

A Simplified Method for State Personal Income Tax Return and Withholding Calculations with S and F Numbers

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Keywords: Tax Simplification, State Individual Income Tax, Linear and Gradual Tax System

JEL classification code: G18, H21, H25, H71, C02

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Abstract

Taxpayers and state governments prefer an efficient, equity-based, and simpler tax system. In this paper, we assign the tax status and filing period with radical numbers that are used for further simplifying the linear and gradual (LG) state tax system, which has been developed previously for assisting employers to file with precise withholding taxes and submit withholding reports to governments. A great number of taxpayers with non-complex tax situations may have an option to either not file tax returns or file with a simplified process. In addition, governments can verify tax returns with the withholding reports before sending out tax refunds to avoid or reduce tax faults and avoidance. The proposed tax rates have not been greatly varied from the existing rates, which would support state tax administration with an efficient concern and the calculation system can be reduced to a minimum. The research finding reveals simplifications of tax calculations, analyses, reforms, and projections that could reduce the processing time and costs for governments, taxpayers, and businesses significantly.

Introduction and Literature Review

Many U.S. states require two existing personal tax systems. One is the tax withholding schedules and the related withholding tables used for businesses to estimate income withholding taxes. Another is the Tax Table and Tax Computation used for taxpayers to correct the above estimations for filing tax returns. One to five tax statuses are applied in these systems. Both the Withholding Tables and Tax Tables are complex with exceptionally long instructions. Some states still use flat tax rates, which inadequately cover different taxable incomes equitably.

One of the major goals of the 1986 tax reform had been to simplify the tax code or reduce the number of tax brackets. In fact, the 1986 tax law has resulted in more complicated forms and no progress toward a simpler tax code in the later tax bills in 1993, 1997, 2001, 2003, and 2012. Recently, Senator Elizabeth Warren introduced the Tax Filing Simplification Act of 2016 on April 13, 2016. This bill amends the Internal Revenue Code of 1986 to require the Internal Revenue Service (IRS) to establish and operate the following programs free of charge, including online tax preparation and filing software, to provide a program for taxpayers to download third-party provided return information relating to individual income tax returns and to permit individuals with simplified tax situations to elect to have the IRS prepare their returns. However, the IRS may not enter into any agreement that restricts its legal right to provide tax return preparation services, software, or tax return filing services. Individual taxpayers can participate in the programs established by this bill, however must first verify their identity to the IRS. Another tax bill was introduced by House Representative Mike Bishop, which was the Mobile Workforce State Income Tax Simplification Act of 2015 on May 14, 2015, and was passed on September 21, 2016. In this bill, one of the simplification processes is to exempt employers from state income tax withholding and information reporting requirements for employees who are not subject to the income tax.

The complexity of the U.S. tax system has created compliance and equity issues according to the Annual Report to Congress of the National Taxpayer Advocate (TAS Executive Summary 2008). The IRS estimated that individuals and businesses have spent 7.6 billion hours a year or equivalent to 3.8 million full-time workers in one year just to comply with the tax filing requirements. It can convert to \$193 billion monetary terms or 14 percent of individual and corporate income tax receipts to fulfill the tax collection laws in 2008. The burden of coping with this complexity falls mainly on the taxpayers and creates high compliance costs. The National Taxpayer Advocate

recommended Congress to simplify the tax code extensively. The simplifications include a series of recommendations to repeal the Alternative Minimum Tax, simplify the family status provisions of the Code, streamline education and retirement savings tax incentives, allow taxpayers to exclude modest amounts of canceled debts from income without having to make an affirmative claim, revise the overall penalty structure, and reduce tax sunset and phase out provisions.

Again, the Tax Advocate Service reported to congress (TAS 2012) concerns of the tax complexity issues. The Office of the Taxpayer Advocate in the IRS shows that the U.S. taxpayers, including individuals and businesses, spent more than 6.1 billion hours to complete filings required that contains almost four million words by a tax code. On average, the code has added more than one new provision per day. This resulted in nearly 60 percent of taxpayers hiring tax preparers and another 30 percent relying on commercial software to prepare their returns. The report suggests that the tax laws should be better coherent and explicit. The computations of tax should be transparent and relatively simple for tax papers' confidence and trust. However, few taxpayers today can confidently understand the full tax code or even that they have correctly computed their tax liabilities. They identify that tax complexity is the most serious problem facing taxpayers and recommend that the Congress urgently simplify the tax code immensely for the ease of tax compliance.

Gardner (2013), in his testimony before the U.S. Senate Committee on Finance, had also recommended the federal government to regulate or restrict state and local governments' ability to raise taxes for coordinating and harmonizing their tax laws to restrict their taxing power and tax systems from becoming more complex. Most states are currently using federal AGI for their own special exemptions, although many of these states still provide fewer exemptions than the federal amounts. Although they provide their own deductions, most of them are linked to federal itemized deductions. Only six states use a slight variation and synchronize their income tax to federal taxable income rather than the AGI. Since taxable income includes federal exemptions and deductions, these states automatically allow the same exemptions and deductions on the federal level. Also, federal exemptions and deductions are indexed with inflation factor. The exemptions and deductions would allow these states to increase with inflation factor and avoid the "hidden tax hikes" each year. If these states have lower exemptions and standard deductions than the federal level, taxpayers are then required to recalculate or take further steps for the difference (ITEP 2011).

Many studies have been devoted to the simplification of personal taxation. Slemrod, et.al. (1994) have investigated two-bracket piecewise linear income tax structures. For promoting the Pareto-efficient tax schedules, they used a two-class economy with at least one marginal tax rate equal to zero and let the marginal tax rate change in either direction. Diamond and Saez (2011) suggested considering the optimal progressivity of earnings taxation and considered whether capital income should be taxed. Freebairn (2012) suggested several personal income taxation reform options. He proposed the removal of tax expenditures for some forms of labor remuneration and the increase of more neutral systems of taxation for different forms of capital income. Davis, et al. (2013) indicated that the use of low income tax credits like the Earned Income Tax Credit (EITC) is an important indicator of tax progressivity. In combination with a flat or only nominally graduated rate structure, they pointed out that these tax breaks can sometimes create an unfair result due to the highest income taxpayers paying less of their income taxes than middle-income taxpayers.

Kao and Lee (2013) proposed a linear and gradual tax system to simplify the existing US progressive personal income rules. The advantage of this new tax structure is to eliminate the current complex Tax Tables and Tax Rate Schedules by using a simpler way to calculate the tax amounts. Kao and Lee (2014) have further developed

the LG tax system to simplify current U.S. federal and state corporate income taxation from eight to four federal corporate tax brackets. They suggested that the tax system can also simplify current state individual income systems practically. Several advantages of the LG tax system include the simplified tax/tax rate calculations, analysis, and forecasts with less tax processing time and lower management costs for individuals, corporations, and governments.

This paper applies a new filing status number and filing period number for a further simplification of the LG tax system, which streamlines the LG tax system further to a half page or less for 2015 or current U.S. state personal income taxes. Similarly, a great number of taxpayers with non-complex tax situations may have an option to either not file tax returns or to file with a simplified process. Eventually, governments can verify tax returns with tax withholding reports before sending out tax refunds to avoid or reduce tax evasions and avoidances. In this new proposed method, we will describe the existing state personal tax system, the proposed state tax systems, implications on four selective states, and the benefits from using the new proposed system.

Implications on the State Personal Tax Systems

1. The Existing State Personal Tax Systems

Each U.S. state has a different tax system. Some states use flat tax rates as their personal tax systems. Some state personal tax systems are complex (such as ones with 6-12 tax brackets). State tax systems for individuals have tax rate ranges (0-14.63%). California personal tax system has its tax rates 1.1%-14.63% with ten brackets, which has the highest tax rate 14.63% in all U.S. states (www.edd.ca.gov/pdf_pub_ctr/15methb.pdf). Iowa personal tax system has nine tax brackets with 0.36%-8.98%. Missouri tax system has tax rates 1.5%-6% with ten tax brackets. Hawaii has tax rates 1.4%-11% with 12 tax brackets. Each state has different situations. Table 1 shows state tax systems for individuals. Their basic information is from www.taxadmin.org/assets/docs/Research/Rates/ind_inc.pdf. Flat tax rates are too simple, which cannot cover all taxable incomes (TI) reasonably. More tax brackets increase complexity of a tax system, which have more smooth tax rate changes.

Table 1: Tax Rate Ranges and Tax Brackets in State Tax Systems

State No.	Tax Rate Range	Tax Bracket No.	State	Tax Rate Range	Tax Bracket
Alabama	2-5%	3	Alaska	No State Income Tax	
Arizona	2.59-4.54%	5	Arkansas	1-7%	6
Colorado	4.63%	1	Connecticut	3-6.7%	6
Delaware	2.2-6.75%	6	Georgia	1-6%	6
Hawaii	1.4-11%	12	Idaho	1.6-7.4%	7
.....				
Missouri	1.4-6%	10	Montana	1.0-6.9%	7
.....			South Carolina	0-7%	6
.....			Dist. Of Columbia	4-8.95%	4

We will imply the LG Tax System to four selected states, including California, Hawaii, Missouri, and Kansas for their current tax rate ranges and brackets.

a. The Existing California and the LG Tax System for Its Individual Income Taxes

California’s personal income tax system is relatively complex with tax rate range of 1.1%-14.63%, ten tax brackets and five filing statuses as shown in Table 2. The California tax system is more complex than most states. There are two tax systems in the existing California tax system. One tax system is Tax Withholding Schedules, which is used for employers to estimate income tax withholdings. Another tax system is Tax Table and Tax Computation to correct the estimations for tax returns. There are similar tax rates and slightly different taxable income ranges, formulas and taxes in the two tax systems, which are usually changed yearly. California has the most populations out of all the U.S. states.

The 2015 California personal income withholding schedules and withholding tables have 10 pages on weekly, bi-weekly, monthly, quarterly, semi-annually and annually basis (www.edd.ca.gov/pdf_pub_ctr/15methb.pdf and www.ftb.ca.gov/forms/2015_California_Tax_Rates_and_Exemptions.shtml#sd). 2015 Tax Table has 5 pages (www.ftb.ca.gov/forms/2015/15_540tt.pdf). Its partial Tax Table is show in Table 2.2. For over 100,000, you must compute your tax using the Tax Rate Schedules.

When the LG tax system is used, the ten tax brackets are simplified to four, with easy taxable income ranges, which are shown in Table 3. The tax rate range check is provided for a self-checking tool as shown in Table 3. The LG tax rate formulas are applied to match the tax rates in Table 2 with simplicity and meaning. For Single or Married/RDP filing separately at TI from 0 to \$100,000, a linear relationship of $y = a + x/b$ is found by equation (1) with matched tax rate results.

$$\text{Tax Rate} = 0.01 + \text{TI} / 1,562,500 \quad (\text{tax rate range: } 0.011\text{-}0.075) \dots\dots\dots (1)$$

The slope $1/b=1/100,000/(0.075-0.011)=1/1,562,500$ and 0.075 is calculated from $(2,463.68+0.1023(100,000-50,869))/100,000$. For Single or married/RDP filing separately at TI from \$100,000 to \$250,000, another linear relationship $y=a+bx$ is found. At $\text{TI}=250,000$, $(2,463.68+0.1023(100,000-50,869))/100,000=0.91$. The existing California tax calculation system with 15 pages can be simplified to less than half a page (Table 3) comparably.

Table 2: The Existing California Tax Withholding Schedules

Taxable income is		Tax		Amount is over	
Over	But not over				
Schedule X — Single or married/RDP filing separately					
\$0	\$7,749	\$0.00	plus	1.10%	\$0
\$7,749	\$18,371	\$85.24	plus	2.20%	\$7,749
\$18,371	\$28,371	\$318.92	plus	4.40%	\$18,371
\$28,995	\$40,250	\$786.38	plus	6.60%	\$28,995
.....					
\$519,687	\$1,000,000	\$55,568.65	plus	13.53%	\$519,687
\$1,000,000 and over		\$120,555.00	plus	14.63%	\$1,000,000
Schedule Y — Married/RDP filing jointly or qualifying widow(er)					
\$0	\$15,498	\$0.00	plus	1.10%	\$0
\$15,498	\$36,742	\$149.10	plus	2.20%	\$15,498
.....					
\$1,039,374 and over		\$111,570.44	plus	14.63%	\$1,039,374
Schedule Y — Head of Household					
\$0	\$15,508	\$0.00	plus	1.10%	\$0
.....					
\$1,000,000 and over		\$114,672.71	plus	14.63%	\$1,000,000

Table 3: California Personal Tax Table (5 pages)

Filing status: 1 or 3 (Single; Married/RDP Filing Separately) 2 or 5 (Married Filing Jointly; Qualifying Widow(er)) 4 (Head of Household)

Least	Over	Status 1 or 3	2 or 5	4
\$1	\$50	\$0	\$0	\$0
51	150	1	1	1
.....				
39,951	40,050	1,362	699	698
.....				
84,951	85,050	5,382	3,093	3,944
.....				

Table 4: The LG Tax System for California Individual Tax Rates with Range Check

TI×F/S	Yearly Taxable Income (TI)/S	TI	LG Tax Rate Formula	Tax Rate	Tax Rate Check	Tax TI×Rate
	0-100,000		$0.011 + TI \times F / 1,562,500 / S$		0.011-0.075	
	100,000-250,000		$0.06433 + TI \times F / 9,375,000 / S$		0.075-0.091	
	250,000-500,000		$0.0758 + TI \times F / 16,447,368 / S$		0.091-0.1062	
	500,000		$0.1463 - 20,050 \times S / TI / F$		0.1062-0.1463	

For taxpayers, a status number (S) is 1 for Single (or Married filing separately), 2 for Married filing jointly (or qualifying widow(er)) or =1.5 for Head of household. Filing period (F) is 1 (yearly Tax Return), 2 (semi-yearly), 4 (quarterly), 12 (monthly), 24 (semi-monthly), 26 (bi-weekly) or 52 (weekly) or 365 (daily). For employers to file withholding, S and F numbers are used. Computer programs for withholding taxes, tax withholding reports and tax returns have been designed to do these automatically.

There are only 1.6% (0.091-0.075) and 1.52% (0.1062-0.091) between \$100,000-250,000-500,000. The 4 tax brackets can be further simplified to 3 reasonably by Table 4. The existing CA tax system and the LG tax system are comparable, which are shown in Figure 1. When tax information such as total incomes, filing status, deduction and exemption are inputted, taxable income and tax can be calculated automatically. For Single or married filing separately, total tax can be calculated from the equation (2). Here w, x and y are individual numbers during the four taxable income ranges. Other similar equation(s) may be used for tax analysis and projection.

$$\text{Total Tax} = 0.011 \sum TIw + \sum TIw^2 / 1,562,500 + 0.0758 \sum TIx + \sum TIx^2 / 12,820,513 + 0.1463 \sum TIy - 20,050y \dots (2)$$

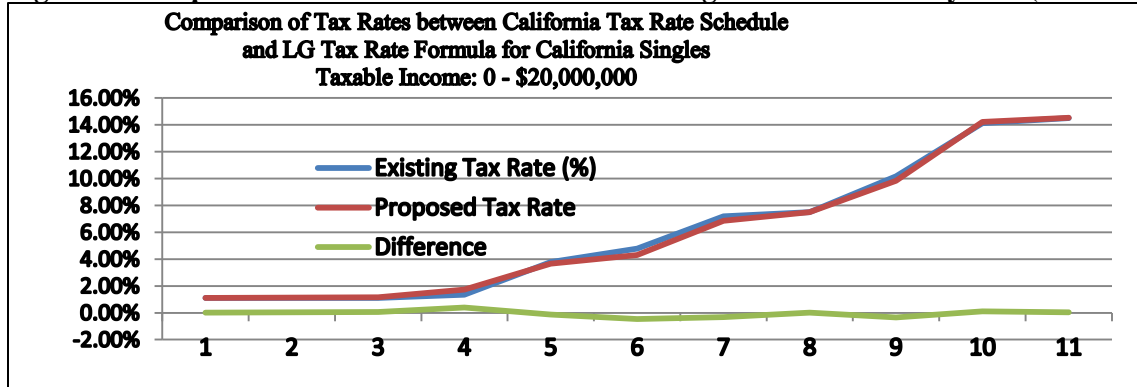
Table 5: The LG Tax System for California Individuals with S and F numbers (3 tax brackets)

TI×F/S	Taxable Income TI×F/S	TI	LG Tax Rate Formula	Tax Rate	Tax Rate Check	Tax TI × Rate
	0-100,000		$0.011 + TI \times F / 1,562,500 / S$		0.011-0.075	
	100,000-500,000		$0.0672 + TI \times F / 12,820,513 / S$		0.075-0.1062	
	500,000		$0.1463 - 20,050 \times S / TI / F$		0.1062-0.1463	

The LG tax rate formulas in Table 4 or 5 are much simpler than the existing withholding and tax tables, which reduces from 15 pages to ~1/4 of a page. The tax processing time and costs are then reduced. When employers, taxpayers, and the government use the same tax system (Table 3 or 4) for withholding taxes, tax returns and tax analysis, accurate withholding taxes may be reached for many taxpayers with non-complex tax situations such as

one-source incomes and standard deductions. Then these taxpayers may not need to file normal tax returns because of accurate withholding taxes by accurate information adjusted by the end of a year. Tax withholding reports, which cover detailed tax data such as name, social security number, income, deduction, retirement, credit, taxable income, tax rate and tax, from employers may be done from payroll summaries by January 31 with or without modification. For a tax reform, tax brackets are 3 and taxable income ranges are fixed. Lawmakers adjust tax rate top/bottom ranges to meet a tax goal. A government can use tax withholding reports compared with tax returns before sending out tax refunds, which can reduce tax filing mistakes and fraud crimes.

Figure 1: Comparison of Tax Rates between the Existing and the LG Tax System (10/3 tax brackets)



(Taxable income: 1=\$100, 2=\$500, 3=\$1,000, 4=\$10,000, 5=\$40,000, 6=\$50,000, 7=\$90,000, 8=\$100,000, 9=\$500,000, 10=\$5,000,000, 11=\$20,000,000)

b. Hawaii Tax System Simplification with the LG Tax System

The 2015 HI personal tax system has the most tax brackets (12) out of all the U.S. states. Its tax rates are from 1.4% to 11% with Tax Table (12 pages) and the three filing statuses in Table 6 (<http://files.hawaii.gov/tax/forms/2015/n11ins.pdf>), which is the most complex state tax system. When the LG Tax System is used, the existing system can be simplified significantly with 4, 3 or 2 tax brackets and without Withholding Table and Tax Table. The LG tax rate formulas with tax rate range checks are used to replace the above Tax Table and Tax Rate Schedules with less than half of a page. Figure 2 shows their tax rate differences from the two tax systems, which are very comparable to each other. The LG tax system is much easier to use than the existing tax system.

When S and F numbers are used, the existing complex HI tax system can be simplified from 12 tax brackets to 4 (Table 7), which can be used by all parties. Status number (S) is 1 for Single or Married filing separately, 2 for Y-Married filing jointly (or qualifying widow(er)) or =1.5 for Head of household. Filing period (F) is 1, 2, 4, 12, 24, 26, 52 or 365.

There are only 1.5% (0.068-0.053) and 1.4% (0.082-0.068) between \$20,000-50,000-200,000. When the two tax brackets are simplified and combined into one range with 2.9% tax rate difference, the four tax brackets can be further simplified to three reasonably and practically. Their tax rate formula becomes $0.04978 + TI \times F / 6,206,896.6 / S$ (0.053-0.082) for \$20,000-200,000. The changes are shown in Table 7.

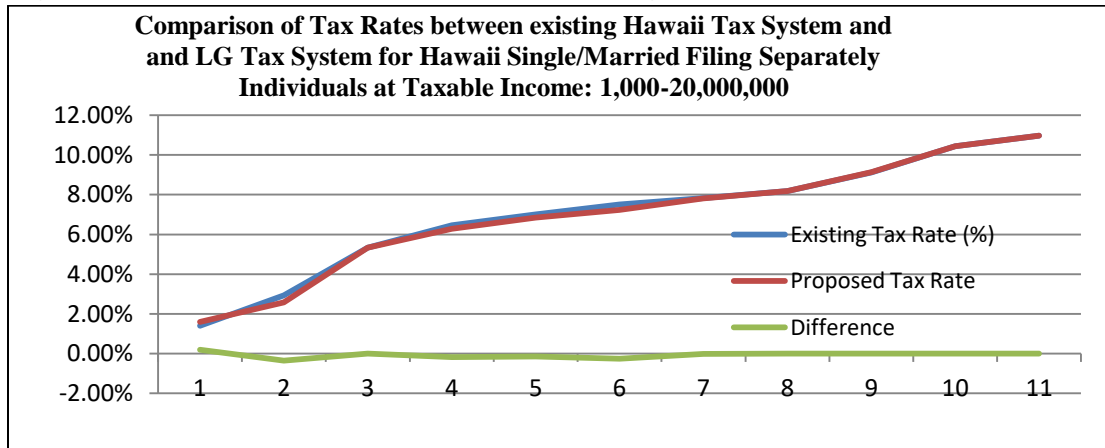
Table 6: Existing HI Tax Rate Schedules (12 tax brackets)

I. Single and Married Filing Separately		II. Married Filing Jointly		III. Unmarried Head of Household	
0 - \$2,400	1.4% of TI	0 - 4,800	1.4% of TI	0 - \$3,600	1.4% of TI
\$2,400 - \$4,800	34+3.2% (TI-2400)	4,800-9,600	67+3.2% (TI-4800)	3,600-7,200	50+3.2% (TI-3600)
.....		
175,000-200,000	13,879+10% (TI-175000)			363,500-300,000	20,818+10%(TI-262,500)
Over 200,000	16379+11% (TI-200,000)	Over 400,000	Over 300,000	24568+11% (TI-300,000)

Table 7 The LG Tax System for HI Individuals with S and F factors (4 tax brackets)

TI×F/S	Taxable Income TI×F/S	Your TI	LG Tax Rate Formula	Tax Rate	Tax Rate Check	Tax Rate × TI
	0-20,000		$0.014 + TI \times F / 512,820.5 / S$		0.014-0.053	
	20,000-50,000		$0.04375 + TI \times F / 2,097,902 / S$		0.053-0.068	
	50,000-200,000		$0.06281 + TI \times F / 10,478,519 / S$		0.067-0.082	
	over 200,000		$0.11 - 5,600 \times S / TI \times F$		0.082-0.11	

Figure 2: Tax Rate Differences between the Existing Hawaii and the LG Tax System



(Taxable income: 1=\$1,000, 2=\$6,000, 3=\$20,000, 4=\$40,000, 5=\$60,000, 6=\$100,000, 7=\$160,000, 8=\$200,000, 9=\$300,000, 10=\$1,000,000, 11=\$20,000,000)

Table 8: The LG Tax System for HI Individuals with S and F factors (3 tax brackets)

TI×F/S	Taxable Income TI×F/S	Your TI	LG Tax Rate Formula	Tax Rate	Tax Rate Check	Tax Rate × TI
	0-20,000		$0.014 + TI \times F / 512,820.5 / S$		0.014-0.053	
	20,000-200,000		$0.04978 + TI \times F / 6,206,896.6 / S$		0.053-0.082	
	Over 200,000		$0.11 - 5,600 \times S / TI \times F$		0.082-0.11	

For the tax analysis, projection and reform of the filing status I, total tax equation is as following equation (3), which is used to calculate the total tax for the whole two groups of Single and Married taxpayers filing separately. The total tax equation or similar equations may be used to do total tax, tax difference, average tax or tax rate and tax data analysis and tax projection simply and practically, which do not need to have individual tax data at first and then to add them together. Tax rate or tax is a simple function of TI.

$$\text{Total Tax} = 0.014\sum TIe + \sum TIe^2/512,820.5 + 0.04978\sum TIf + \sum TIf^2/6,206,896.6 + 0.11\sum TIg - 5600g \dots \dots \dots (3)$$

c. The Existing Missouri and the LG Tax System for Individual Taxes

The Missouri personal income tax system has 10 tax brackets with marginal tax rates at 1.5%, 2%, 2.5%, 3%, 3.5%, 4%, 4.5%, 5%, 5.5% and 6% and Tax Table for individuals. All individuals are required to search and calculate their total income taxes. Tax numbers in the Tax Table are from one number to another number without smooth changes gradually. Tax withholding tables for employers to use have 10 pages. The 10 tax brackets and 10-page tax withholding tables are complex. When the LG tax system and F and S numbers are used, the two tax rate formulas are found and matched (Table 9), which are simple and reasonable for all related parties to use the same tax system (Table 9). S number is 1 for different MO tax statuses. Then tax return, analysis, reform and projection can be done simply and practically. Tax rates change smoothly and continuously. There is almost no tax rate difference by LG and existing tax systems compatibly.

Table 9: The LG Tax System for MO Individuals with S and F Factors (2 tax brackets)

TI×F	Taxable Income TI×F/S	Your TI	Tax Rate Formula	Tax Rate	Tax Rate Check	Tax Rate × TI
	0-10,000		0.015+TI×F/444,444.4		0.015-0.0375	
	Over 10,000		0.06 – 225/TI×F		0.0375-0.06	

Tax calculation, analysis, reform and projection become easy to do. Total tax is calculated with the equation (4). Here m and n are single individual numbers during the two taxable income ranges.

$$\text{Total Tax} = 0.015\sum TI_m + \sum (TI)^2 m/444,444.4 + 0.06\sum TI_n - 225n \dots \dots \dots (4)$$

d. The LG Tax System for Kansas Individual Tax Returns

Kansas has relatively simple tax system with 2 tax brackets. But its existing tax withholding tables have 22 pages and Tax Table (for TI ≤ \$100,000) has 8 pages, which are complex. Married filing separately, Single, and Head of Household are in the same tax status with S number 1. Table 10 is simple tax return form (half page) for all taxpayers (F=1) with the LG tax system. For employers, different filing period (F) is 1 (yearly Tax Return), 2 (semi-yearly), 4 (quarterly), 12 (monthly), 24 (semi-monthly), 26 (bi-weekly), 52 (weekly) or 365 (daily). Lines 6-7 in Table 9 are used to figure out income withholding taxes. It has been reported from KS Department of Revenue that about 80% of Kansans use the standard deduction now.

Tax calculation, tax return, analysis, reform and projection become easy to do. Total tax is calculated with such as the equation (5). Here p and q are married filing jointly numbers during the two TI ranges.

$$\text{Total Tax} = 0.025\sum TI_p + \sum (TI)^2 p/3,636,364 + 0.046\sum TI_q - 570q \dots \dots \dots (5)$$

Final income tax (C9) = Income Tax-KS state EIC-Nonrefundable tax credits (If Final income tax is less than 0, enter 0).

Tax (-Refund/+Owe) (G9) = Final income tax (≥ 0)–Refundable tax credits–KS tax withheld–Tax refund (≤ 100 /last year)

G9 is negative for tax refund (providing bank information) or positive for owned tax (asking tax payment). If your tax refund is less than \$100, it may be delay to next year (into F9) to save tax processing time and costs. If your taxable income is less than \$100,000 with standard deductions, you may use your tax withholding report (similar to W-2 with more details) with or without modification and attach necessary documents to replace normal tax return.

Table 10: 20XX KS tax return form by the LG tax system

Married filing separately Married filing jointly Single Head of household
or qualifying widow(er)

Tax status number	1	2	1	1	Record's Barcode
Standard reduction	3,750	7,500	3,000	5,500	

Taxable income (TI) = State adjustable gross income/Modification-Deduction-Exemption

Exemption: 2,250/person. Additional exemption for blind: 850/person or for 65 or older: 850/person.

A	B	C	D	E	F	G	
Year	Your Name	SS #	Spouse Name	Spouse SS #	Blind&Elder#	Child #	1
2020					1, 2 or __	1, 2 or__	2
Status (S)	Federal AGI	Modifications	Standard/Itemized KS deductions	- KS exemptions	Additional exemptions	Taxable income	3
1 or 2							4
TI*F/S	Yearly taxable income (TI)/S	Your TI	LG tax rate formula	Tax rate check range	Tax rate	Income Tax	5
	0-30,000		$0.02+TI/1,818,182 \times S$	0.02-0.0365			6
	30,000		$0.046-285 \times S/TI$	0.0365-0.046			7
KS EIC	Nonrefundable tax credits	Final income tax	Refundable tax credits	KS tax withheld	Tax refund ≤ 100 /last year	Tax (-R/+O)	8
							9

The LG tax system with 2 or 3 (preferred 2) tax brackets can replace the existing state tax systems with different tax brackets (1-12) and simplify existing tax complexity with smooth tax rates. A flat tax rate is easy but too simple, which cannot cover all taxable incomes reasonably. More tax rate brackets (4-12) can increase complexity of a tax system, which need more processing time and costs. The tax status and filing period numbers are used to simplify existing tax systems, which can be applied for many U.S. states. Also the LG tax system with the tax status and filing period numbers can be applied for the U.S. federal tax system and other countries.

For a tax reform, lawmakers usually struggle to select the number of tax brackets (1-12), taxable income ranges, tax rates, and computations at the very least to meet a tax goal. It is difficult to consider several factors with different options at the same time. With the LG tax system, which provides the most reasonable, simple and fair tax rates, these factors and options are fixed and only tax rate ranges (bottom/top) are adjusted to meet a tax goal. Tax rate formulas are decided by fixed taxable income and tax rate ranges. Then "complex" political factors and options are converted into simple technical issues.

Conclusion

The proposed method in this paper could simplify and combine the tax status numbers, taxable income, tax rate formula, filing period number, tax rate checks, and tax rate into a short tax simplification table. Tax status and filing period numbers can be used to further simplify the LG state tax system and reduce to two or three taxable income ranges. The LG state tax system can help employers to file the withholding taxes accurately for taxpayers and provide governments tax withholding reports earlier by January 31. Many taxpayers with non-complex tax situations can exempt to file their normal tax returns with or without modifying their tax withholding reports. Governments could verify tax returns with tax withholding reports before sending out tax refunds to reduce tax faults and possible fraud crimes. The related software programs for calculating the withholding tax return can be designed to process it automatically. The proposed tax rates are compatible with the existing tax rates, which can be complied with the current tax administration.

The LG tax system simplifies and combines existing state personal tax systems with tax withholding schedules/related withholding tables for businesses and Tax Table/Tax Computation for taxpayers into one simple tax system for many states. All related parties can benefit from using the same simple LG tax system, and the tax rates could be easily checked by tax officers and taxpayers. This can also be complied with the enacted Senate Bill (2789) of Tax Filing Simplification Act of 2016. The proposed tax system would provide more reasonable and fair tax rates that could allow lawmakers to help tax reforms by adjusting tax rate ranges and other related factors to meet the tax goal. The potential contributions to this research finding could simplify tax calculation, tax return, analysis, reform, and projection. The tax processing time and costs for lawmakers, governments, taxpayers, and businesses can be reduced significantly.

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