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Determinants of personal income tax revenue and the implication on public welfare development (Case study at 6 regions in Jakarta City, Indonesia capital city during 2010-2014)

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Abstract
The purpose of this study is to examine the factors which have influencing to tax revenue optimizing from the source of individual income tax. Then, analyzing the implication of tax revenue on public welfare. The paper research is based on tax revenue data of 6 regions at Jakarta City (capital city of Indonesia) from the period of year 2010 to year 2014. Those secondary data was set in panel data, and then analyzed by multiple linear regression and simple linear regression method. Explanatory research method was used to explain the variables in research model. Variables in this paper are delinquent tax collection, individual income taxpayer, compliance of individual taxpayer, employment, individual income tax revenue, infrastructure development, education development and healthcare development. This paper result suggested that delinquent tax collection, number of individual taxpayerrs, compliance of individual taxpayers and employment; those variables are simultaneously and partially significant have impact on the individual income tax revenue. Then the individual income tax receipts has significant and positive impact on development of infrastructure, education and healthcare.

Keywords: income tax revenue, delinquent tax collection, individual income taxpayer, employment

1. Introduction
In theoretical point of view, country development expenditure is contributed by taxpayers, both individual and corporate. In the purpose to optimizing taxpayer's contribution, Indonesian government has implemented self-assessment system (SAS) for whole taxpayers; it has been declared by Indonesian regulation in the Act no.28 on 2007.
Target of SAS implementation are to increase tax collection rate and to encourage voluntary compliance. The compliance responsibilities for taxpayers consist of an obligation to report, calculate and pay their taxes according to tax regulation. The essence of policy maker of SAS is to maximize the utilization of tax revenue, particularly in welfare development and public facility development. So the fair assessment would conclude that well designed tax policies have the potential to raise economic growth, but there are many stumbling blocks along the way and certainly no guarantee that all tax changes will improve economic performance (Gale and Samwick, 2014) [20]. Obviously, the role of tax revenue has a big contribution in country development, but in reality it has distortion happening in implementation. So the objectives of this paper is to examine the contribution of individual income tax revenue on public welfare development in Jakarta City, Indonesia capital city; which has 6 small taxpayers offices (*Kantor pajak Pratama*) in Jakarta City region, each is Central Jakarta, North Jakarta, West Jakarta, South Jakarta, East Jakarta and Thousand Island region. The study was expected to provide deeper understanding of those independent variables' role on government tax revenue and the impact on public welfare development in Jakarta City. Furthermore, the findings of this study would contribute suggestion to concerned parties to have other jurisdictions on tax regulation and policy to optimizing tax revenue.
The remainder of this article is set out in five parts. Following the Introduction; a literature review is presented in section II and brief explanation of the research methodology is presented in section III. The findings and discussion of the individual taxpayers implication is presented in section IV. Then, the closing part of this paper is conclusions in section V.

2. Literature Review
2.1 Theoretical Framework
In most countries, taxation affair becomes a concern of the government, since it be a funding source in development spending. So, the tax system is significantly important and takes place in country development (Lymer and Oats, 2009) [25]. Taxation as the most potential source of revenue to government of any nation, it has played crucial roles as an instrument in economic, social and fiscal policy. Indonesia is who has the same objectives to generating the income tax; this challenge has been replied by government through the Self-Assessment System (SAS) in taxation. The SAS is a system of tax administration whereby the tax payer is granted the right by law, to compute his own tax liability, pays the tax due and produces evidence of tax paid at the time of filing his tax return at the tax office, on due date. On the other hand, the tax authority has the responsibilities of enablement to and checks on the taxpayers to ensure

compliance with tax administration process (Appah and Ogbonna, 2014) [7]. Marlik (2010) [27], suggested that SAS requires taxpayers to understand tax system, procedures, adequate tax knowledge, in order to comply tax obligations. The core and the basic factor of taxation is taxpayers' compliance in term of administration and payment. Tax compliance is measured by taxpayers' obedience to fulfil tax administration and payment follow to the country rules (Sarker, 2003) [36]. Tax compliance directly impact to tax revenue generating, which is suggested by Appah and Ogbonna (2014) [7], that compliance enforcement will increase revenue generation. Hence, taxpayers incompliance affecting increases of tax delinquencies. Tax delinquencies are the debts incurred by a citizen (taxpayers) with the tax authority and this circumstance has a significant impact on public development continuation.

2.2 Determinants of Personal Income Tax Revenue

Tax revenue is influenced by manifold factors which have difference influence degree; it may vary due to the intensity of the relationship among the variables. Refer to the previous research findings, such as Beeson, *et al*. (2016); Gale and Samwick (2014) [20]; Karagoz (2013); Mishra (1991) [28]; Bhat and Nirmala (1993) [14]; those researchers have been explored the determinants of tax revenue and its components in different countries using different explanatory variables. In Indonesia tax system has 3 methods in tax generating, there are Official Assessment System, Self Assessment System and Withholding System. Tax collection system is a component in tax revenue. The objective of this paper is to examine similar context of personal taxation but explore in different variables and conducted in Jakarta City. The determinants of personal income tax revenue are collection of delinquent tax, number of taxpayers, taxpayers compliance and employment ratio.

2.2.1 Personal Taxpayer and Number of Personal Taxpayers

Personal taxpayer is a person who has obligation to pay tax or an individual is obligated to make payments to government taxation agencies. In this new environment, governments are striving more than ever to mobilize greater tax revenue domestically. Taxes are compulsory levy by government through designated agent on the tax payers to defray the expenses incurred in the common interest of all, without reference to special benefit conferred (Adeyeye, 2004; Seligman,1925) [2]. All taxes have some features in common. They are compulsory levy, imposed by government, either on income, expenditure or capital assets, for which the taxpayer receives nothing specific in return. The primary purpose of imposing a tax in Taxation as a mechanism for income and wealth distribution, holds that the burden of taxation should be heavier for the rich in the society than for the poor so that taxes collected are used to pay for social services for the less fortunate (Ojong *et al*., 2016) [31]. The determinant of taxation fund generation, naturally depend on numbers of taxpayers. The number of taxpayers holds an important role in achieving tax revenue target. This norm is enacted in Jakarta City region, which is the research object in this paper. Data of the number of taxpayers in Jakarta City is shown on table 1.

Table 1: Total Personal taxpayers in 6 regions (South, North, East, West, Central and Thousand Islands) in the year of 2010 - 2014

Region of Central Jakarta			Region of Thousand Island		
Year	**taxpayer**	**Growth**	**Year**	**taxpayer**	**Growth**
2010	4,863.00		2010	1,517.00	
2011	5,012.00	2.97	2011	1,637.00	7.33
2012	5,107.00	1.86	2012	1,496.00	-9.43
2013	5,172.00	1.26	2013	1,633.00	8.39
2014	5,225.00	1.01	2014	1,996.00	18.19

Region of South Jakarta			Region of North Jakarta		
2010	67,074.00		2010	42,087.00	
2011	72,310.00	7.24	2011	45,094.00	6.67
2012	76,518.00	5.5	2012	48,352.00	6.74
2013	81,306.00	5.89	2013	51,464.00	6.05
2014	83,795.00	2.97	2014	52,775.00	2.48

Region of West Jakarta			Region of East Jakarta		
2010	71,941.00		2010	59,015.00	
2011	76,508.00	5.97	2011	63,140.00	6.53
2012	80,523.00	4.99	2012	66,824.00	5.51
2013	84,630.00	4.85	2013	70,858.00	5.69
2014	86,664.00	2.35	2014	72,532.00	2.31

Source: Kantor Pajak Pratama DKI Jakarta

2.2.2 Delinquent tax and Collection

Delinquent tax refers to a tax that is unpaid after the payment due date. In Glossary of tax terms by Organization for Economic Co-operation and Development (OECD, 2016); explained that delinquency tax which is in default, i.e. due but not yet paid. Also, tax revenue target is depending on the collection of delinquent tax. Taxpayers are heterogeneous in their liquidity needs, and they must decide whether to pay their tax obligations on time or postponed. If they postpone,

tax status will become delinquent tax. Then the tax agency has right to enforce payment through a collection tool by law. The collection tool is not always effective and may not be equally effective on all debtors and at the eventually is imposed to foreclosure the taxpayers' asset in purpose to pay out the delinquent tax. Data of Tax delinquent and the collection at Jakarta City area in period of 2010 till 2014 are shown in table 2 and table 3.

Table 2: Delinquent personal tax in 6 regions (South, North, East, West, Central and Thousand Islands) in the year of 2010 - 2014

Region of Central Jakarta			Region of Thousand island Jakarta		
Year	**Amount**	**Growth**	**Year**	**Amount**	**Growth**
2010	9,750,773.00		2010	13,984,910.00	
2011	49,031,625.00	80.11	2011	4,430,229.00	-215.67
2012	36,643,664.00	-33.81	2012	190,699,381.00	97.68
2013	18,207,112.00	-101.26	2013	24,714,376.00	-671.61
2014	5,002,590.00	-263.95	2014	5,470,949.00	-351.74
Region of South Jakarta			Region of North Jakarta		
2010	261,312,246.00		2010	541,232,163.00	
2011	259,777,351.00	-0.59	2011	167,696,972.00	-222.74
2012	231,830,560.00	-12.05	2012	8,360,072,238.00	97.99
2013	246,810,463.00	6.07	2013	991,684,493.00	-743.02
2014	257,710,510.00	4.23	2014	190,568,214.00	-420.38
Region of West Jakarta			Region of East Jakarta		
2010	375,930,510.00		2010	510,942,484.00	
2011	3,369,361,040.00	88.84	2011	694,053,578.00	26.38
2012	408,471,061.00	-724.87	2012	306,983,949.00	-126.09
2013	1,332,684,885.00	69.35	2013	1,307,827,762.00	76.53
2014	6,111,600.00	-21,705	2014	33,421,233.00	-3,813

Source: Kantor Pajak Pratama DKI Jakarta

Jakarta City Delinquent tax is spread out in 6 regions; in 2014 the highest delinquent tax is located in Region of West Jakarta. The collection is conducted by tax agency; through several steps which is started by officially reminder then followed by hard action, such as the foreclosure and taxpayer detention in certain circumstances. Through intensive collection, Jakarta City Tax Agency achieve 80% average collection rate in delinquent personal tax in 2014, the data are shown in table 3 and table 4.

Table 3: Collection of Delinquent personal tax in 6 regions (South, North, West, East, Central and Thousand Islands) in the year of 2010 – 2014

Region of Central Jakarta			Region of Thousand island Jakarta		
Year	Amount	Growth	Year	Amount	**Growth**
2010	9,202,095.00		2010	13,459,056.00	
2011	30,668,390.00	69.99	2011	3,963,559.00	-239.57
2012	29,230,115.00	-4.92	2012	66,075,838.00	94
2013	2,928,265.00	-898.21	2013	6,273,661.00	-953.23
2014	3,455,873.00	15.27	2014	5,014,954.00	-25.1
Region of South Jakarta			Region of North Jakarta		
2010	44,175,021.00		2010	520,881,023.00	
2011	345,592,767.00	87.22	2011	150,029,780.00	-247.19
2012	119,653,226.00	-188.83	2012	2,896,699,364.00	94.82
2013	189,239,614.00	36.77	2013	251,735,758.00	-1,050.69
2014	135,250,715.00	-39.92	2014	157,090,760.00	-60.25
Region of West Jakarta			Region of East Jakarta		
2010	344,097,123.00		2010	446,820,567.00	
2011	3,272,357,139.00	89.48	2011	651,380,992.00	31.4
2012	201,848,027.00	-1,521.20	2012	303,339,149.00	-114.74
2013	1,753,709,619.00	88.49	2013	114,075,853.00	-165.91
2014	5,187,600.00	-33,705.80	2014	97,321,670.00	-17.22

Source: Kantor Pajak Pratama DKI Jakarta

Table 4: Delinquent Tax Collection Achievement in 6 regions (South, North, West, East, Central and Thousand Islands) in the yearof 2010– 2014

Year	2010	2011	2012	2013	2014
Central Jakarta Region			**in Rupiah**		
Delinquent tax	9,750,773.00	49,031,625.00	36,643,664.00	18,207,112.00	5,002,590.00
Delinquent tax collection	9,202,095.00	30,668,390.00	29,230,115.00	2,928,265.00	3,455,873.00
Collection Achievement	94.37%	62.55%	79.77%	16.08%	69.08%
Thousand Islands Region			**in Rupiah**		
Delinquent tax	13,984,910.00	4,430,229.00	190,699,381.00	24,714,376.00	5,470,949.00
Delinquent tax collection	13,459,056.00	3,963,559.00	66,075,838.00	6,273,661.00	5,014,954.00
Collection Achievement	96.24%	89.47%	34.65%	25.38%	91.67%
North Jakarta Region			**in Rupiah**		
Delinquent tax	541,232,163.00	167,696,972.00	8,360,072,238.00	991,684,493.00	190,568,214.00
Delinquent tax collection	520,881,023.00	150,029,780.00	2,896,699,364.00	251,735,758.00	157,090,760.00
Collection Achievement	96.24%	89.46%	34.65%	25.38%	82.43%
South Jakarta Region			**in Rupiah**		
Delinquent tax	261,312,246.00	259,777,351.00	231,830,560.00	246,810,463.00	257,710,510.00
Delinquent tax collection	44,175,021.00	345,592,767.00	119,653,226.00	189,239,614.00	135,250,715.00
Collection Achievement	16.91%	133.03%	51.61%	76.67%	52.48%
West Jakarta Region			**in Rupiah**		
Delinquent tax	375,930,510.00	3,369,361,040.00	408,471,061.00	1,332,684,885.00	6,111,600.00
Delinquent tax collection	344,097,123.00	3,272,357,139.00	201,848,027.00	1,753,709,619.00	5,187,600.00
Collection Achievement	91.53%	97.12%	49.42%	131.59%	84.88%
East Jakarta Region			**in Rupiah**		
Delinquent tax	510,942,484.00	694,053,578.00	306,983,949.00	1,307,827,762.00	33,421,233.00
Delinquent tax collection	446,820,567.00	651,380,992.00	303,339,149.00	114,075,853.00	97,321,670.00
Collection Achievement	87.45%	93.85%	98.81%	8.72%	291.20%

Source: Kantor Pajak Pratama DKI Jakarta

2.2.3 Taxpayers compliance

Tax compliance is a key issue for fostering tax collection. In Glossary of Tax term by Economic Co-operation and Development (OECD) defined that tax compliance is Degree to which a taxpayer complies (or fails to comply) with the tax rules of his country, for example by declaring income, filing a return, and paying the tax due in a timely manner (www.OECD.org). Detailing of taxpayers identities is essential for effective tax administration, especially in terms of tax compliance (Ayres & Braithwaite, 1992; Braithwaite, 2002) [10, 16]. Tax compliance is expectedly supported by attractive tax regulation and tax system; of which will motivate the taxpayers obedience to fulfill tax obligation. Due to the role of tax compliance in tax generation; taxpayers should be well informed in the decision to comply or not comply with tax laws; then has been understood as an individual's rational pursuit of material outcome maximization, weighting expected costs of detection and fines against the expected benefit of not paying the tax (Allingham & Sandmo, 1972) [5]. Taxpayer ethics in the sense of moral obligation is reflected by taxpayers' compliance (Bosco & Mittone, 1997; Reckers *et al*, 1994; Schwartz & Orleans, 1967) [7, 35]. By the time, government tax agency has to reserved efforts to improve the taxpayers' awareness consistently, in term of tax compliance and payment obligation. A deterrence action is considered as ultimate choice, in spite of as it preliminary attempts, through detection and punishment, and to make tax compliance a relatively more attractive option (Fischer, *et al*, 1992) [19]. Eventually,

Taxpayers should have education, which is covering wide range of activities and actors – from government program to encourage tax-compliant behavior. In other words, people who receive good quality public services are more willing to pay taxes (www.oecd.org)

2.2.4 Employment

Employment is a relationship between two parties, which is based on a contract that work is paid to one party or employees. The party who spend the payment is employer; may be a corporation, for profit, not-for-profit organization, co-operative or other entity. Employees work in return for payment, active employee typically means staff currently working at company and taking home a paycheck issued by employer. Employment can be expressed in number of people working or in total working hours. Taxes on employment refer to both sides on labor market and labor supply (labor force pay income taxes) on the one hand and labor demand (employers, who pay payroll taxes) on the other side (Michal Tvrdon,2011) [14]. The positive employment effects of progressive taxation in imperfectly competitive labor markets stands in sharp contrast to the effects in perfectly competitive labor markets where progressive taxes distort labor supply decisions and reduce employment (Rasmussen, 2001) [34]. A research in Turkey (Betcherman Daysal, and Pagés, 2010) [11], The reduction

in social security contributions that affected increasin in the number of registered establishments and the number of employed workers registered and had no effect on wages; which is indirectly has no affect on individual tax income. Eventually, tax income is affected by number of employed workers; in no matter how is the social security and any other benefit is provided to workers.

Table 5: Employment in 6 regions (South, North, West, East, Central and Thousand Islands) in the year of 2010-2014

Central of Jakarta		Thousand Island	
Year	total	Year	total
2010	37,805.00	2010	3,982.00
2011	37,672.00	2011	3,859.00
2012	46,673.00	2012	3,963.00
2013	43,225.00	2013	3,680.00
2014	37,568.00	2014	4,317.00

South of Jakarta		North of Jakarta	
2010	104,479.00	2010	154,108.00
2011	100,261.00	2011	146,072.00
2012	99,673.00	2012	173,734.00
2013	98,040.00	2013	147,663.00
2014	98,255.00	2014	150,373.00

West of Jakarta		East of Jakarta	
2010	115,097.00	2010	67,514.00
2011	106,867.00	2011	70,257.00
2012	111,161.00	2012	69,063.00
2013	113,543.00	2013	76,527.00
2014	109,398.00	2014	76,106.00

Source: Kantor Pajak Pratama DKI Jakarta

Wholly on the latest year of 2014, there is no growth in the total employment at Jakarta City; due to the head count of total employment on 2013 is 482.678 and on 2014 is 476.017.

2.3 Contribution of Income Tax Revenue on Public Welfare

Due to the change of official assessment system to self-assessment system (SAS) in Indonesia's taxation, it is a way of giving credence to taxpayers to calculate tax liabilities by themselves, then to encourage taxpayers have a good compliance behavior in tax settlement. By SAS, expectedly there is increasing degree in Individual taxpayer's compliance, since taxpayers' candour to fulfill tax payment; it affected region growth and development (Susilawati and Budiartha, 2013) [13]. The grand purpose of tax is to generate revenue to meet government expenditure and to redistribute wealth and management of the economy (Ola, 2001; Jhingan, 2004; Bhartia, 2009) [33, 22, 13]. Tax is discriminatory, since it is assessed on persons or property based on incomes or gain, the benefit derived by citizens from tax payment is without reference to the contribution of individual taxpayers (Nightingale, 2000) [29]. The similar suggestion comes from Ariwodola (2000) posits that the primary objective and purpose of taxation in most nations of the world is essentially to generate revenue for government expenditure on social welfare such as provision of defense, law and order, health services and education. Tax

Revenue can also be expended on capital projects otherwise called consumer expenditure, creating social and economic infrastructure which will improve the social life of the people (Angahar & Alfred, 2012) [6]. Refer to previous research, Okafor (2012) [12] who investigated the impact of income tax revenue on the economic growth of Nigeria, the result claimed a very positive and significant relationship between the components of tax revenue and the growth of the Nigeria economy. These findings have also been supported by Akwe (2014) [4]. In this paper, the social welfare is comprised several public development, which are covering infrastructures, education and health care. Adeyeye (2004) [2] explained that tax as liability on account of taxpayers as contribution in some quantum measure to the fund available for

Use by government in providing necessary infrastructure for the citizens. In Jakarta City, the most spending for public welfare development is in the field of infrastructural development, then respectedly in the field of educational development and healthcare development. The personal tax income and development spending is shown in the following table 6, table 7, table 8 and table 9.

Table 6: Personal Tax Revenue in 6 regions (South, North, West, East, Central and Thousand Islands) in the year of 2010-2014 (Total in million Rupiah)

Center of Jakarta		Thousand Island	
Year	Amount	Year	Amount
2010	552,542,957,689.00	2010	1,179,602,351.00
2011	601,914,067,909.00	2011	1,826,449,413.00
2012	620,010,301,494.00	2012	2,144,579,400.00
2013	552,021,588,531.00	2013	2,791,754,384.00
2014	727,037,705,133.00	2014	3,976,756,488.00
South of Jakarta		North of Jakarta	
2010	118,644,392,707.00	2010	45,651,973,669.00
2011	147,854,444,439.00	2011	69,135,298,966.00
2012	170,496,367,233.00	2012	94,016,239,598.00
2013	185,101,397,497.00	2013	112,021,420,537.00
2014	243,837,960,311.00	2014	138,521,381,361.00
West of Barat		East of Jakarta	
2010	98,973,227,754.00	2010	26,038,450,643.00
2011	127,736,880,971.00	2011	29,568,750,737.00
2012	172,874,826,135.00	2012	28,652,299,892.00
2013	216,432,962,504.00	2013	30,912,291,133.00
2014	236,008,112,785.00	2014	34,211,465,334.00

Source: Kantor Pajak Pratama DKI Jakarta

Table 7: Infrastructural Development spending in 6 regions (South, North, West, East, Central and Thousand Islands) in the year of 2010-2014 (Total in million Rupiah)

Central of Jakarta		Thousand Island	
Year	Total	Year	Total
2010	28,404,191.00	2010	55,181.00
2011	32,288,420.00	2011	62,617.00
2012	35,889,701.00	2012	69,736.00
2013	40,275,800.00	2013	78,195.00
2014	45,317,575.00	2014	87,329.00
South of Jakarta		North of Jakarta	
2010	34,604,817.00	2010	32,234,826.00
2011	39,055,530.00	2011	36,835,597.00
2012	43,445,252.00	2012	41,781,289.00
2013	48,523,485.00	2013	46,805,628.00
2014	54,505,409.00	2014	52,855,997.00
West of Jakarta		East of Jakarta	
2010	31,597,660.00	2010	23,822,980.00
2011	35,733,250.00	2011	27,028,820.00
2012	39,615,960.00	2012	30,498,950.00
2013	44,530,350.00	2013	34,322,840.00
2014	49,088,870.00	2014	37,603,620.00

Source: Pemda Provinsi DKI Jakarta (Jakarta Capital City Government)

Table 8: Educational Development spending in 6 regions (South, North, West, East, Central and Thousand Islands) in the year of 2010 – 2014 (Total in million Rupiah)

Central of Jakarta		Thousand Island	
Year	Total	Year	Total
2010	14,517,435.00	2010	16,448.00
2011	16,329,508.00	2011	18,683.00
2012	18,532,915.00	2012	21,107.00
2013	21,085,503.00	2013	25,388.00
2014	24,270,384.00	2014	29,980.00
South of Jakarta		North of Jakarta	
2010	10,870,244.00	2010	6,918,456.00
2011	12,005,748.00	2011	7,619,222.00
2012	13,587,208.00	2012	8,669,751.00
2013	15,573,375.00	2013	9,856,235.00
2014	18,331,633.00	2014	11,460,824.00
West of Jakarta		East of Jakarta	
2010	10,089,950.00	2010	12,830,850.00
2011	11,223,490.00	2011	14,362,210.00
2012	12,766,120.00	2012	16,222,330.00
2013	14,536,930.00	2013	18,393,380.00
2014	16,838,460.00	2014	21,431,480.00

Source: Pemda Provinsi DKI Jakarta (Jakarta Capital City Government***)***

Table 9: Health Care Development spending in 6 regions (South, North, West, East, Central and Thousand Islands) in the year of 2010 – 2014 (Total in million Rupiah)

Central of Jakarta		Thousand Island	
Year	Total	Year	Total
2010	3,735,895.00	2010	29,237.00
2011	4,376,144.00	2011	34,524.00
2012	5,102,956.00	2012	40,637.00
2013	5,925,935.00	2013	45,571.00
2014	6,802,107.00	2014	55,382.00
Jakarta Selatan		Jakarta Utara	
2010	4,336,459.00	2010	2,282,200.00
2011	4,982,778.00	2011	2,634,195.00
2012	5,719,215.00	2012	3,001,616.00
2013	6,584,833.00	2013	3,440,728.00
2014	7,554,991.00	2014	3,952,298.00
Jakarta Barat		Jakarta Timur	
2010	3,164,600.00	2010	2,859,900.00
2011	3,642,850.00	2011	3,284,320.00
2012	4,115,320.00	2012	3,790,990.00
2013	4,709,440.00	2013	4,384,480.00
2014	5,428,470.00	2014	5,014,850.00

Source: Pemda Provinsi DKI Jakarta (Jakarta Capital City Government)

2.4 Objective of The Study

To find out the impact of number of personal taxpayers; personal taxpayers compliance; personal delinquent tax; personal delinquent tax collection and employment in Jakarta City on Personal Income Tax Revenue, then it affect on development of social infrastructure; education facilities and social health care facilities.

3. Methodology

Explanatory research method has been applied in this paper, which is doing analysis and exploring on causality relationship between dependent variable and independent variable; in purpose of hypothesis testing. Concern of this section is to describe the choice of research design and strategies, model specification, data requirements and sources, the nature and scope of data collected, the data processing technique and the theoretical significance of parameter estimate are discussed. The frame work of analysis is shown on figure 1

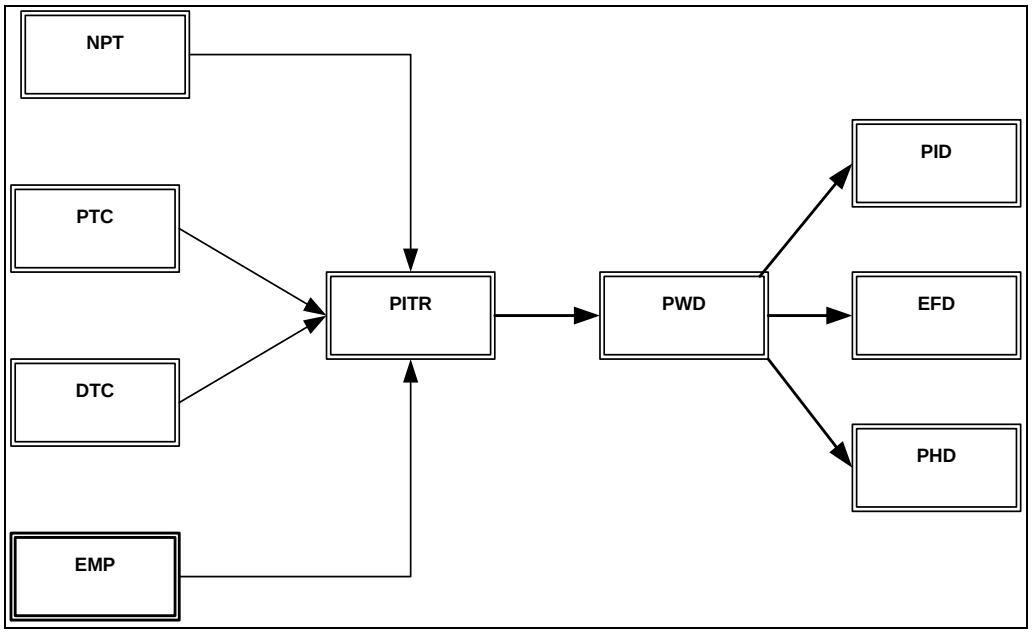

Fig 1: Frame Work of Analysis

Note:
NPT = Number of Personal Taxpayers
PTC = Personal Taxpayers Compliance
DTC = Delinquent Tax Collection
EMP = Employment
PITR = Personal Income Tax Revenue
PWD = Public Welfare Development
PID = Public Infrastructural Development
EFD = Educational Facilities Development
PHD = Public Healthcare Development

3.1 Research Design

The study approach and style of this research are both empirical and analytical in nature of personal income tax revenue at Jakarta City. It employs annual time series empirical data spanning from the year of 2010 to 2014 and cross-section data of 6 regions in Jakarta City. All data provided in panel data and run econometric regression analyses by employed Ordinary Least Square (OLS). The methods were employed to identify the impact of Number of Personal Taxpayers, Personal Taxpayers Compliance, Delinquent Tax Collection and Employment on Personal Income Tax Revenue; then the impact of Personal Income Tax Revenue on Public Welfare Development, which is consist of Public Infrastructure Development, Education Facilities Development and Public Healthcare Development. This paper uses infrerential statistical analysis, which is based on empirical research design approach for the data analysis by approaching combines of theoretical consideration (prior criteria) with the empirical available data appropriately. Secondary data were used, such as tax agency report, journals, employment report, statistic agency report, tax regulation published materials and any other secondary data sources.

3.2 Data Collection

The study is based on taxation data at Province of Jakarta Capital City, which is collected from 6 regions tax agency office, such as North of Jakarta, South of Jakarta, Central of Jakarta, West of Jakarta, East of Jakarta and Thousand Island. Data is fully collected from research objects in the year range of 2010 until 2014. The data set is quantitative data performance in balanced panel consisting of 4 cross section data of 6 region tax agency, and 5 time series data spanning from the year on 2010 until the year on 2014. The estimation of collected data is process by software EViews 8.

3.3 Research Hypothesis

Refer to taxation associated literature, then the previous literary and journal, this paper considers the following hypothesis for present research:

H1: Collection of Delinquent of personal income tax has positively Impact on personal income tax revenue

H2: Number of personal income taxpayers has positively impact on personal income tax revenue

H3: Personal income taxpayer's compliance has positively impact on personal income tax revenue

H4: Employment rate compliance has positively impact on personal income tax revenue

H5: Personal income tax revenue has positively impact on public infrastructural development

H6: Personal income tax revenue has positively impact on public educationa facilities development
H7: Personal income tax revenue has positively impact on public Healthcare facilities development

3.4 Research model & Findings

In this section, regression models are building for hypothesis testing. Here we have 4 models, for examining 2 dependent variables which are Personal Income Tax Revenue and Public Welfare Development.
Classical assumption test and the regression model preferred test have been run on those 4 models, which the result are shown in table 10; table 11 and table 12, as follow:

Table 10: Classical Assumption Test

Model	Normality (Jarque Bera)	Heteroscedasticity (White Method)	Autocorrelation (Breusch-Godfrey)
	Probability	Prob. Chi Square	Prob. Chi Square
1	0,589694 > 0,05	0,0611 > 0,05	0,7524 > 0,05
2	0,572220 > 0,05	0,1335 > 0,05	0,1590 > 0,05
3	0,762863 > 0,05	0,3509 > 0,05	0,5203 > 0,05
4	0,137934 > 0,05	0,0956 > 0,05	0,1168 > 0,05

Note : process by Eviews 8

Table 11: Classical Assumption Test (Multicollinearity)

Variable	DTC	NPT	PTC	EMP
DTC	1,000000	0,716575	0,732529	0,634549
NPT	0,716575	1,000000	0,784814	0,634549
PTC	0,732529	0,784814	1,000000	0,716575
EMP	0,634549	0,634549	0,716575	1,000000

Note: process by Eviews 8

Table 12: Regression Model Test

Model	Chow Test	Hausman Test	Regression
	Chi Square	Cross Section Random	Model
1	0,0000 < 0,05	0,0000 < 0,05	Fixed Effect Model
2	0,0000 < 0,05	0,0008 < 0,05	Fixed Effect Model
3	0,0000 < 0,05	0,0008 < 0,05	Fixed Effect Model
4	0,0000 < 0,05	0,2475 > 0,05	Random Effect Model

Note: process by Eviews 8

Each empirical model's panel data is process by Eviews and estimated by ordinary least square estimator (OLS). The models are presented as following :

1. Empirical Model 1; Examining Personal Income Tax Revenue

$PITRit = \beta_0 + \beta_1 DTCit + \beta_2 NPTit + \beta_3 PTCit + \beta_4 EMPit + \varepsilon i_t$

Where PITRit is Personal Income tax revenue of region i, year t; DTCit is Delinquent Tax Collection of region i, year t; NPTit is Number of Personal Taxpayers of region i, year t; PTCit is Personal Taxpayers Compliance of region i, year t; EMPit is Employment rate of region i, year t; ε is error term; i is consist of 6 regions of tax agency in Jakarta City; t is the year on 2010 until 2014.
The variables data of model 1 have been run a regression using Pooled Least Squares (PLS) method, the summary is shown on table 13:

Table 13: Data Regression of Model 1 by PLS Method

Variable	Coefficient	Std Error	t-Statistic	Prob
C	3,469171	0,258282	6,543892	0,0000
LN_DTC	0,493645	0,114662	4,350929	0,0004
LN_NPT	1,266666	0,444350	2,850602	0,0102
LN_PTC	0,924540	0,165686	5,580080	0,0000
LN_EMP	0,939494	0,345633	2,718181	0,0136

Note: process by Eviews 8

3.5 The result of the empirical model 1 is

Ln PITRit = 3,469171 + 0,493645 Ln DTCit + 1,266666 Ln NPTit+ 0,924540 Ln PTCit + 0,939494 Ln EMPit + εit

2. Empirical Model 2; Examining Public Infrastructural Development

PIDit = β_0 + β_6 PITRit + εit

Where PIDit is Public Infrastructure Development of region i, year t; PITRit is Personal Income tax revenue of region i, year t. ε is error term; i is consist of 6 regions of tax agency in Jakarta City; t is the year on 2010 until 2014. The variables data of model 2 have been run a regression using Pooled Least Squares (PLS) method, the summary is shown on table 14 :

Table 14: Data Regression of Model 2 by PLS Method

Variable	Coefficient	Std Error	t-Statistic	Prob
C	0,201999	0,3019581	0,066896	0,9472
LN_PITR	1,532597	0,184115	8,324138	0,0000

Note: process by Eviews 8

The result of the empirical model 2 is:

Ln PIDit = 0,201999 + 1,532597 Ln PITRit + εit

3. Empirical Model 3; Examining Educational Facilities Development

EFDit = β_0 + β_7 PITRit + εit

Where EFDit is Education Facilities Development of region i, year t; PITRit is Personal Income tax revenue of region i, year t. ε is error term; i is consist of 6 regions of tax agency in Jakarta City; t is the year on 2010 until 2014. The variables data of model 3 have been run a regression using Pooled Least Squares (PLS) method, the summary is shown on table 15 :

Table 15: Data Regression of Model 3 by PLS Method

Variable	Coefficient	Std Error	t-Statistic	Prob
C	2,475064	0,256913	9,633827	0,0000
LN_PITR	1,217212	0,223085	5,456258	0,0000

Note: process by Eviews 8

The result of the empirical model 3 is:

Ln EFDit = 2,475064 + 1,217212 Ln PITRit + εit

4. Empirical Model 4; Examining Public Healthcare Development

PHDit = β_0 + β_8 PITRit + εit

Where PHDit is Public Healthcare Development of region i, year t; PITRit is Personal Income tax revenue of region i, year t. ε is error term; i is consist of 6 regions of tax agency in Jakarta City; t is the year on 2010 until 2014. The variables data of model 4 have been run a regression using Pooled Least Squares (PLS) method, the summary is shown on table 16 :

Table 16: Data Regression of Model 4 by PLS Method

Variable	Coefficient	Std Error	t-Statistic	Prob
C	8,632606	1,8883004	4,584487	0,0001
LN_PITR	1,12542	0,127027	8,859723	0,0000

Note: process by Eviews 8

The result of the empirical model 4 is:

Ln PHDit = 8,632606 + 1,12542 Ln PITRit + εit

The results of the 4 models regression are confirmed that the independent variables positively associated with dependent variable. The findings are:

1. Delinquent Tax Collection (DTC), Number of taxpayers (NPT), Personal Taxpayer Compliance (PTC) and Employment (EMP) are statistically proven to have significant impacts on Personal Income Tax Revenue (PITR). Particularly, Number of Taxpayers impacted the level of Personal Income Tax Revenue most positively.
2. Personal Income Tax Revenue (PITR) is statistically proven to have significant impacts on Public Infrastructural Development (PID) positively.
3. Personal Income Tax Revenue (PITR) is statistically proven to have significant impacts on Educational Facilities Development (EFD) positively.
4. Personal Income Tax Revenue (PITR) is statistically proven to have significant impacts on Public Healthcare Development (PHD) positively.

4 Discussion of Findings

Based on the statistical result, these findings have been confirmed, that:

H1: Ddelinquent tax Collection on personal income tax has positively impact on personal income tax revenue, it is confirmed by statistically test and has significant relationship, and the coefficient is 0,493645 has positive relationship on Personal Income Tax Revenue, which is explained that the growth at collection of delinquent tax

will raise tax revenue due to increasing of successful on tax collection. This finding is associated with the happening in Wisconsin Department of Revenue, who is changed a policy in collection to delinquent taxpayers by lower collection threshold. That action had been highly successful at increasing collected tax revenues (Wisconsin Department of Revenue, 2007). This paper finding is in line with research by Maiga (2015), confirmed that there is a positive correlation between the collection of taxes and revenues generated by financial services of the Directorate General of Taxes at Mali. Wawire (2011), is explained that the growth of collection rate on delinquent tax will raise tax revenue; since the tax agency have been marshaled and implemented an effective tax policy.

H2: Number of personal income taxpayers has positively impact on personal income tax revenue; it is confirmed by statistically test and has significant relationship, and the coefficient is + 1,266666 has positive relationship on Personal Income Tax Revenue, which is explained that the increasing of number of personal income taxpayers will pushed tax revenue up, since the taxpayers are obliged to comply to pay tax. The basic sources of tax revenue have certain characteristic and flexibility. The certainty sources of taxes revenue imply that taxes collection from taxpayers is assured (Ofoegbu1, et.al. 2016).

H3: Personal income taxpayers compliance has positively impact on personal income tax revenue, it is confirmed by statistically test and has significant relationship, and the coefficient is + 0,924540 it means has positive relationship on Personal Income Tax Revenue, which is explained that the compliances of personal income taxpayers will fully effected to tax revenue, due to the willingness of taxepayers to fullfil their obligation timely. According to Marlik, (2010) [27], Tax compliance activities are the major role of tax agency, which is encouraged by self-assessment system. It is an effort to recall the taxpayers to perform tax payment on due date (Marlik,2010) [27]. It is evidently clear that increase in self-assessment compliance enforcement has played key role in bringing about increased Revenue Generation (Appah and Ogbonna,2014) [7].

H4 : Employment rate compliance has positively impact on personal income tax revenue, it is confirmed by statistically test and has significant relationship; the coefficient is + 0,939494 has positive relationship on Personal Income Tax Revenue, which is explained that the increasing of employment rate will triggers increasing of tax revenue, since the employment is subject to taxation party.

Most workers' earnings increase during their careers and then fall at older ages, as they reduce hours or retire. Average income tax revenue from individuals varies across age cohorts, as taxpayers' incomes and rates of labor force participation (Alison Felix and Kate Watkins, 2013)

H5: Personal income tax revenue has positively impact on public

infrastructural development, it is confirmed by statistically test and has significant relationship; the coefficient is + 1,532597, confirmed have positive relationship on Public infrastructural development, which is explained that the utilization of tax is effectively to infrastructure development.As well as Keynes (1936); Soyode and Kajola (2006) that utilization of taxation as an Instrument of Fiscal Policy believed that governments could counteract the problem of instability in the economy and to promote a steady rate of economic growth, especially increasing public sector expenditure. Worlu and Emeka (2012); Bukie and Adejumo (2013) examined the impact of Tax Revenue on the economic growth, their result explained that infrastructural development is effect of taxation system and revenue. This paper findings is supported also, by public infrastructural developments' data in Jakarta City on last 5 years.

H6: Personal income tax revenue has positively impact on public

Educational facilities development, it is confirmed by statistically test and has significant relationship; the coefficient is + 1,217212; confirmed have positive relationship on Public educational development, which is explained that the utilization of tax is effectively on development in education affairs. It means taxation is being used by government to achieve many objectives such as government expenditure, wealth redistribution, public welfare and development. The first component of a welfare measure is the effect of the tax on individual utility (A.J. Auerbach and M. Feldstein, 1985). This paper findings is supported also, by public educational developments' data in Jakarta City on last 5 years.

H7: Personal income tax revenue has positively impact on public

Healthcare facilities development, it is confirmed by statistically test and has significant relationship; the coefficient is + 1, 12542; is positively associated with public healthcare development, which is explained that taxation revenue is redistributed to public welfare; in other words tax system is a means of ensuring the redistribution of income and wealth in order to reduce poverty and promote social welfare (Afuberoh, Dennis, and Okoye Emmanuel, 2014).

5. Conclusion

Analysis on first empirical model in this paper shown that the independent variables, which are instead of delinquent tax collection of personal income tax; number of personal taxpayers; personal taxpayers compliance and employment have significant impact on personal income tax revenue in Jakarta City. The most challenge effort in raising personal tax revenue is to boost up number of taxpayers, which is proven by the model showing that number of taxpayers has highest coefficient. Then respectively are employment rate, tax payer compliance and delinquent tax collection. Comprehensively, this research finding concludes that the public welfare development is backed up by government fund; one of the sources is personal income tax. On eventually, government endeavour of generating tax is important agenda and consistently execute appropriate tax program in order to keep public welfare development sustainability.

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