providing financing and guarantee for foreign investment of enterprises; allowing true pre-tax expenses of overseas training expenses for overseas contracting project and other projects.

2. Reforming tax credit system to expand the comprehensive credit scope. China’s tax system structure, especially corporate income tax rate is of great difference from that in the countries along the Silk Road Economic Belt, we can consider about changing China’s current “country specific instead of item specific” credit system into non-national comprehensive ordinary credit system. The advantage is that the comprehensive ordinary credit could enable enterprises to offset their profits and losses in different countries, meanwhile it can also simplify the calculation and improve the efficiency in collection and management [15]. So far, China’s petroleum enterprises have tried the alternating plan of “country and item non-specific ordinary credit method” and “comprehensive ordinary credit method”, in the future, such act might be popularized to all “going global” enterprises [16]. Besides, China shall also pay attention to relax the shareholding, hierarchy, compensation limit and valid certificate limit of overseas credit, and expand tax reduction and exemption scope, to promote capital export. We can follow the United States, Japan and other great powers for capital export, to exempt the corporate income tax obliga-

tion of the “going global” enterprises in the opposing country in specific areas and industries.

3. Consummating supporting system to guarantee enterprises for going global. Learning from international experience, China could consider about establishing reserve fund system for overseas investment risk, i.e. allowing enterprises to make a provision for overseas investment based on a certain proportion (before taxes), to be beneficial to improve enterprises’ risk resistance capacity for overseas investment [17]. Besides, consummating China’s overseas loss burden mechanism is also very necessary, we can consider about the method of carrying down to the subsequent years, or offsetting the profits of previous years etc. To promote foreign investment, we can think about introducing overseas investment tax deferred mechanism by learning from the measures in the United States, i.e. allowing enterprises to put their income in foreign countries, and collecting the tax while the income is repatriated, to improve the risk resistance capacity and international competitiveness of enterprises for foreign investment.

3.2. Consummating tax convention network to promote tax coordination

In the future, promoting tax coordination will depend on at least two mechanisms, one is the bilateral mechanism represented by tax convention, and the other is multilateral or regional cooperation mechanism.

1. Bilateral cooperation mechanism Bilateral cooperation mechanism which features tax treaties plays an important role in preventing tax risks in the Silk Road Economic Belt. Therefore, we should speed up the process of signing tax treaties and struggle for a full coverage of tax treaties in the future of development. At the same time, we should amend and improve tax treaties that we have already signed. Specifically, the work should be done from several perspectives as follows: First, tax sparing terms should be taken into more account

in the process of signing and amending tax treaties, and OECD model in favor of capital exporting countries is a good reference. In particular, to gradually expand the range of application of methods of tax exemption which avoids double taxation should be taken into consideration. For example, when China and Russia modifying tax treaties which are signed in 1994, methods of tax exemption were introduced gradually, which further stimulates the enthusiasm of enterprises [18]. Second, establish an automatic exchange of tax information mechanism. Automatic exchange of tax information plays an important role in getting information about tax evasion, deterring tax dodgers, realizing the equality of taxes, and effectively striking against cross-border tax evasion, so it has received worldwide attention. OECD amended Article 26 of its model tax convention (which involves regulations of information exchange) in 2004, expanded the scope of implementation of information exchange, reduced the regulations of international information exchange, and enriched the ways of tax information exchange. In 2006, OCED issued *Manual on the Implementation of Exchange of Information Provisions for Tax Purposes*, which expounds six ways of exchange of tax information in detail [19, pp. 7–8]. In the future, on the one hand, China should promote establishing a tax information exchange mechanism, and emphasize improvising the quality of tax information on the other hand to propel countries along the lines of the Silk Road Economic Belt to use CRS to implement the exchange of tax information.

2. Multi-lateral or regional cooperation mechanism in the multilateral context of the Silk Road Economic Belt, a multilateral or regional mechanism for tax cooperation becomes rather important, where each country’s interest of taxation should be ensured and efficiency of multilateral tax collection should be improved. For the moment, compared with the cases of relatively established regional economic organizations such as EU and NAFTA, the establishment of

a regional tax cooperation mechanism faces challenges caused by factors such as complexity and difference among the systems of countries along the line of the Silk Road Economic Belt. From the perspective of further development, to establish a relatively unified platform for regional tax coordination is still an important task in subsequent regional taxation cooperation. In the process of establishing such a platform, we can learn from NAFTA, TPP and the latest achievements of BEPS action program of OECD, and take the features of politics, economics, societies, and taxation systems of countries along “the Belt and Road Initiative” into account to set up regulations and platforms for international tax coordination which meet the demands of development.

3.3. Establish a taxation platform, and improve the tax collection and management capacities

Weak tax collection and management capacity is a key factor accounting for tax risks in the Silk Road Economic Belt. In particular, in the temporal context of “Internet+”, information conditions such as big data, Internet of Things, cloud computing provide tax departments with advantages to find tax risks immediately and precisely. However, low quality of taxation data, slow update speed, disunity of data interface standard presents challenges tax risks management in the temporal context of “Internet +” [20]. Under such circumstances, China’s tax departments can commence with the following two aspects to improve the tax collection and management capacity, which will help them provide superior tax services for China’s “going global” enterprises and protect China’s taxation rights and interests.

First, reinforce the taxation information construction. Taxation information construction is an effective way to improve the efficiency of tax services. Tax departments can set up an information database of international taxation policies by collecting information such as tax policies, tax preferences and examples

of tax collection and management from various countries. They should collect information about political and economic development and changes of laws from various countries immediately, issue investment risk assessment reports of each country, and issue warnings about investment risk timely. They should improve the construction of tax departments’ websites, establish user-friendly service websites, provide more overall tax information timely, and protect China’s enterprises abroad.

Second, strengthen the construction of related systems for tax services. Some “going global” enterprises don’t understand international tax issues such as tax treaties and earned income tax credit. Tax departments should train “going global” enterprises through various means such as network classroom, forums for tax enterprises, brochures and so on to expound foreign investment policies, and popularize tax problems they would face in foreign investment and solutions. In addition, when enterprises run abroad, new tax issues may also arise due to differences in systems, ethnicity, culture, beliefs and other factors, which requires us to emulate the practices of the United States, Japan and South Korea, which send tax counselors to China, and send tax counselors to foreign embassies in their major investment countries to solve specific tax-related matters.

Generally, the Silk Road Economic Belt is geographically vast and has great potential for development, but is restricted by some factors such as geopolitics, economic development levels, tax collection and management capacities and so on. It is an economic region where opportunities and risks coexist. From China’s perspective, we should optimize an open and friendly tax system constantly, promote the construction of a regional tax coordination mechanism, and emphasize on improving tax departments’ tax collecting and management abilities to prevent tax risks in the Silk Road Economic Belt, and lay foundation for further development of the Silk Road Economic Belt.

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For citation

Ma Caichen, Shan Miao. Research on tax risks in the development of the New Silk Road. *Journal of Tax Reform*, 2018, vol. 4, no. 3, pp. 250–265. DOI: [10.15826/jtr.2018.4.3.055](https://doi.org/10.15826/jtr.2018.4.3.055)

Для цитирования

Ма Цайчень. Исследование налоговых рисков реализации проекта Нового Шелкового пути / Ма Цайчень, Шан Миао // *Journal of Tax Reform*. – 2018. – Т. 4, № 3. – С. 250–265. – DOI: [10.15826/jtr.2018.4.3.055](https://doi.org/10.15826/jtr.2018.4.3.055)

Article info

Received *July 28, 2018*; accepted *September 23, 2018*

Информация о статье

Дата поступления *28 июля 2018 г.*; дата принятия к печати *23 сентября 2018 г.*

DOI [10.15826/jtr.2018.4.3.056](https://doi.org/10.15826/jtr.2018.4.3.056)

Lab experiment to investigate tax compliance: the case of future taxpayers' behavior in Russia and Belarus

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ABSTRACT

The paper aims to examine the internal motivation of taxpayer's behavior, and the factors affecting tax morale and voluntary tax compliance. The authors provide scientific results of the tax experiments in post-Soviet countries (Russia and Belarus). The laboratory tax experiment was carried out in a form of a business game engaging students of various levels of education and background. The controllability of the experiment with the impossibility of material encouragement is ensured in the student's environment in the form of scores to the final attestation. In order to obtain data on tax behavior motivation, a survey on attitude to tax system was conducted. Respondents (experiment participants) were asked to indicate their level of agreement with defined statements by Likert scale. To assess the differences between two groups of participants (who paid and who do not paid tax), the data obtained as a result of filling out the questionnaire using the Mann-Whitney *U*-test and the Kruskal-Wallis *H*-test were analyzed. The study results affirmed the hypothesis generated earlier, the personal tax morale influences the national tax system and the tax behavior of an individual. The article proves that the awareness of the ways government spends public revenue and the trust level to the state and tax system itself influence tax behavior directly. The civil awareness on the real state of fiscal distribution increases the trust level to the government among taxpayers and is the essential motivation to pay taxes. The developed methodology may be used in an educational process to increase tax literacy, its further application in the scientific research will allow us to derive evidence-based methods and ways to directly influence tax behavior, which may enlarge the public revenue in the times of an unstable global economy.

KEYWORDS

tax behavior; attitude to taxes; tax compliance; tax evasion; tax experiment; behavioral economics

JEL C91, H26, H39

HIGHLIGHTS

1. The study reveals that the tax audit affects more the amount of evading taxes than the number of evaders, where an increase of education level helps to reduce tax evasion through citizens, to make an individual more competent and more responsible as a taxpayer
2. Laboratory tax behavior monitoring of students allows us to identify the factors that influence on the real national tax behavior and tax experiments could become a tool for the formation of strategies of interaction between tax authorities and taxpayers in Russia and Belarus
3. The main incentives for paying taxes are the trust towards the government and the tax system and the understanding of the society-oriented character of the state

УДК 336.225.67

**Изучение налогового поведения
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ORCID: [0000-0002-7860-5929](https://orcid.org/0000-0002-7860-5929)**АННОТАЦИЯ**

Целью статьи является исследование внутренней мотивации поведения налогоплательщиков и изучение факторов, влияющих на налоговую дисциплину и ответственное соблюдение налогового законодательства. Представлены научные результаты проведенных авторами лабораторных налоговых экспериментов в постсоветских странах (Россия и Беларусь). Эксперимент проводился в форме деловой игры среди студентов различных уровней обучения. Для обеспечения контролируемости эксперимента студенты получали условный доход в виде баллов к промежуточной аттестации. Для получения данных о мотивах налогового поведения был проведен опрос об отношении к налоговой системе. Респондентам (участникам эксперимента) было предложено указать свой уровень согласия с определенными утверждениями по шкале Ликерта. Чтобы оценить различия между двумя группами участников (заплативших и не заплативших налог), проанализированы данные, полученные в результате заполнения анкеты с использованием U-критерия Манна-Уитни и H-критерия Краскела-Уоллиса. Результаты исследования подтвердили предположение о влиянии отношения к налогам на налоговое поведение. Исследование доказывает, что доверие к правительству и налоговой системе, осознание социальной направленности деятельности государства, является основным мотивом для уплаты налогов. Разработанная методика и инструментарий налогового эксперимента могут быть использованы в учебном процессе для повышения налоговой гра-

мотности, а дальнейшее их применение в научных исследованиях позволит предложить научно обоснованные методы и формы воздействия на поведение налогоплательщиков, гарантирующие увеличение налоговых поступлений в бюджет в условиях нестабильности мировой экономической системы.

КЛЮЧЕВЫЕ СЛОВА

налоговое поведение; отношение к налогам; налоговая дисциплина; уклонение от налогов; налоговые эксперименты; поведенческая экономика

ОСНОВНЫЕ ПОЛОЖЕНИЯ

1. В результате исследования выявлено, что вероятность проверки в большей степени влияет на объем скрываемых налогов, чем на количество нарушителей, а повышение образовательного уровня позволяет сформировать не только более грамотного, но и более ответственного налогоплательщика

2. Исследование показало, что наблюдение за налоговым поведением студентов в лаборатории позволяет определить факторы, влияющие на поведение реальных налогоплательщиков, поэтому налоговые эксперименты могут стать полезным инструментом в разработке стратегии взаимодействия налогоплательщиков и налоговых органов в России и Беларуси

3. Исследование доказывает, что доверие к правительству и налоговой системе, осознание социальной направленности деятельности государства, является основным мотивом для уплаты налогов

Introduction

The world today is actively switching to electronic interaction in different spheres of life, and taxation is no exception. Electronic services facilitating interactions between taxpayers and tax authorities are being introduced at an impressive speed. All this may produce a false impression that such technological innovations could solve most problems of the taxation system, including the problem of tax evasion. We should, however, keep it in mind that interactions in the digital environment remain interactions between people who have their own interests and preferences. J. Schumpeter's claim that "psychology is really the basis from which any social sciences must start and in terms of which all fundamental explanation must run" [1] remains relevant in any economy, including a digital one. Without taking into account the motivation behind the taxpayers' behavior it is hard to understand why people still pay taxes to the budget with very low detection probabilities for tax evasion, and how to increase the collection of taxes in the future without increasing the administrative pressure.

The behavioral aspects of tax-related behavior have been described in research publications since 1970s. Due to this, most

studies of tax behavior and its dependence on subjective factors refer to countries where the observance of tax legislation and tax discipline have traditionally been high. The experience of foreign peers in the sphere of tax behavior is actively studied in Russia. For example, a specialist in management psychology Erich Kirchler presented a report "Economic Psychology of Tax Behaviour: Literature Overview and The "Slippery Slope" Framework" at the workshop "Rationality. Behavior. Experiments" in the Higher School of Economics¹. However, tax experiments per se have not yet been introduced in the practice of research.

The relevance of the scientific problem caused by the necessity of the complex study of factors that lead law-abiding behavior of taxpayers in the post-Soviet countries. Despite the relevance of an integrated approach to the study of tax evasion neither methods of behavioral economics, nor the psychological and sociological approaches to the study of the behavior of taxpayers practically do not apply in Russia and Belarus.

The goal of our research is to bridge the gaps in the experimental research of tax behavior and its motivation in the

¹ Available at: <https://iq.hse.ru/news/177673493.html>

Russian Federation and Republic of Belarus. We suggest using a laboratory tax experiment developed within the framework of behavioral economy to study taxpayers' behavior. The focus group of the study is students who will soon acquire the rights and corresponding duties of taxpayers.

The first part of the article contains an overview of research publications that form the theoretical background of the research; the second part describes methodology and instruments. The third part presents data on tax experiments in Russian and Belarus universities. The fourth part contains the results of a survey on the attitude of students from different countries to the system of taxation. The final part presents discussion and conclusions.

1. Theory

The models of the neoclassical approach to studying tax behavior are based on the premise that the taxpayer makes rational choices, and aims at maximizing benefit when making the decision to evade taxes. The founders of this approach Michael Allingham and Agnar Sandmo [2] used the criminal choice model by Gary Becker [3] to develop a so-called "A-S model" that demonstrates two behavioral strategies – risky tax avoidance and safe payment of taxes. This model was extensively used in numerous neoclassical models [4; 5], which supplemented it with various factors and assumptions.

Within the framework of neo-institutional analysis, the interpretation of rationality is extended by singling out three of its forms: maximization, limited rationality and organic rationality of economic agents. These are supplemented by the principle of self-interest, which can be enforced through opportunistic tax behavior; besides, the authors study the impact of de-formalization of tax rules (when the rules set by the state are substituted by informal rules, which in practice takes the form of tax avoidance) [6, p. 70; 7].

The transition from the neoclassical to the neo-institutional approach to behav-

ioral economy based on the paradigm of free, rational and unlimited choice of the taxpayer was connected with the necessity to explain why the observance of tax legislation is much higher than the level which the enforcement measures (audits and fines) could ensure. Thus, many neoclassical economic models show a considerably high degree of tax discipline observance and insignificant tax avoidance by taxpayers. In this connection, the advocates of behavioral approach point out that the widespread image of total tax avoidance is just a myth. For example, Alm, McClelland & Schulze [8], Fild & Frey [9], Elfers [10], Long & Swingen [11] claim, that some taxpayers never evade taxes and never try to find ways of doing so. Frey & Foppa [12], Pyle [13] criticize the opinion that individuals are amoral in their desire to maximize income by cutting taxes. In this connection, in modern behavioral research the question "why people do not pay taxes?" is substituted with the question "why people pay taxes?".

Behavioral economy uses the concepts of tax moral, tax ethics, tax avoidance mentality, attitudes towards taxes. Tax moral (inner motivation to pay taxes) is described as inner honesty inherent in people, their moral duty to observe laws and pay taxes. Although early studies of tax moral were conducted as far back as 1960s (Cologne school of tax psychology – Schmolders [14], Strümpel [15]), the very concept of tax moral was for a long time denied by most researchers. Later, tax moral was mentioned in some studies of tax behavior (Lewis [16], Vogel [17]), but studies totally devoted to this issue appeared only in the early 21st century (Fild & Frey [9]). Empirical data obtained in such research demonstrate considerable differences in tax moral between countries and the influence of socio-cultural and psychological factors on the behavior of taxpayers (Alm & Torgler [18; 19]).

In the Russian Federation and in the post-Soviet countries, the issues of tax morality and tax ethics are considered from a theoretical perspective yet. So the paper by Zotova and Boguslavsky [20] examines the concepts of «tax honesty» and «tax ethics»,

which is interpreted by the authors as «the norms of behavior that guide citizens in their relationships with the government.» The paper substantiates the importance of social activity of citizens to establish a trusting relationship between the government and society. It also discusses the socio-psychological background of dishonest taxpayers. Some authors analyze opportunistic tax behavior leading to tax evasion, for example (Merkulova [21], Vishnevsky [7], Mayburov [22], Fedotov [23]). However, in these works, attention is often drawn to the economic causes of tax behavior.

Experimental methods are one of the instruments of experimental psychology. They make it possible to obtain information regarding various phenomena, including hidden ones, such as, for example, tax evasion. As pointed out by Nobel laureate Vernon Smith, the value of experimental research is that they «...directed at closing two gaps: the gap between decision theory and decision behavior, and the gap between evidence concerning how people think about economic questions and evidence concerning how people behave in experimental markets» [24].

A detailed description of experimental tests of various factors influencing the decision to evade taxes is presented in Table 1.

Table 1

Laboratory tax experiments' results in foreign countries

Studied factor	Experiment's conclusions
Audit probability	Positive impact on the observance of tax legislation
Penalty rate	Weak impact on the observance of tax legislation
Tax rates	Positive impact on the observance of tax legislation
Taxpayer's income	Weak impact on the observance of tax legislation
Reimbursement of some of the taxes paid as a transfer to the taxpayer	A growth in transfers has a positive influence on the observance of legislation
Impact of personal moral qualities	An effective constraint for tax evasion
Openness and honesty of tax authorities	Positive impact on the observance of legislation

Source: based on [25].

Lab economic experiments are carried out in an artificial environment – a so-called “laboratory”, and the subjects know that they take part in an experiment. Starting with the first lab tax experiment conducted by Israeli researchers (Freidland, Maital, and Rutenberg) in 1970s [26], students are the most common environment for laboratory experiments.

We developed the methodology of studying tax behavior using the experience of tax experiments from different countries that were based on “experiments with the public good”. During the experiment with the public good individuals face a choice – to invest in public or in private good (Alm [27]). It should be mentioned that up to now there have practically been no tax experiments in the Russian Federation. Some publications (including those by the authors) contain descriptions of experimental methods [28–31]. At the same time, tax experiments have been conducted in other countries for over 40 years.

2. Research methodology and instruments

2.1. Methodology of a laboratory tax experiment

The drawback of laboratory experiments is that the actual behavior of taxpayers cannot be reproduced in the artificial environment, just like real life cannot be reproduced. Field experiments based on using real subjects (who do not know that they are part of an experiment) are, undoubtedly, more persuasive and valuable, but they cannot be carried out without the tax authorities, while the procedure itself is complicated and very costly.

The choice of students as the experiment environment is determined by one more factor. According to State Statistics Committee, the average age of working people is at present about 41 years old², including 64.5% aged 35 and older³. The

² *Russia in Figures*. Moscow, 2017. P. 97. Available at: http://www.gks.ru/free_doc/doc_2017/rusfig/rus17.pdf

³ Available at: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1140097038766. Calculated from data in Table 2.2.

average age of executives in Russian top-500 companies is even older – 50 years⁴. These people were born, studied, and many of them started working before 1990. So, the formation of most modern taxpayers happened in the conditions of dominant administrative-command system and social ideology, and although it instilled in people a sense of responsibility before the state, this responsibility was “mainly oriented towards the external assessment” [32, p. 44]. This generation of taxpayers is gradually becoming the past. Behavioral reaction of the students, whose views are ahead of the actual picture of today’s reactions, could, in our opinion, reflect the mood of the generation of the future taxpayers in the 21st century.

Just like other researchers using experimental methods, we based our work in the methodology of a so-called “standard tax experiment”. Its procedure can be described in the following way: participants receive or earn a certain income and should declare it. According to the experiment’s conditions, the declaration cannot be checked automatically. The participants pay taxes from the declared income. The experiment includes a certain possibility of an audit. If undeclared income is revealed, the tax and the fine need to be paid.

The experiment was carried out as a business game during classes. In this game, the students were asked to use financial data to fill in the tax form. The game consisted of several rounds (tax periods), the students did not know the number of rounds beforehand. At the beginning of each round the organizer of the game (the professor) announced the rules of the game, the information regarding the possibility of an audit and the amount of fine, which were written down on the board. After the participants filled in the forms, a randomly chosen part of declaration forms was checked, the results of the audit were announced, and the declarations were returned to the participants. The participants then calculated the size of the remaining income. After that, they were asked to fill in new forms for the new tax period.

⁴ Available at: <https://www.rbc.ru/opinions/business/02/10/2015/560e41579a794751360896bf>

Variable parameters of the game corresponded to the practice of standard tax experiments: size of income; tax rate; audit probability; penalty rate.

The key problem of laboratory experiments is that, unlike real-life situations, negative behavior does not result in any real financial gains or losses for the participants. This is the challenge of creating a controlled situation – the participants should be interested not only in the game itself, but also in its results. One of the main methods of maintaining control in lab experiments, suggested by W. Smith, is the opportunity for the participants to get rewards. According to W. Smith’s theory of “induced valuation” [33], the reward should be closely connected with the results of the participants’ actions, should be meaningful and compensate any inconveniences and costs of the participants, and should also be confidential (not known to other participants).

Understandably, we were not in a position to offer monetary compensation to students, so we made a decision to motivate them by giving them a chance to earn extra points toward their credit grades in our subject. Thus, the instruction for the participants looked like this: “Your income is 10 points. It is taxable income and you should declare it. Tax rate is 20%. You can pay a full tax or its part, the possibility of an audit is 30% (30% of randomly chosen declarations will be checked). If the audit determines that somebody did not pay their tax in full, the offender will have to pay the tax and also a fine for tax avoidance, which is 40% of the unpaid sum”.

2.2. Research tools

We used a hypothetical “tax return” (Table 2) to conduct our experiment.

Table 2

Hypothetical “tax return” form

1.	Name, Surname	
2.	Tax period	1
3.	Taxable Income	10 points
4.	Tax rate, %	20%
5.	Tax owed	2 points
6.	Tax paid	
7.		
8.		

The “tax return” form shows the tax rate, income, and tax owed (income multiplied by the tax rate). Subjects used the form to enter a tax reporting decision, with the chosen amount of income (and associated tax payment) shown in the line 6. Line 6 is filled by the game participant. After all subjects fill the form, the audit outcome randomly determines independently for each individual according to the pre-announced audit probability. The last two lines are intended to fill in the results of the audit of the declaration. Line 7 indicates the amount of the penalties if the declaration has been selected for audit and tax is undeclared. The resulting earnings (if audited or if not audited) which is equal to the player’s income minus the additional amount of tax and fine, plus refund is indicated in line 8.

2.3. Experimental design

Each subject chose how much income to report in 5 rounds. Income was held constant (10 points, except the last round), as was the tax rate (20 or 30 percent). The probability of an audit was either 20 percent or 30 percent. The fine on unreported income (the individual paid unpaid taxes plus an additional penalty) was either 40 percent or 50 percent. Thus there were five different treatment combinations based on the audit probability and penalty. In addition to their earnings from the fifth round, subjects received tax refund. Experimental conditions are presented in Table 3. The color indicates the variable that is changed in the round of the game.

Table 3

Experimental conditions

Parameters of treatment combinations for each round	Game round				
	R1	R2	R3	R4	R5
Income	10	10	10	10	5
Tax rate, %	20	30	30	30	30
Audit probability, %	30	30	20	20	20
Penalty rate on unreported tax, %	40	40	40	50	50

The experiment was conducted at Baikal State University (Russia) and at Belarus State Economic University using student subjects from both institutions

(students). There were 208 students from Baikal State University (Russia) and the 172 students from Belarus State Economic University. All participants have economic knowledge and easily understood the description of the experiment. The age differences of the participants were insignificant, so we did not investigate this factor.

2.4. The attitude to the tax system questionnaire

At the second stage of the experiment the subjects also filled out the questionnaire about the attitude to the tax system. In this case, we followed the logic of the authors of the *following* fundamental tax experiment (Spicer & Becker), who introduced into the methodology of experiments a tool called the «tax resistance scale» [34].

Data for second part of our research was collected using questionnaires applied to primary sources. The questionnaire consists of twenty (20) statements was designed to evaluate taxpayers attitudes against taxes⁵. A five-point Likert scale (from 1 strong agreement to 5 strong disagreements) was used to indicate agreement or disagreement of the subject with each statement (Table 4).

Respondents were asked to choose a number to indicate the extent of their agreement or disagreement with each statement: 5 points – fully agree, 4 points – agree, 3 points – difficult to answer, 2 points – do not agree, 1 point – completely disagree.

The questionnaire form consisted of three types of questions. The questionnaire contains 12 questions, the positive answer to which characterizes the positive attitude of the experiment participants to the tax system (1, 4, 5, 7, 8, 10, 11, 13, 15, 17, 19, 20); 5 questions, a positive answer to which implies a negative assessment (3, 6, 14, 16, 18); 3 questions of a neutral nature, the answer to which does not imply value judgments (2, 9, 12). The last group of questions is presented in the question-

⁵ We are gratitude for prof. [Aleksandr Vyatkin](#) whose questionnaire we used.

naire in order to relieve the emotional tension of the participants. This group of questions was not included in the analysis of the results.

3. Experimental Results

3.1. Experimental Results in Russia

The students from Baikal State University (Russia) were trained on different

level of education: bachelors; master students and postgraduate students.

In Figure 1 we present the level of noncompliance for each group of students (bachelors, undergraduates and postgraduate students) and for different treatment combination based on the tax rate, audit probability and penalty rate. The noncompliance rate for each group is calculated as declared tax divided by (true) tax.

Table 4

Questionnaire on attitude towards tax system

No	Statements	Answer
1	The tax system in our country allows redistributing income effectively	
2	Due to taxes, health care systems, education, etc. are developing	
3	The tax system in our country is ineffective	
4	Most citizens in our country pay taxes on time and in full	
5	If everyone pays taxes, the standard of living in our country will increase	
6	In our country there will never be fair taxation	
7	If to raise taxes, we all will live better	
8	The attitude toward taxes in our country can change for the better	
9	Taxes are fees for certain public goods provided by the state	
10	A good citizen has to pay taxes	
11	One of the functions of taxation is social justice	
12	Taxes are inevitable	
13	I pay taxes on all my income	
14	If there is even the slightest opportunity to avoid paying taxes, I will use it	
15	I pay taxes because I believe that it is my duty	
16	I will pay taxes only in the case of a real threat of restricting travel abroad	
17	The tax system in our country is open and transparent	
18	I do not trust our tax service	
19	Paying taxes, I know exactly what this money goes	
20	Filling in the tax payment form not cause difficulty for me	

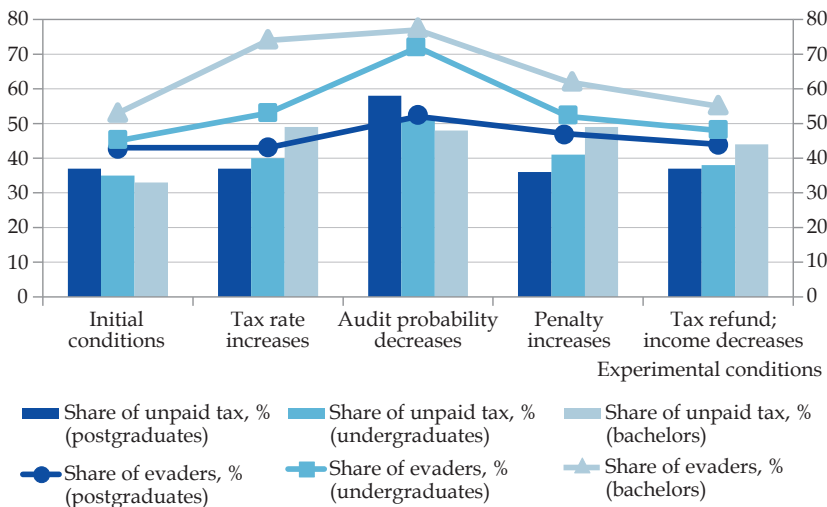


Figure 1. The level of noncompliance for different groups of students

These aggregate data reveal that the average compliance rate depended on education level of the subjects. The higher education level meet higher level of tax compliance (lower percentage of tax evaders and lower percentage of unpaid tax). Thus, subjects who already have university education (muster students and postgraduate students) demonstrated the higher level of tax compliance then subjects without university education (bachelor students).

The experiment also obtained the data on the impact on taxpayer's behavior the economic factors: the amount of income, tax rates and possible losses from tax evasion (probability of audit and the penalty rate).

The aggregate data of the game reveal the following (Figure 2):

- the tax rate increase in the second round caused the percentage of unpaid tax increase in four groups of six;
- the audit probability decrease in the third round caused an increase in the percentage of unpaid tax in all groups, the proportion of evaders remained unchanged;
- the penalty rate increase in the fourth round resulted in the decrease of the share of unpaid tax;
- the tax refund in conjunction with the income decrease in the fifth round led to different results: in some causes – the share of unpaid tax increases, in others – it decreases.

These aggregate data reveal that the growth the percentage of evaders outpace the growth of the share of unpaid tax only in two rounds (2 and 5). This means, that tax rate increase induces high incidence of tax evasion. Tax refund («reward law-abiding behavior») does it always lead to the reduction in evasion to a baseline: it may be affected by the effect of a reduction in income, i.e. the amount of risk.

Reducing the audit probability slightly affects on the involvement in illegal behavior, but evaders are willing to risk more substantial amounts. The increase in the fine rate predictably reduces the scale of evasion, both in the amount of unpaid tax and the number of evaders.

The aggregate data of the game shown in Figure 3.

The results of the questionnaire were analyzed by comparing the number of positive answers (answer «4» – I agree; answer «5» – I fully agree) between the experiment participants who paid and did not pay tax (Figure 4).

When comparing the answers given by the participants who have paid and not paid the tax, a number of regularities are revealed.

When answering questions illustrating a positive assessment of the tax system, the greatest range was observed when answering the following questions:

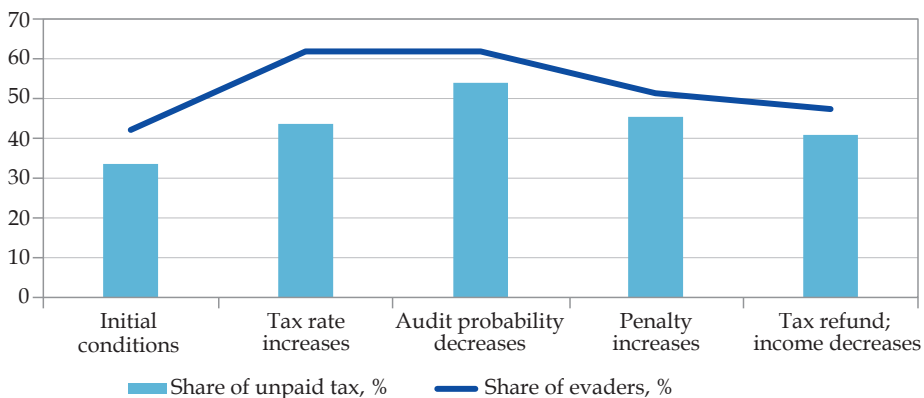


Figure 2. The share of evaders and the share of unpaid tax under different experiment parameters (Russia)

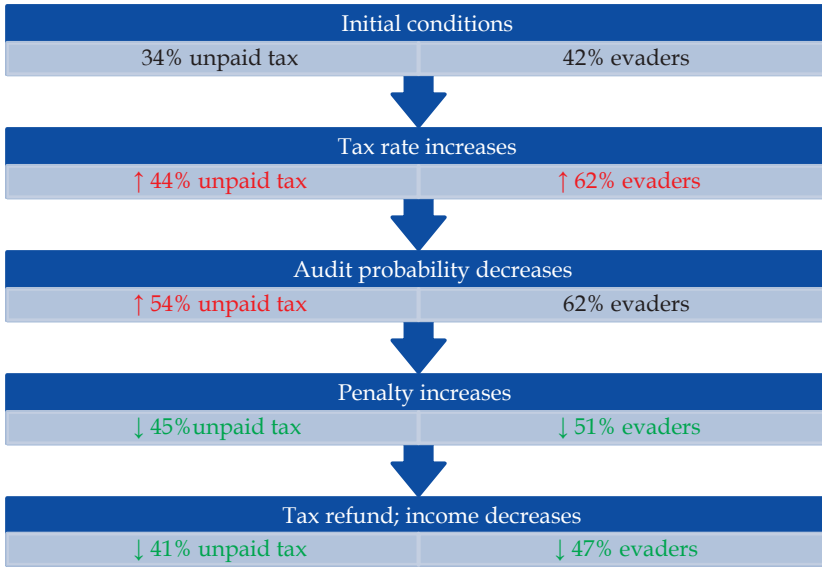


Figure 3. The impact of economic incentives on the experiment participants behavior (Russia)

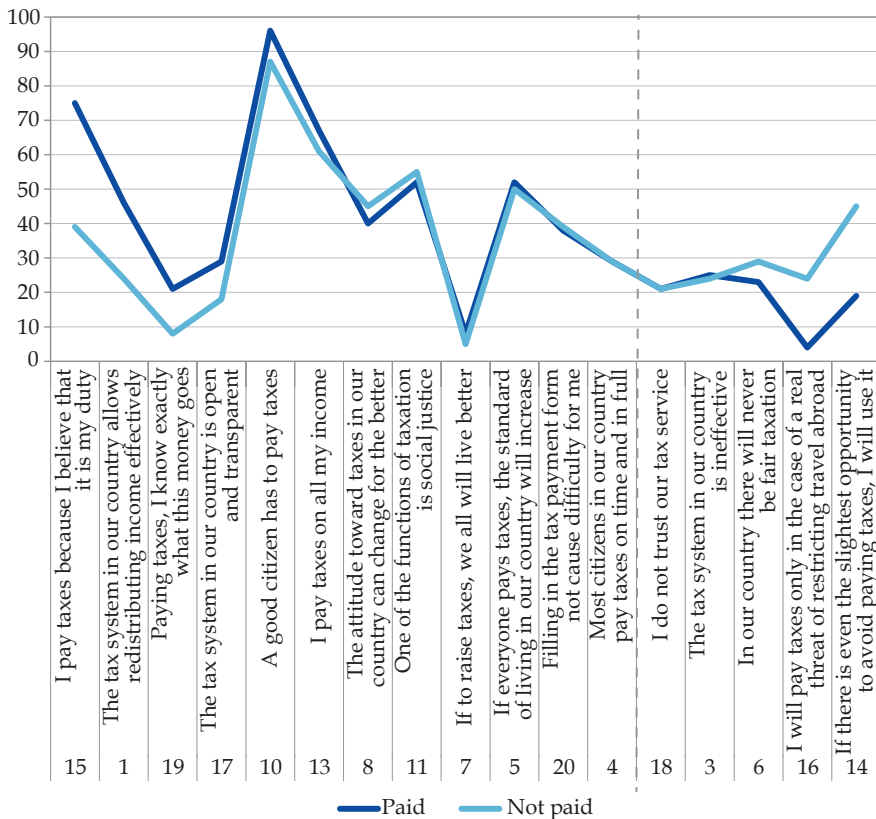


Figure 4. Distribution of positive answers to questions about the attitude to tax system among the experiment participants who paid and did not pay tax

1. I pay taxes because I believe that it is my duty. Such an answer chose 75% of the experiment participants who have paid the tax, and 39% whom have not paid the tax (range is 36%).

2. The tax system in our country allows redistributing income effectively. This answer chose 46% of the experiment participants who have paid the tax, and 24% whom have not paid the tax (range is 22%).

3. Paying taxes, I know exactly what this money goes. This answer chose 21% of the experiment participants who have paid the tax, and 8% whom have not paid the tax (range is 13%).

4. The tax system in our country is open and transparent. This answer chose 29% of the experiment participants who have paid the tax, and 18% whom have not paid the tax (range is 11%).

When answering questions that demonstrate a negative assessment by the respondent for the practice of taxation, the greatest range was observed when answering the following questions.

1. If there is even the slightest opportunity to avoid paying taxes, I will use it. This answer was given by 45% of the experiment participants who have not paid the tax, and 19% whom have paid the tax (range is 26%).

2. I will pay taxes only in the case of a real threat of restricting travel abroad. This answer was given by 24% of the experiment participants who have not paid the tax, and 4% whom have paid the tax (range is 20%).

Experiment participants were more unanimous in assessing the activities of tax authorities, regardless of their tax behavior (Figure 5). So, more than 60% of participants have no difficulty filling out a tax return; almost 80% trust our tax service and only 25% consider the tax system ineffective. The participants are unanimous in the negative assessment of the prospects for raising taxes: only 5–8% believe, that if we raise taxes we will all live better.

Regarding the tax behavior of other citizens, the experiment participants



Figure 5. The results of the questionnaire on attitude towards tax system (Russia)

formed a pessimistic point of view. Less than 1/3 of respondents agree with the statement «Most citizens in our country pay taxes on time and in full». At the same time, there are no differences (in percentage terms) between the groups of respondents who paid and did not pay taxes during the experiment.

The perception and attitudes of the respondents to taxation were analyzed: whether there is significantly difference according to their decision during experiment (to pay or do not pay tax). Thus our sample (experiment participants who filled questionnaire) consists of two groups: group 1 – 66 participants who do not paid tax, and group 2 – 128 participants who paid tax at the experiment. I.e. grouping variable is compliance.

H0: responders who not paid tax have the same distribution of answers on Likert scale as responders who paid tax.

The following is descriptive statistics for taxpayers and tax evaders. In order to reveal central tendencies for questionnaire results among the experiment participants who paid and did not pay tax, we calculated several measures: mean, mode and standard deviation for each group. For Likert scale the most appropriate measure of central tendency is the mode.

The results of calculation are presented in Table 5 (0 – not paid; 1 – paid).

Minimal standard deviation is characteristic of question «A good citizen has to pay taxes». The greatest range of responders' estimates is observed when answering questions «If there is even the slightest opportunity to avoid paying taxes, I will use it» and «I will pay taxes only in the case of a real threat of restricting travel abroad».

According to this table, quite remarkable is the respond to statement «A good citizen has to pay taxes» from violators. (Kurtosis is 3.46. Kurtosis greater than 3 is positive excess kurtosis. Distributions with kurtosis greater than 3 is leptokurtic.) For this same question, we observe negative skew, i.e. for this group of respondents the distribution appears as a right-leaning curve. (We suppose that

this can be interpreted as «respondents provide a socially approved response that is not appropriate for their behavior during the experiment».)

Next, we found that distribution of data was not normal according to Kolmogorov-Smirnov normality test ($p < 0.05$). Therefore, we use methods of nonparametric analysis towards all 20 statements: Mann-Whitney U Test and Kruskal-Wallis H Test.

First, we use Mann-Whitney U Test. Mann-Whitney U test (also called the Mann-Whitney-Wilcoxon test) is a test of the null hypothesis that it is equally likely that a randomly selected value from group 1 will be less than or greater than a randomly selected value from group 2 (Table 6). The observations from both groups are combined and ranked. The test calculates the number of times that a score from group 1 precedes a score from group 2 and the number of times that a score from group 2 precedes a score from group 1. The Mann-Whitney U statistic is the smaller of these two numbers. The Wilcoxon rank sum W statistic is the smaller of the two rank sums. For large samples (one or both groups with $n > 20$) the value of U approaches a normal distribution, and so the null hypothesis can be tested by a Z -test. We compare the obtained Z value and the critical Z value to determine whether to retain or reject the null hypothesis:

– if the absolute value of the obtained Z is less than 1.96 (for 5% two tailed), then we should retain H0;

– if the absolute value of the obtained Z is greater than 1.96, then we should reject H0.

Then we use Kruskal-Wallis H test (Table 7). It extends the Mann-Whitney U test, which is used for comparing only two groups; it can be used for comparing two or more independent samples. If sample consist from more than five members per group, we should treat H as Chi-Square. H is statistically significant if it is equal to or larger than the critical value of Chi-Square for particular degree of freedom.

We have: $df = 1$; $p = 5\%$; critical Chi-Square = 3.84.

Table 5

Summary of Responses

№	Statement	Mean		Std. Deviation		Mode		Kurtosis		Skewness	
		0	1	0	1	0	1	0	1	0	1
1	The tax system in our country allows redistributing income effectively	2.89	3.05	0.91	0.99	3	3	-0.40	-0.42	0.09	0.19
2	Due to taxes, health care systems, education, etc. are developing	3.26	3.70	1.22	1.06	4	4	-1.30	-0.39	-0.09	-0.63
3	The tax system in our country is ineffective	3.05	3.09	1.17	1.07	2	3	-1.07	-0.69	0.15	0.14
4	Most citizens in our country pay taxes on time and in full	2.86	2.80	0.94	0.93	2	3	-0.82	-0.55	0.28	0.10
5	If everyone pays taxes, the standard of living in our country will increase	3.36	3.77	1.15	0.87	4	4	-0.43	-0.16	-0.26	-0.34
6	In our country there will never be fair taxation	2.65	2.62	1.18	0.99	2	2	-0.57	-0.22	0.43	0.39
7	If to raise taxes, we all will live better	2.03	1.98	0.93	0.96	1	2	-0.84	2.21	0.42	1.35
8	The attitude toward taxes in our country can change for the better	3.59	3.62	0.94	1.06	4	3	0.40	-0.27	-0.67	-0.44
9	Taxes are fees for certain public goods provided by the state	3.79	4.14	1.09	0.91	4	5	0.83	-0.28	-1.11	-0.79
10	A good citizen has to pay taxes	4.21	4.64	0.90	0.54	4	5	3.46	0.42	-1.60	-1.18
11	One of the functions of taxation is social justice	3.80	4.01	1.03	0.98	5	5	-1.09	-0.49	-0.29	-0.62
12	Taxes are inevitable	3.76	4.07	1.12	0.98	4	4	-0.47	0.77	-0.64	-1.11
13	I pay taxes on all my income	3.65	4.08	1.03	1.16	4	5	-1.07	-0.48	-0.20	-0.92
14	If there is even the slightest opportunity to avoid paying taxes, I will use it	3.17	2.54	1.00	1.24	3	2	-0.21	-0.74	0.03	0.46
15	I pay taxes because I believe that it is my duty	3.38	3.94	1.02	1.11	4	5	-1.10	0.44	0.07	-1.01
16	I will pay taxes only in the case of a real threat of restricting travel abroad	2.33	1.66	1.24	0.78	2	1	-0.47	0.34	0.72	0.97
17	The tax system in our country is open and transparent	2.26	2.63	0.97	0.99	2	2	-0.83	-0.38	0.30	0.27
18	I do not trust our tax service	2.88	2.93	1.12	1.08	3	3	-0.52	-0.50	-0.03	0.10
19	Paying taxes, I know exactly what this money goes	2.06	2.22	1.02	0.97	2	2	-0.07	-0.58	0.77	0.38
20	Filling in the tax payment form not cause difficulty for me	3.02	3.07	0.95	1.15	3	3	-0.21	-0.62	-0.14	0.02

Table 6

Mann-Whitney U test

No of statement	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)	Point Probability	Inference
1	3878.5	6089.5	-0.980	0.327	0.329	0.165	0.001	H0
2	3371.5	5582.5	-2.408	0.016	0.016	0.008	0.000	Reject
3	4115.0	6326.0	-0.305	0.761	0.762	0.381	0.001	H0
4	4127.0	12383.0	-0.275	0.783	0.783	0.392	0.002	H0
5	3370.5	5581.5	-2.413	0.016	0.016	0.008	0.000	Reject
6	4215.0	6426.0	-0.025	0.980	0.981	0.491	0.001	H0
7	4024.5	12280.5	-0.576	0.565	0.567	0.283	0.000	H0
8	4169.0	6380.0	-0.155	0.877	0.878	0.439	0.001	H0
9	3459.0	5670.0	-2.195	0.028	0.028	0.014	0.000	Reject
10	3059.0	5270.0	-3.617	0.000	0.000	0.000	0.000	Reject
11	3745.0	5956.0	-1.357	0.175	0.174	0.088	0.001	H0
12	3563.5	5774.5	-1.890	0.059	0.059	0.030	0.000	H0
13	3162.5	5373.5	-3.024	0.002	0.002	0.001	0.000	Reject
14	2895.5	11151.5	-3.692	0.000	0.000	0.000	0.000	Reject
15	2893.0	5104.0	-3.736	0.000	0.000	0.000	0.000	Reject
16	2949.5	11205.5	-3.681	0.000	0.000	0.000	0.000	Reject
17	3384.5	5595.5	-2.370	0.018	0.018	0.009	0.000	Reject
18	4157.0	6368.0	-0.188	0.851	0.851	0.425	0.001	H0
19	3782.5	5993.5	-1.247	0.212	0.214	0.107	0.001	H0
20	4143.0	6354.0	-0.228	0.820	0.810	0.405	0.000	H0

Note: Grouping Variable: compliance

Table 7

Kruskal-Wallis H test

No of statement	Chi-Square	Asymp. Sig.	Inference
1	0.960	0.327	H0
2	5.798	0.016	Reject
3	0.093	0.761	H0
4	0.076	0.783	H0
5	5.820	0.016	Reject
6	0.001	0.980	H0
7	0.332	0.565	H0
8	0.024	0.877	H0
9	4.818	0.028	Reject
10	13.081	0.000	Reject
11	1.840	0.175	H0
12	3.573	0.059	H0
13	9.145	0.002	Reject
14	13.632	0.000	Reject
15	13.961	0.000	Reject
16	13.551	0.000	Reject
17	5.615	0.018	Reject
18	0.035	0.851	H0
19	1.556	0.212	H0
20	0.052	0.820	H0

Thus, as a result of the analysis, it was revealed that there are differences in the distribution of answers to the questionnaire among tax payers and tax evaders on the following answers (Table 8).

Table 8

Results from nonparametric analysis

No of statement	Statements
2	Due to taxes, health care systems, education, etc. are developing
5	If everyone pays taxes, the standard of living in our country will increase
9	Taxes are fees for certain public goods provided by the state
10	A good citizen has to pay taxes
13	I pay taxes on all my income
14	If there is even the slightest opportunity to avoid paying taxes, I will use it
15	I pay taxes because I believe that it is my duty
16	I will pay taxes only in the case of a real threat of restricting travel abroad
17	The tax system in our country is open and transparent

The results of modal value calculation are presented in Figure 6.

It can be noted that:

1. «Law-abiding taxpayers» show greater solidarity in the affirmative answers to the questions: «Taxes are fees for certain public goods provided by the state»; «A good citizen has to pay taxes»; «I pay taxes on all my income»; «I pay taxes because I believe that it is my duty».

2. The majority of «offenders» do not agree with the statement «If to raise taxes, we all will live better».

This is quite consistent with participants’ behavior during the game.

3.2. Experimental Results in Belarus

The game results indicate that:

- when the tax rate is higher the tax noncompliance increases (the amount of unpaid tax increases in the average sample and the share tax evaders also increased);

- when the probability of tax audit is lower the amount of unpaid tax and the rate of tax evaders also increases;

- when the fines rate is higher the tax noncompliance decreases (the amount of unpaid tax decreases and the share tax evaders also decreased);

- the tax refund combined with the income decrease resulting in the higher tax compliance only in the half of the sample (lower share of unpaid taxes, as well as the lower share of evaders).

This suggests that taxpayers in Belarus do not trust the allocation of budgetary funds and prefer to determine the use of their income by themselves (they give priority to the growth of earned income, rather than budget subsidies). Since the students were oriented toward the grade earned from the results of the game, they could calculate the amount of allocable funds, which is difficult to do in real economic conditions.

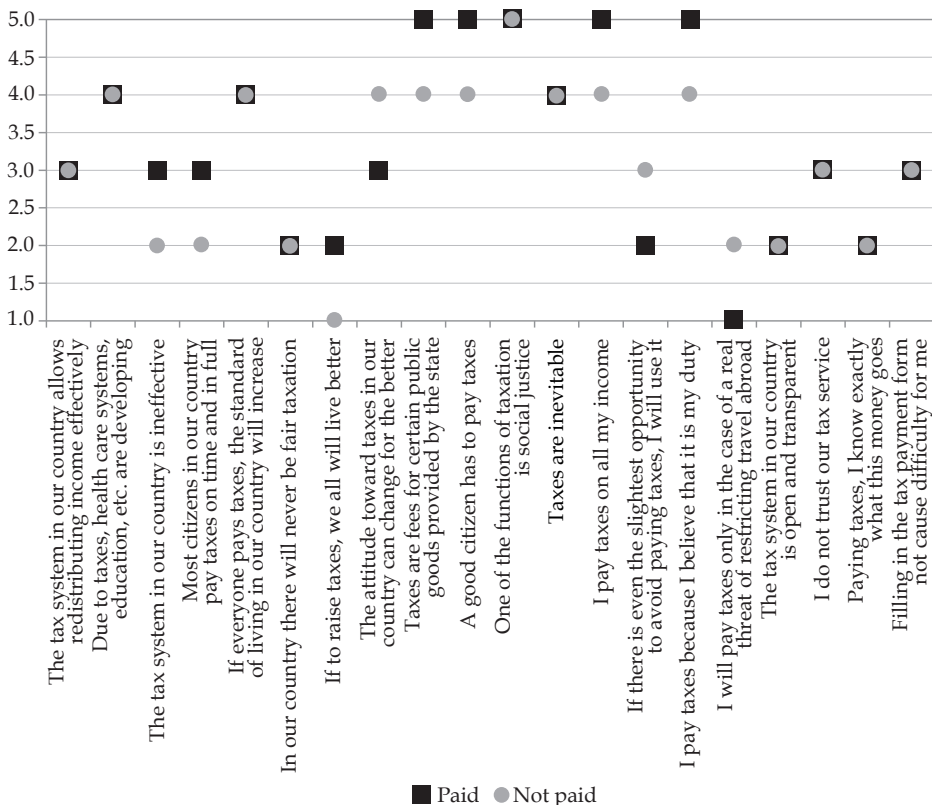


Figure 6. The results of the questionnaire on attitude towards tax system: modal value (Russia)

The game results are presented in Figure 7.

The figure shows, that under experiment conditions, the change in the share of unpaid tax moved closely with the share of evaders, except the round with tax refund.

Comparison the share of unpaid tax and the share of evaders under different experiment conditions presented on Figure 8.

Comparison of changes in indicators allows us to conclude that the increase in the tax rate and penalties causes epy more intensive increase in the share of

evaders compared to the share of unpaid taxes. The decrease in the audit probability causes a faster change in the share of unpaid taxes compared to the change in the share of tax evasion. The decrease in the amount of income and the tax refund leads to the decrease in the share of evaders, but causes the increase in the share of unpaid taxes. Thus, an increase in the tax burden and a decrease in the probability of tax audit causes Belarusian taxpayers to seek to violate the tax legislation. The strengthening of measures of responsibility for violations – stimulate the reduction of unpaid taxes.

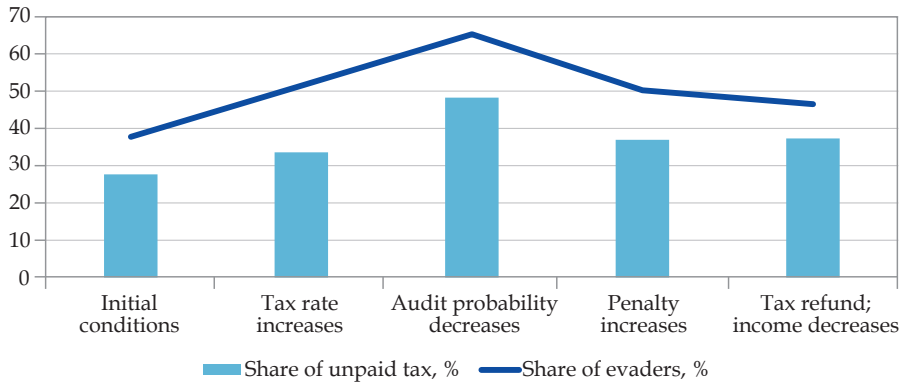


Figure 7. Tax evasion rate by determinants of the experiment (Belarus)

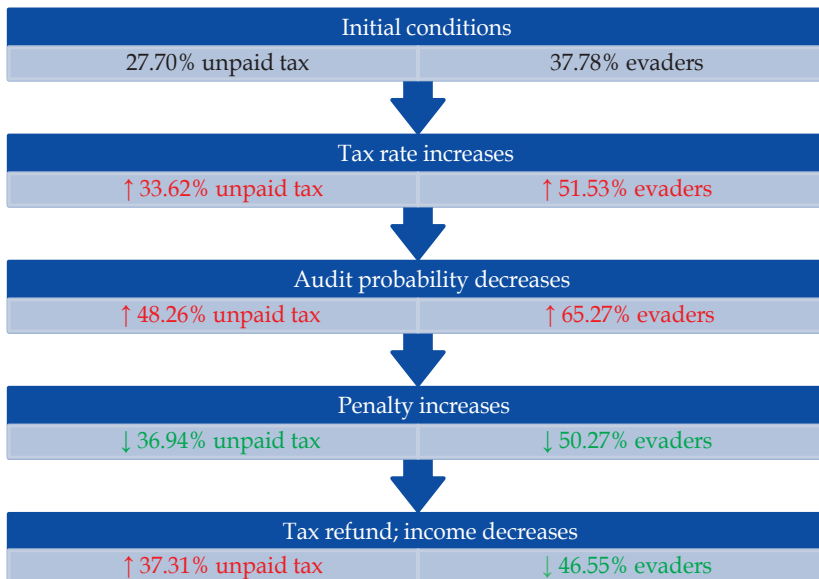


Figure 8. The impact of economic incentives on the experiment participants' behavior (Belarus)

The results of the survey on attitude to tax system and taxation are presented in Figure 9.

4. Comparison of research results with the same from other countries

In the previous part of the paper we presented the tax experiment data from two universities of Russia and Belarus. The survey data from students at Baikal State University were supplemented with the data obtained from students of Far Eastern Federal University, Saint Petersburg State University and Financial University under the Government of the Russian Federation (292 people in total).

We compared the data of our study with the results of the study on tax morale of Turkish and Spanish students from the universities of Sakarya (Turkey) and Zaragoza (Spain) [35]. The total number of students surveyed in these countries was 459 people. All of them studied tax issues and had an idea about taxes as part of their educational programs.

Comparison of results was possible for several groups of questions characterizing:

- perception on fairness of the tax system;
- attitude towards the obligation to pay taxes;
- the potential of law-abiding behavior;
- attitude to the tax authorities.

The wording of the same questions in different studies had some differences, which in our opinion is not crucial for comparing the results (Figure 10).

To compare the results of surveys, the data were brought to a uniform form. Thus, i.e. if in a survey conducted in Russia and Belarus, agreement with a certain statement meant satisfaction with the tax system, and in a survey conducted in Turkey and Spain, it had the opposite meaning, then for international comparison we rephrased the statement wording (by changing, respectively, the location of data obtained from answers of respondents).

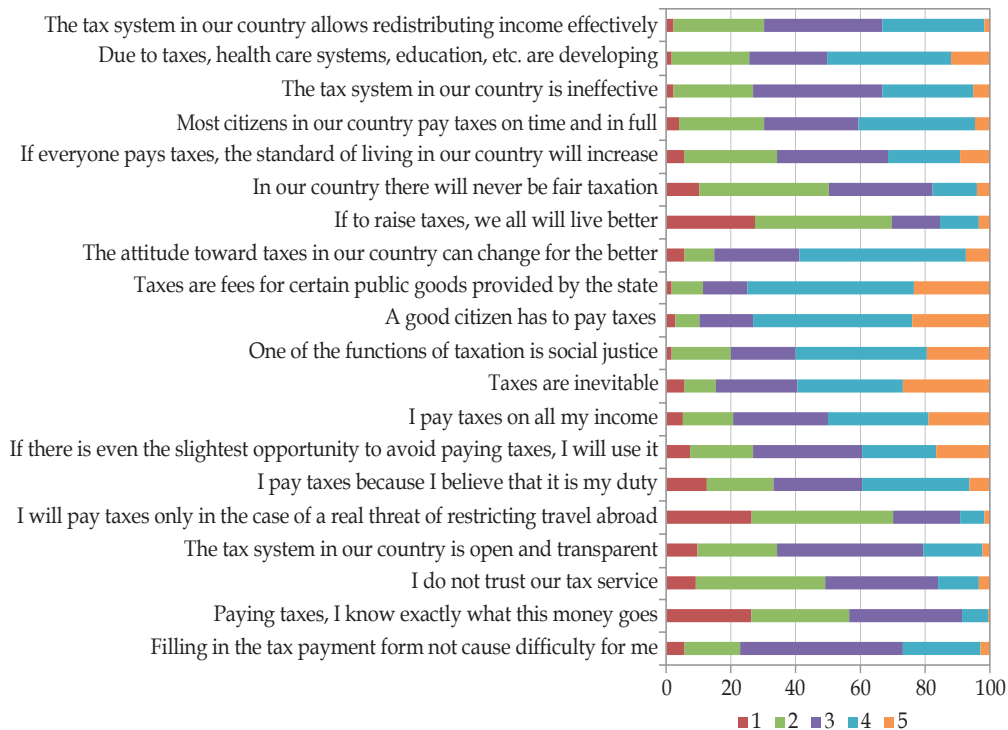


Figure 9. The results of the questionnaire on attitude towards tax system (Belarus)

As a result, in all statements, consent denotes high tax morale of the taxpayer.

The results are shown in the Figure 11.

Figure 11 makes it possible to distinguish features of tax systems of these countries from the point of view of the experiment participants, motivating them to make a decision on tax payment or tax evasion.

Even more clearly the perception of such features can be seen by calculating the ratio of the share of those who agreed

with the statement with the share of those who did not agree with it. The results are presented in the Table 9.

Based on the results of summarizing the data in the last table, we can draw the following conclusions about the perception of the tax system by respondents:

1. Russia: legislation is non-understandable for citizens; but consider paying taxes a moral duty; assert that they will not avoid paying taxes in the future.

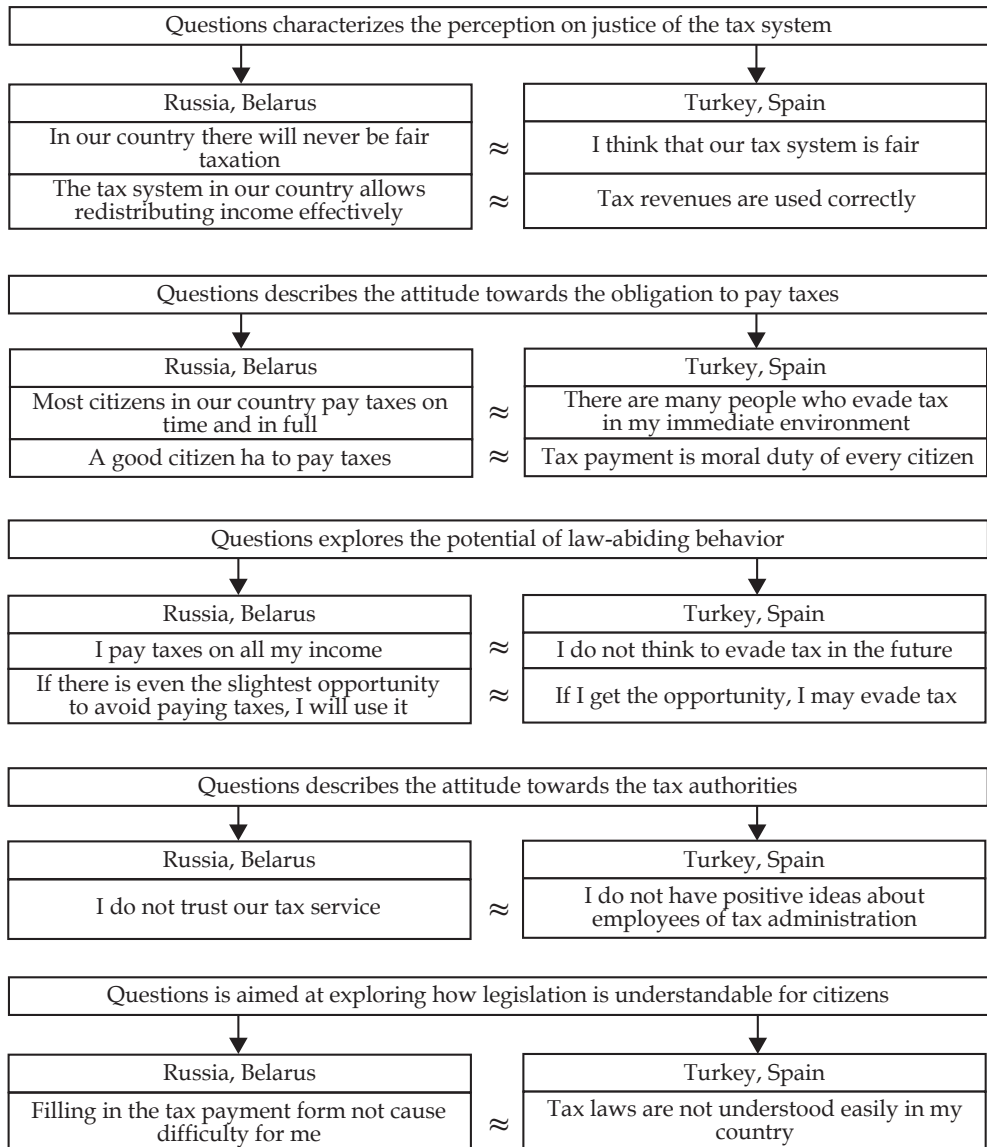


Figure 10. Groups of questions characterizing attitude to tax system in different countries

2. Belarus: do not consider paying taxes a moral duty; [if it is possible] they avoid paying taxes now, and will avoid paying in the future.

3. Turkey: legislation is non-understandable for citizens; they do not trust the tax authorities, but they will pay and pay taxes (it can be assumed that the existing system of punishments is perceived as

harsh: the highest value of ratios of agreed and disagreed persons with recent statements).

4. Spain: unfair tax system; funds are used incorrectly in terms of respondents; think that many avoid paying taxes; legislation is non-understandable for citizens; but paying is regarded as a moral duty; assert that they will pay taxes.

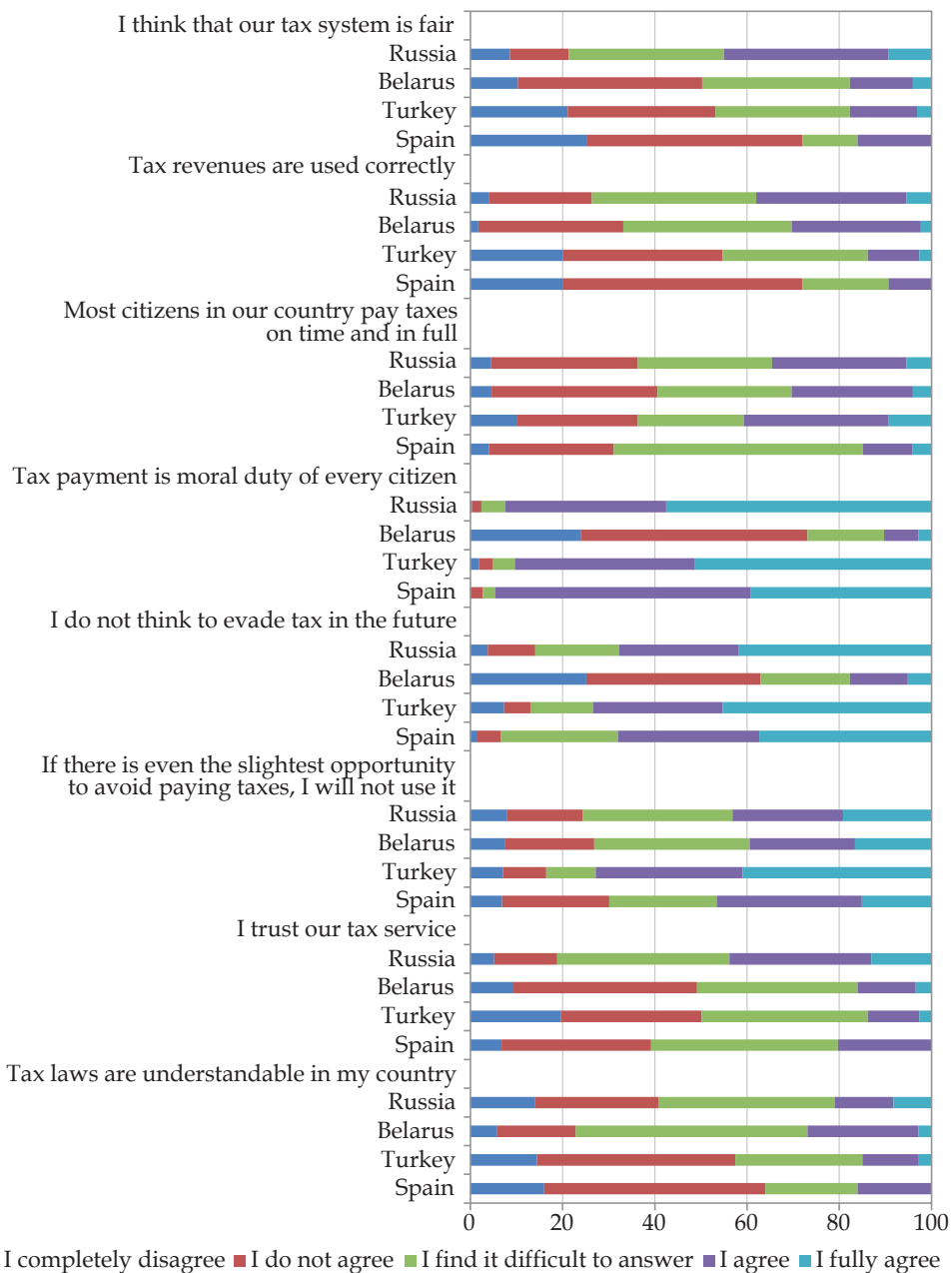


Figure 11. Processed surveys' results

Table 9

Surveys' results – cross-country comparison

Statements	Country	I completely disagree + I do not agree	I find it difficult to answer	I agree + I fully agree	Ratio of the share of those who agreed with the statement with the share of those who did not agree with it
<i>Perception on justice of the tax system</i>					
I think that our tax system is fair	Russia	21.31	33.68	45.02	2.11
	Belarus	50.29	32.00	17.71	0.35
	Turkey	53.13	29.17	17.71	0.33
	Spain	72.00	12.00	16.00	0.22
Tax revenues are used correctly	Russia	26.37	35.62	38.01	1.44
	Belarus	33.14	36.57	30.29	0.91
	Turkey	54.69	31.51	13.80	0.25
	Spain	72.00	18.67	9.33	0.13
<i>Attitude towards the obligation to pay taxes</i>					
Most citizens in our country pay taxes on time and in full	Russia	36.30	29.11	34.59	0.95
	Belarus	40.57	29.14	30.29	0.75
	Turkey	36.29	22.98	40.73	1.12
	Spain	31.08	54.05	14.86	0.48
Tax payment is moral duty of every citizen	Russia	2.40	5.14	92.47	38.57
	Belarus	73.14	16.57	10.29	0.14
	Turkey	4.95	4.69	90.36	18.26
	Spain	2.70	2.70	94.59	35.00
<i>Potential of law-abiding behavior</i>					
I do not think to evade tax in the future	Russia	14.04	18.15	67.81	4.83
	Belarus	62.86	19.43	17.71	0.28
	Turkey	13.02	13.54	73.44	5.64
	Spain	6.67	25.33	68.00	10.20
If there is even the slightest opportunity to avoid paying taxes, I will not use it	Russia	24.32	32.53	43.15	1.77
	Belarus	26.86	33.71	39.43	1.47
	Turkey	16.45	10.70	72.85	4.43
	Spain	30.14	23.29	46.58	1.55
<i>Attitude towards the tax authorities</i>					
I trust our tax service	Russia	18.84	37.33	43.84	2.33
	Belarus	49.14	34.86	16.00	0.33
	Turkey	50.13	36.03	13.84	0.28
	Spain	39.19	40.54	20.27	0.52
<i>How legislation is understandable for citizens</i>					
Tax laws are understandable in my country	Russia	40.75	38.36	20.89	0.51
	Belarus	22.86	50.29	26.86	1.18
	Turkey	57.48	27.56	14.96	0.26
	Spain	64.00	20.00	16.00	0.25

Discussion and conclusions

As this experiment is one of the first in the Russian Federation, its main result is testing the available instruments for studying tax behavior. The results of the experiment, first, proved that this method can be used in our country and second, highlighted the advantages of experimental methods for studying tax behavior:

- lab experiments make it possible to obtain information that was not available earlier (for example, the influence of incentives modeled by the researcher on the behavior of subjects);

- the experiment allows the researchers to control variables and test a large number of alternatives at low cost;

- lab experiment can be recreated.

Experiment results confirmed that non-material incentives can be used as motivation. In our experiment it was the number of points added towards the credit grade of students. The credit grade for an academic discipline is based on a 100-point scale, so 32–45 points that can be earned as a result of the game were a considerable incentive, besides, it improved attendance and increased interest in studying taxes.

Lab experiments are carried out in an artificial environment and the behavior of students (who are not yet taxpayers) may not correspond to the behavior of actual taxpayers. The problem of “external validity” of lab tax experiments (how well the research corresponds to the objective reality) is recognized and analyzed by researchers.

The comparison of the results of experiments involving students and groups of other test subjects in the USA [36] (obtained with the help from the Internal Revenue Service) showed that firstly, behavior models of subjects in the laboratory correspond to the behavior model of persons making similar decisions in natural conditions. Secondly, behavioral reactions of students are similar to the behavior reactions of real taxpayers [37]. Special research has been carried out to compare the results of experiments with students and with other test subjects. Thus, Alm,

Bloomquist & McKee [38] compared tax behavior of students and professors and university staff. This research showed that students were less law-abiding, but when the parameters of the experiment were changed, it matched the behavior of other participants who were not students. The study by Bloomquist [39], who compared tax behavior of students in the conditions of the lab experiment and the results of a selective audit of real taxpayers, also revealed similar results in both groups.

Thus it is possible to conclude that the results of experiments involving students do not allow researchers to make definite conclusions regarding the level of tax avoidance, but make it possible to judge how different factors influence it. The changes in the tax behavior of students in the experimental environment help understand which factors influence the tax-related behavior of real taxpayers in our country and how this behavior can be changes to make it more law-abiding. It is necessary to answer the questions “why people pay taxes?”, “why the level of tax conscientiousness is different?”, “how taxpayers react to different changes in taxation?” to formulate conditions that contribute to maximizing the collection of taxes without additional administrative pressure.

We studied the influence of three factors on the behavior of taxpayers: level of education, economic incentives and attitude to the tax system.

The influence of the level of education on tax behavior

Arguably, education has a positive influence on tax behavior. Better educated people find it easier to understand legislation and changes in it and, correspondingly, less often make mistakes when calculating and paying taxes. Insufficient knowledge about taxes deteriorates trust in tax authorities and tax system and, correspondingly, impedes lawful tax behavior.

Our research showed that a higher level of education makes a person not only a more literate, but also a more responsible taxpayer. It should be noted, however, that results of other research of this factor

found in foreign publications are not so unequivocal. One study (Bobek et al. [40]) proves that a low level of education could be the reason behind low tax discipline, while another study (Kirchler [41]) shows that the complexity of tax legislation, insufficient understanding of tax responsibilities and the feeling of insecurity stimulate tax discipline. Besides, a higher level of education makes it possible to work out and use schemes of tax minimization. Thus, an increase in the level of education leads, on the one hand, to the reduction of tax avoidance and, on the other, to the increase of tax minimization⁶.

The influence of economic incentives (profits and losses) on tax behavior

Our experiment studied the influence of the size of income, tax rate and possible losses in cases of avoidance (the possibility of audits and the size of fines) on the behavior of taxpayers.

The results were as following:

- an increase in income does not have any considerable influence of the observance of tax legislation;
- an increase in tax rates leads to a growth in the number of violations;
- the reduction of the possibility that the declaration will be checked has little influence on the improvement in the observance of tax legislation, besides, if this possibility is lowered, it has a weak influence on the decision to commit unlawful

⁶ Tax minimization is lawful practice of taxpayers aimed at reducing the tax burden, unlike unlawful tax avoidance.

acts, but the violators are ready to risk greater sums;

- an increase in the size of fines reduces avoidance, both in terms of the concealed sums and the number of violators.

These results support the strategy that has been chosen by tax authorities who reduce the number of audits and concentrate their efforts on working with specific groups of taxpayers. A possible way to reduce tax avoidance could be the increase of fines (up from the current 20%), at least for some violations.

The influence of attitude to the tax system on tax behavior

The obtained results agree with the hypothesis regarding the influence of the attitude to the tax system on tax behavior: those who pay taxes have a positive attitude to the system of taxation, understand paying taxes as their duty, recognize the effectiveness of taxation and redistribution of income and believe that our tax system is open and transparent. And vice-versa, those who avoid taxes do not trust our tax system, do not consider it to be just, do not believe that it is open and transparent and will only pay if they are forced to do so.

In our opinion, key research results of the conducted tax experiment are that education is a necessary factor in the upbringing of a law-abiding taxpayer and that trust towards the government and the system of taxation, the understanding of the society-oriented character of the state are the main incentives for paying taxes.

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Acknowledgements

This work was financially supported RFBR grant No 17-22-01002/17 and BRFFR grant No Г17Р-012 “Elaboration the Tax Experiments in the System of Tax Avoidance Counteraction for the Economic Security Provision in the Russian Federation and Belarus”.

Благодарности

Статья подготовлена при финансовой поддержке грантов РФФИ, проект № 17-22-01002 и БРФФИ проект № Г17Р-012 «Методология изучения уклонения от уплаты налогов путем проведения налоговых экспериментов в системе обеспечения экономической безопасности России и Беларуси»

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For citation

Kireenko A. P., Nevzorova E. N., Kireyeva A. F., Filippovich A. S., Khoroshavina E. S. Lab experiment to investigate tax compliance: the case of future taxpayers' behavior in Russia and Belarus. *Journal of Tax Reform*, 2018, vol. 4, no. 3, pp. 266–290. DOI: [10.15826/jtr.2018.4.3.056](https://doi.org/10.15826/jtr.2018.4.3.056)

Для цитирования

Киреевко А. П. Изучение налогового поведения будущих налогоплательщиков в России и Беларуси путем проведения лабораторного налогового эксперимента / А. П. Киреевко, Е. Н. Невзорова, Е. Ф. Киреева, Е. С. Филиппович, Е. С. Хорошавина // *Journal of Tax Reform*. — 2018. — Т. 4, № 3. — С. 266–290. — DOI: [10.15826/jtr.2018.4.3.056](https://doi.org/10.15826/jtr.2018.4.3.056)

Article info

Received August 14, 2018; accepted October 22, 2018

Информация о статье

Дата поступления 14 августа 2018 г.; дата принятия к печати 22 октября 2018 г.

Требования к статьям, публикуемым в журнале Journal of Tax Reform

Требования к структуре и содержанию статьи

1. Статья, представляемая для публикации, должна обладать новизной, быть самостоятельным, завершенным, характеризующимся внутренним единством исследованием актуальной проблемы, связанной с налоговыми реформами на международном и национальном уровнях.

2. Текст статьи следует структурно разбивать на разделы с заголовками, отражающие:

- актуальность темы исследования;
- степень изученности и проработанности проблемы;
- предлагаемые методы, подходы и их оригинальность;
- анализ полученных результатов;
- основные выводы, обобщающие полученные научные результаты, а также обозначающие направления дальнейших исследований по проблеме.

3. Статья должна содержать иллюстративный материал, демонстрирующий результаты исследований.

4. Статьи принимаются только на английском языке.

Правила оформления статьи

1. Текст статьи набирается в текстовом редакторе Microsoft Word и сохраняется в формате .docx.

2. При наборе необходимо учитывать следующее:

- формат листа – А4;
- шрифт – Times New Roman; размер основного текста – 14 пт., вспомогательного (аннотация, ключевые слова, таблицы, рисунки, литература) – 12 пт., постраничных сносок – 11 пт.;

• межстрочный интервал – одинарный;

• форматирование – по ширине;

• абзацный отступ – 1,25 см;

• поля – 20 мм со всех сторон;

• нумерация – внизу страницы.

3. Объем статьи не менее 18–25 страниц.

4. Статья должна содержать следующие элементы, оформленные в соответствии с требованиями журнала (см. образец оформления статьи):

- индекс УДК;
- JEL коды;
- заглавие статьи на русском и английском языках;
- информацию об авторе (ах) на русском и английском языках;
- аннотацию на русском и английском языках;
- 5–10 ключевых слов на русском и английском языках;
- основные положения статьи, которые отражают ключевые результаты исследования, основное содержание статьи, изложенные тезисно и оформленные в виде 3–5 пунктов маркированного списка;

• список использованной литературы (References);

• ссылки на литературу, оформленные согласно списку литературы в квадратных скобках.

5. Все элементы, перечисленные в п. 4, указываются сначала на английском языке, а затем на русском языке.

Рекомендации по подготовке аннотации статьи

Аннотация является источником информации о содержании статьи и изложенных в ней результатах исследований.

1. Аннотация выполняет следующие функции:

- дает возможность установить основное содержание статьи, определить его релевантность и решить, следует ли обращаться к полному тексту статьи;

- предоставляет информацию о статье и устраняет необходимость чтения полного текста статьи в случае, если статья представляет для читателя второстепенный интерес;

- используется в информационных, в том числе автоматизированных, системах для поиска необходимых статей и информации.

2. Аннотация к статье должна быть:

- информативной (не содержать общих слов);
- оригинальной;
- содержательной (отражать основное содержание статьи и результаты исследований);

- структурированной (следовать логике описания результатов в статье и разделенной на подзаголовки: цель исследования, методы, результаты, заключения);

- компактной (укладываться в **объем от 200 до 250 слов**).

3. Аннотация включает следующие аспекты содержания статьи:

- предмет, цель исследования (указываются в том случае, если они не ясны из заглавия статьи);

- метод или методологию проведения работы (целесообразно описывать в том случае, если они отличаются новизной или представляют интерес с точки зрения данной работы. В рефератах статей, описывающих экспериментальные работы, указывают источники данных и характер их обработки);

- результаты работы (описываются предельно точно и информативно. Приводятся основные теоретические и экспериментальные результаты, фактические данные, обнаруженные взаимосвязи и закономерности. При этом отдается предпочтение новым результатам и данным долгосрочного значения, важным открытиям, выводам, которые опровергают существующие теории, а также данным, которые, по мнению автора, имеют практическое значение);

- область применения результатов;
- выводы (могут сопровождаться рекомендациями, оценками, предложениями, гипотезами, описанными в статье).

4. В тексте аннотации следует употреблять синтаксические конструкции, свойственные языку научных и технических документов, избегать сложных грамматических конструкций. Текст должен отличаться четкостью формулировок и содержать только значимую информацию. Сведения, содержащиеся в заглавии статьи, не должны повторяться в тексте аннотации. В ней следует применять значимые слова из текста статьи.

Рекомендации по выбору ключевых слов

1. Ключевые слова выражают основное смысловое содержание статьи, служат ориентиром для читателя и используются для поиска статей в электронных базах, поэтому должны отражать дисциплину (область науки, в рамках которой написана статья), тему, цель и объект исследования.

2. В качестве ключевых слов могут использоваться как одиночные слова, так и словосочетания в единственном числе и именительном падеже. Количество слов внутри ключевой фразы (словосочетания) может быть не более трех.

3. Основные принципы подбора ключевых слов:

- применяйте базовые термины вместе с более сложными (бухгалтерский учет основных средств, бухгалтерский учет, основные средства); повторы и синонимы (грузовые перевозки – транспортная логистика, организация перевозок – логистика);

- не используйте слишком сложные слова (словосочетания, в которых приводится больше трех слов, чаще всего можно разбить на несколько ключевых слов

(обработка и анализ данных — обработка данных, анализ данных)); слова в кавычках (ОАО «Иркутскэнерго» — Иркутскэнерго); слова с запятыми (факторы, определяющие качество — факторы качества, определение качества);

• каждое ключевое слово — это самостоятельный элемент. Ключевые слова должны иметь собственное значение (человеческий капитал, его оценка — человеческий капитал, оценка человеческого капитала).

Рекомендации по оформлению ссылок на использованную литературу

1. Нумерация в списке литературы осуществляется по мере цитирования. При повторном цитировании источника ему присваивается номер первоначального цитирования.

2. Ссылки на использованную литературу приводятся в тексте в квадратных скобках с указанием в них номера источника по Списку использованной литературы и страницы цитируемого фрагмента, напр.: [5, с. 115].

3. В оригинальной научной статье необходимо упоминание не менее 25–40 источников, имеющих автора, в научном обзоре — 50–80, в том числе не менее 50 % источников на иностранном языке. Редакционная коллегия рекомендует цитировать статьи из журналов, которые индексируются в международных базах данных (Scopus, Web of Science).

4. Электронные ресурсы, в которых не указан автор материала, статистические сборники, нормативно-правовые акты размещаются в постраничных сносках и в список использованной литературы не выносятся.

5. Самоцитирование автора допускается не более 20 % от количества источников в списке.

Пример оформления библиографических записей

1. Статьи в журналах:

Pimenov N. A. Fiscal risks in the system of tax security of businesses and State. *Nalogy = Taxes*, 2010, no. 4, pp. 10–13. (In Russ.).

Slemrod J. Lessons for Tax Policy in the Great Recession. *National Tax Journal*, 2009, vol. LXII, no. 3, pp. 387–397. Available at: http://webuser.bus.umich.edu/jslemrod/Great_Recession.pdf.

Jensen O. W. Transfer Pricing and output decisions: the dynamic interaction. *Decision Sciences*, 1986, vol. 17, pp. 428–436.

Börner K., Klavans R., Patek M., Zoss A. M., Biberstine J. R., Light R. P., Larivière V., Boyack K. W. Design and update of a classification system: The UCSD map of science. *PloS one*, 2012, vol. 7, no. 7, pp. 1–10. DOI: 10.1371/journal.pone.0039464.

2. Статьи из сборников научных трудов и материалов конференции:

Reingold I. I. The financial policy of NEP. In Sokolnikov G. Ya. (ed.) *Osnovy finansovoi sistemy SSSR* [Fundamentals of the financial system of the USSR]. Moscow, Gosfinizdat Publ., 1930. Pp. 56–61. (In Russ.).

Atkinson A. B. Horizontal Equity and the Distribution of Tax Burden. In Aaron H., Boskin M. (eds.) *The Economics of Taxation*. Washington DC, Brookings Institution, 1980. Pp. 3–18.

Börner K., Boyack K. W., Milojević S., Morris S. An introduction to modeling sci-ence: Basic model types, key definitions, and a general framework for the comparison of process models. In Scharnhorst A., Börner K., & van den Besselaar P. (eds.) *Models of Science Dynamics, Encounters Between Complexity Theory and Information Sciences*. Berlin, Springer, 2012. Pp. 3–22.

Val'den P. I. The development of chemistry in Russia. *Dnevnik Vtorogo mende-leevskogo s»ezda po obshchei i prikladnoi khimii i fizike. Saint Petersburg, 21–28 dekabrya 1911 g.* [The Diary of Second Mendeleev Congress on General and Applied Chemistry and Physics. Saint Petersburg, December 21–28, 1911]. Saint Petersburg, 2011, no. 1, pp. 124–141. (In Russ.).

3. *Монографии, учебники, учебные пособия:*

Kormishkina L. A., Koroleva L. P. *Finansovaya bezopasnost* [Financial security]. Saransk, The National research Mordovia State University Publ., 2016, 200 p.

James S., Sawyer A., Budak T. (eds). *The Complexity of Tax Simplification: Experiences From Around the World*. London, Palgrave Macmillan, 2016. 273 p.

Taleb Nassim Nicholas. *The Black Swan. The Impact of the Highly Improbable*. Random House, 2007. 400 p. (Russ. ed.: Taleb Nassim Nikolos. *Chernyi lebed'*. Pod znakom nepredskazuemosti. Moscow, KoLibri Publ., 2009. 528 p.).

4. *Диссертации, авторефераты диссертаций:*

Gombozhapova S. V. *Sovershenstvovanie nalogovogo kontrolya s uchetom istoricheskogo opyta. Kand. Diss.* [Improving tax control in context of historical experience. Cand. Diss.]. Irkutsk, 2012. 241 p.

Urban I. *Redistributive effects of direct taxes and social benefits in Croatia. Doct. Diss.* Slovenia, 2010. 199 p.

5. *Электронные ресурсы, в которых указан автор материала:*

Ivanov A. *Krepkii rubl' i deshevye kredity. Naskol'ko deistvenny predlozheniya Sergeya Glaz'eva* [Strong ruble and cheap loans. How effective are the proposals of Sergei Glazyev]. Available at: <http://svpressa.ru/economy/article/156619/>. (In Russ.).

Feldstein Martin. *The Case for Fiscal Stimulus*. Available at: <https://www.project-syndicate.org/print/the-case-for-fiscal-stimulus>.

Предоставление сведений об авторе (ах) статьи

1. В статье в информации об авторах на русском и английском языках указываются следующие данные:

- фамилию, имя, отчество (полностью);
- ученую степень, ученое звание (полностью);
- занимаемую должность;
- рабочее подразделение (кафедра, факультет, институт и др.);
- место работы в соответствии с официальным названием организации;
- почтовый индекс организации – места работы (с указанием почтового индекса);
- адрес электронной почты (e-mail);
- ORCID (Open Researcher and Contributor ID) – уникальный идентификатор ученого, связывающий его исследовательскую деятельность и помогающий идентифицировать ссылки на его научные публикации в международных базах данных (Scopus, Web of Science) (если имеется).

2. Дополнительно указывается информация, которая служит для связи с автором и в журнале не публикуется:

- почтовый адрес для переписки (с указанием индекса);
- телефоны (рабочий, мобильный).

3. Фамилия и имя на английском языке указываются автором в соответствии с их написанием в ORCID или ранее опубликованным в зарубежных изданиях, входящих в международные базы данных (Scopus, Web of Science), либо указанным в заграничном паспорте.

Publication requirements for articles submitted to Journal of Tax Reform

The requirements for the structure and content of the article

1. The article submitted for publication must contain novelty, must be an independent, complete and internally united research work on a current issue, related to tax reform at international and national levels.
2. The article should be structurally divided into sections with headings, reflecting:
 - relevance of the research;
 - background of a problem;
 - proposed research methods and their originality;
 - analysis of the study findings;
 - main conclusions, the results of the research and further discussion of them, or the problem solution.
3. The article should contain illustration material, showing the results of the research.

Format requirements

1. The manuscript files in Microsoft Word format should be converted to .docx files
2. Technical format of the article has to comply with the following requirements:
 - the page size – A4;
 - font – Times New Roman; main text – 14-point, supplementary text (abstract, keywords, tables, figures, references) – 12-point, footnotes – 11-point;
 - line spacing – 1,0;
 - fit to the width;
 - indent – 1,25;
 - margins – 2.0 cm on all sides;
 - page numbers - at the bottom of the page;
3. Article should be 18–25 pages.
4. The article has to contain the following components drawn up in accordance with the journal's requirements (see the sample):
 - JEL classification;
 - title of the article;
 - information about the author;
 - abstract;
 - 5–10 key words;
 - the highlights of the article reflecting the key results of the study, theses of the article's main content, in the form of 3–5 items of the bulleted list;
 - the list of references;
 - the article should have reference notes given in square brackets provided according to the references.

Guidelines for Abstract writing

An Abstract is a source of information on your paper's content and findings.

1. An Abstract has the following functions:
 - allows readers to identify the basic concept of your paper as well as its relevance and decide if the full text paper is of interest to them;
 - provides information on your paper and makes it unnecessary to read its full text version if it is of secondary interest to a reader;
 - is used in information (including computerized) search systems to find papers and information.
2. An Abstract should be:
 - informative (no general words);
 - original;

- relevant (reflects your paper's key content and research findings);
 - structured (follows the logics of results' presentation in the paper and divided into sub-headings: the purpose of the research, methods, results, conclusions);
 - concise (**between 200 and 250 words**).
3. An Abstract should contain the following content aspects:
- the statement of the object and purpose of your study;
 - research methods/methodology;
 - results observed;
 - the sphere of results application;
 - conclusions drawn from your study.
 - the object, topic and purpose of the research (if they are not clear from the title of the paper);
 - the research methods/methodology if they are original or of interest for this particular research. For papers concerned with experimental work describe your data sources and data process technique;
 - the results of research should be described as precisely and informatively as possible. Include your key theoretical and experimental results, factual information, revealed interconnections and patterns. Give special priority to new results and long-term impact data, important discoveries and verified findings that contradict previous theories as well as data that you think have practical value.
 - the sphere for implementation the results of the research;
 - conclusions could be associated with recommendations, estimations, suggestions, hypotheses described in the paper.
4. Use the language typical of research and technical documents to compile your abstract and avoid complex grammatical constructions. Information contained in the title should not be repeated in the abstract. The abstract should be concise and clear and reflect only the main information of the original paper. The text of the abstract should include key words of the paper

Guidelines for Keywords

1. Keywords encapsulate the principal topics of the paper. These keywords will be used for indexing purposes as a guide to search the articles in electronic databases, therefore, they should reflect area of science in which the article was written, the subject, the purpose and object of research
2. The keywords can be used as single words and phrases. Key phrase (phrases) should contain no more than three words.
3. Basic principles for keyword selection:
 - avoid general and plural terms and multiple concepts (avoid, for example, "and", "of").
 - be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.
 - each keyword should have its separate meaning.

Guidelines for Reference

1. The list of references should be arranged in the order of the appearance the citations in the text. In case of repeated citation the number is the same.
2. To associate the list of references with the text of the article, you should include a reference as a number (running number of the source from the list) and also the page number in square brackets: [5, c. 115].
3. In the original scientific paper must be not less than 25–40 references, in the scientific review – 50–80 references. The Editorial Board recommends to cite papers indexing in international databases (Scopus, Web of Science).

4. The electronic sources without an author, statistic and regulation materials should not be included in the list of reference, but preferably set as a footnotes at the end of the page.

5. Author's self-citations should not exceed 20 % of the number of sources in the list of references.

Information about the author (s)

1. The information about the authors indicates the following data:

- surname, first name, middle name (in full);
- academic degree, academic title (in full);
- position;
- operating unit (department, chair, institute etc.).
- affiliation (the official name of the organization);
- organization address (including postcode);
- author's e-mail;
- ORCID (Open Researcher and Contributor ID) (if available).

2. Information for communication with the author (not published in the journal):

- post address for correspondence (with post index);
- phone numbers (office, mobile).

Design and layout *Tatyana A. Loskutova*

Signed in the press on 20.12.18. Format 70x100 1/16. Writing paper. The printing is flat. Usl. Printer. L. 6.4.
Circulation 100 copies. Order

Printed in the publishing house UrFU Publishing and Printing Center.
4 Turgenev St., 620000, Yekaterinburg, Russian Federation.
Phone +7 (343) 371 54 48, +7 (343) 350 58 20, +7 (343) 358 93 06
E-mail: press-urfu@mail.ru

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Дизайн и верстка *Т. А. Лоскутовой*

Подписано в печать 20.12.18. Формат 70x100 1/16. Бумага писчая. Печать плоская. Усл. печ. л. 6,4.
Тираж 100 экз. Заказ

Отпечатано в типографии Издательско-полиграфического центра УрФУ.
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