

The Effectiveness of Tax Incentives Program: The Case of Indonesia

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Tax incentives provide direct benefits to taxpayers and investors to take specific actions. It is a government action that supports companies to invest and build infrastructure. This study proposes a practical way to estimate the effectiveness of tax incentives. By adopting The Luger & Bae Model, we simulate how much taxpayer's costs are reduced by tax incentives and how those reductions are likely to increase employment. That enables us to address the critical but elusive counterfactual question about the induced, rather than gross effects of tax incentives. The importance of this study is not in the elegance of its approach but its application. We demonstrate how a straightforward model can be used to inform critical decisions that thus far have had little useful input from analysts.

Key words: *Tax Incentives, Taxpayers Cost, Increase Employment.*

Introduction

In recent years, there has been a growing use of the tax system to meet social and economic objectives, specifically to advance social policy goals such as education, housing, health care, support for low-income families, and retirement security. Tax incentives fit the need of political leaders to satisfy the demand for new and expanded social programs, while appearing to keep spending and tax burdens down.

The government has just revised the rules concerning the Calculation of Taxable Income and Payment of Income Tax in the Current Year. Through Peraturan Pemerintah (PP) Number 45 The Year 2019 signed on June 26, President Joko Widodo provides tax incentives for labour-intensive companies that meet the criteria set by the government. The incentives consist of several types, ranging from a net reduction of 60 percent in a decrease in the gross income of a maximum of 300 percent. Pasal 29A of the revised regulation provides for the exemption or reduction of Corporate Income Tax to taxpayers, who make new investments for the pioneering

industry. The incentive refers to Law Number 25 The Year 2007, which is in the form of a net reduction of 60 percent of the total investment (in the way of tangible fixed assets including land used for main business activities), which is a charge within a specified period time. The pioneering industry in question is an industry that has full links, provides added value and high externalities, introduces new technologies, and has strategic importance for the national economy.

Five industrial sectors will receive labour-intensive deductible tax incentives. The incentive is expected to prevent layoffs related to recent economic turmoil. Industries that will get incentives are furniture, garments, textiles, toys, and footwear - the selection of industrial sectors that received incentives based on some criteria. Besides the number of employees, another principle is income. Among others, income also involves the number of employees. The micro ones are ten people, but some SMEs include more than that. For information, the government announced it would issue four economic policy packages to deal with the turmoil in the financial markets. One of them is by providing incentives in the form of deductible tax to labour-intensive industries. To obtain these incentives, industry players must sign a memorandum of understanding (MoU) with the Ministry of Industry to avoid layoffs.

Regulations related to labour-intensive incentives are expected to be released this week. The motive was intended to help the company's cash flow in tax payments. For the record, it is fear that an increase in the regional minimum wage (UMR) will increasingly burden companies amid the sluggish economy. With the deductible tax incentive, companies get corporate income tax relief (PPH). The shelter is expected to prevent layoffs. It's actually to avoid layoffs. Why are people afraid of layoffs? Because wages go up, right?

In this regulation, the issue of determining the minimum wage will be discussed by the Wage Council, which consists of government elements, employers' associations, and workers' or workers' associations. Furthermore, wages will also be divided based on business categories comprising criteria of capital intensiveness, labour-intensiveness, and small and medium businesses. Wage policy is also one of the government's policy packages in overcoming the slowdown in the national economy.

In this article, we describe a way to estimate the effectiveness of the deductible tax incentive. By adopting The Luger & Bae Model, we simulate how much taxpayer's costs are reduced by tax incentives and how those reductions are likely to increase employment. That enables us to address the critical but elusive counterfactual question about the induced rather than gross effects of tax incentives. The importance of this study is not in the elegance of its approach but its application. We demonstrate how a straightforward model can inform critical decisions that have had little useful input from analysts.

The article has four additional sections. In the next, we look at an overview of Indonesia's tax incentive program. Then, we look at five different approaches employed for analysis of tax incentives and propose a new analytic approach. We present results from a simulation of how the program is likely to affect resource costs and demands for factors in Indonesia. Then, we look at the effects of the program on net (or induced) employment growth using Indonesia's 2019 tax incentive data. In the last section, we generalize the simulation and empirical findings and discuss limitations to our approach.

Literature Review

Labour-Intensive Deductible Tax Incentive

Taxpayers who make new investments in a pioneering industry, which does not get the facilities referred to in Article 31A of the Income Tax Act, can give a facility an exemption or reduction of corporate income tax as related to in Article 18 paragraph 5 of Law Number 25 The Year 2007 concerning Capital investment. The pioneering industry in question is an industry that has full links, provides added value and high externalities, introduces new technologies, and has strategic value for the national economy.

Another vital point is contained in Article 29A and B. In Article 29A, it is mention that domestic corporate taxpayers who carry out new investment or business expansion in labour-intensive industries and have not received tax facilities can give income tax facilities. The incentive is in the form of a reduction in net income of 60 percent of the total investment in the way of tangible fixed assets including, land used for main business activities, which charge within a specific period time, while article 29B states, domestic corporate taxpayers who carry out work practices, apprenticeship, or learning in the context of fostering and developing specific competency-based human resources can give a reduction in gross income at a maximum of 200 percent of the total costs incurred for work practice activities, apprenticeship, and/or learning.

This decision also reaches domestic corporate taxpayers who carry out individual research and development activities in Indonesia. They will get a reduction in the gross income of a maximum of 300 percent of the total costs incurred for personal research and development activities in Indonesia, which charge within a specific period of time.

Methodology

The research done to date on state tax incentives has employed five different approaches: surveys, case studies, econometric analyses, general equilibrium analyses, and simulations (Fisher & Peters, 1998). Each method has advantages and disadvantages:

- The survey method helps identify the relative importance of various factors for location, but it is inexact. Because survey samples typically include only those businesses receiving tax incentives, the method is subject to selection bias. That approach is also subject to response bias because respondents want more tax incentives regardless how those incentives directly alter their behaviour (Buss, 2001; Fisher & Peters, 1998; Goss & Phillips, 1999).
- Case studies provide an in-depth understanding of one or a few tax incentive programs, but the findings from those studies are difficult to generalize.
- The econometric method is the most popular in tax incentive studies. It allows direct measurement of the tax incentives' effect on location decision and economic growth. However, those studies often fail to control for other important factors such as the quality of public services (Buss, 2001; Wasylenko, 1997). The method's most serious disadvantage is that firm-level empirical data is not generally available. Hence, the studies use macrolevel data instead (e.g. Goss & Phillips, 1999, 2001). That can lead to an overestimation of program effects because it removes the atomistic behavioural dimension from the analysis.
- General equilibrium models can deal with the complex structural interactions among economic variables, but they require large amounts of data, sophisticated modelling, and extensive computation (Fisher & Peters, 1998). Also, the multi equation, interlinked nature of the model makes it highly sensitive to assumptions about parameter values. The complexity of the approach makes it costly to tailor to each state's separate tax system.
- Simulations have been utilized mostly to compare tax burdens among jurisdictions rather than to estimate the induced benefits of the tax incentive programs. That approach also can be complicated but requires less data (Fisher & Peters, 1998; Goss & Phillips, 1999; Peters & Fisher, 2002). Our approach falls within this category.

No one approach is ideal. Moreover, as Bartik (1991) points out, if a tax incentive program is small, its effect on local economic growth will be hard to isolate even though the program may be useful because uncontrolled local factors and characteristics can dominate program effects.

Results and Findings

Simulating the Induces Effect of Tax Incentives

We propose a method to estimate the effect of tax incentives that obviates the need for actual micro-level (or firm-level) data. We calculate the user cost of factors with and without tax incentives and use those user costs to project the effect of tax incentives on demand for factors. This method falls under the simulation rubric but is a different application from what currently appears in the literature. This approach is advantageous in understanding how a firm would change its behaviour regarding investment and employment in response to the availability of tax incentives in Indonesia (i.e., the gross effect). In this section, we discuss this approach using language accessible to as broad an audience as possible.

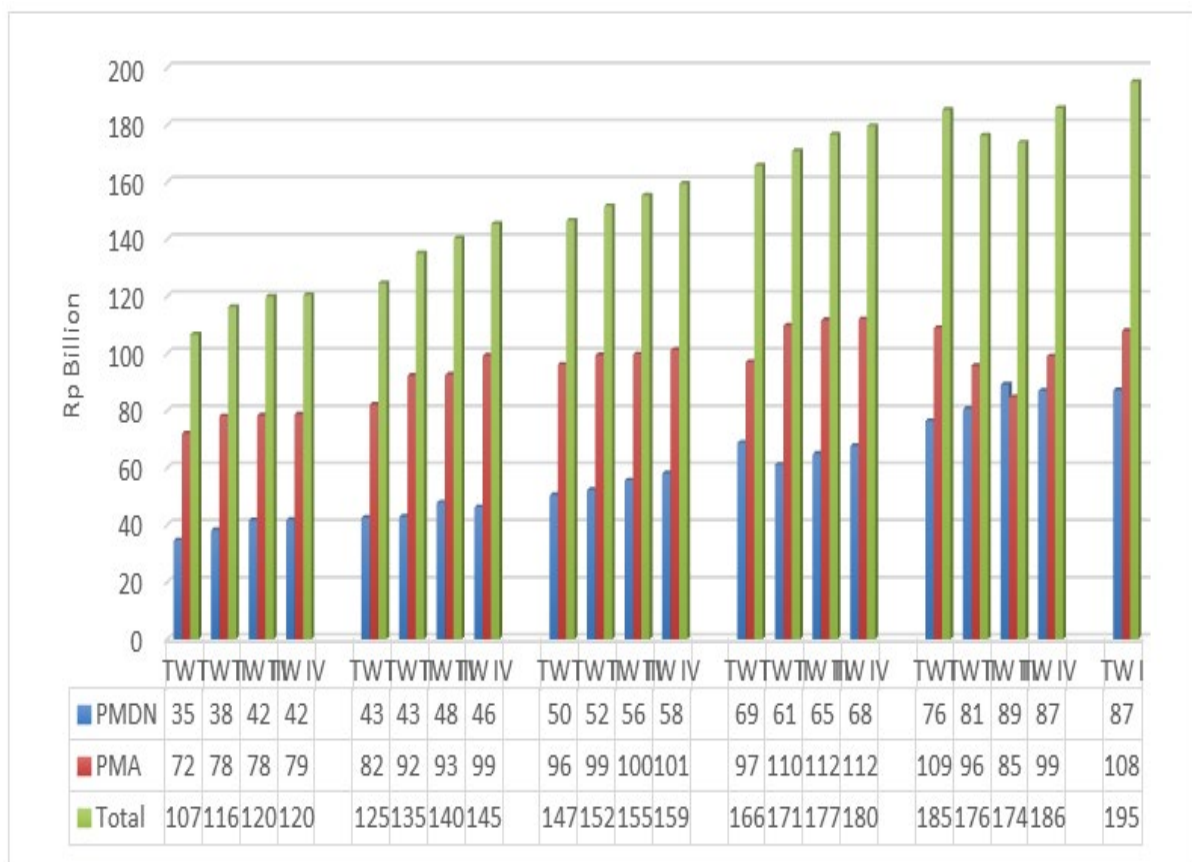
The user cost of a factor is the “implicit rental price” of the factor per unit (Jorgenson, 1963). It represents the real costs that businesses face for the use of resources, including actual outlays, depreciation (or obsolescence in the case of R&D), taxes and tax credits, and the time value of money. By taking into account the characteristics of Indonesia’s tax incentive program (explained in the previous section), we can derive the mathematical expression for the user cost of each factor, following the approach pioneered by Coen (1968), Hall & Jorgenson (1967), and Jorgenson (1963). To see how reduced user costs owing to tax credits can lead to an increase in expected demand for the factor, we can also calculate the desired level of that factor.

Simulation models require assumptions about key behavioural and technical parameters. For this exercise, we have tried to make realistic assumptions about the discount rate, corporate tax rate, rates of depreciation, output elasticities, and firms’ typical amount of revenue. Of course, the results in any simulation model are sensitive to the assumptions made. To account for that, we employ sensitivity analysis, using a range for the most critical assumed values, including employment expenses, investments for M&E, CAO, and R&D, worker-training expenses, and the elasticity of labour. Our model also assumes that the full value of tax credits is realized immediately, even though there are some limitations and carryovers in all types of tax credits imposed by the program.

Reduced user costs and increased demand for factors are important intermediate outcomes. Ultimately, legislators are interested in the employment effects of tax incentives. Increased demand for factors requires additional new employment, for example, to operate purchased M&E, manage buildings and structures, and conduct R&D. Legislators also are interested in how their incentives lead to more plant start-ups and inward relocations. In this article, we do not estimate those outcomes.

For example, company A has a gross income of IDR 10 billion and incurs vocational education costs of IDR 1 billion. In the calculation scheme provided by the PP, the deductible amount is the real cost of the vocational maximum of Rp2 billion or 200%. For R&D, the same amount, with a maximum reduction of 300%, and the amount of gross income of a company that freezes R&D activities, is gross income - (costs incurred × 300%). This can also be understood as Rp. 10 billion minus the cost of Rp. 1 billion multiplied by 300% or Rp. 3 billion. Thus, the gross income of a company that conducts R&D after deducting expenses incremented by 300% is Rp7 billion.

Graph 1. Growth of Investment Realization from 2014 to March 2019



Source: BPS

The Investment Coordinating Board (BKPM) published investment realization data for Quarter I (January-March period) in 2019, with total investment reaching Rp195.1 trillion, up 5.3% over the same period in 2018, which amounted to Rp185.3 trillion. The investment value during the First Quarter of 2019 for Domestic Investment (PMDN) was IDR87.2 trillion, and Foreign Investment (PMA) was IDR107.9 trillion. During the first quarter of 2019, there were 235,401 Indonesian workers absorbed. The realized investment value of the first quarter reached 24.6% of the 2019 investment target of Rp792.0 trillion. The achievement of this investment

realization is significant enough to ensure that economic growth of 5.3% in 2019 can be realized.

The Employment Effect

To analyse the number of workers in the labour-intensive industrial sector, the common measurement model uses the following formula as a measure of growth (Dajan, 1995: 252):

$$L0 = \frac{Lt - Lt - 1}{Lt - 1} \times 100 \%$$

Which:

L0 = large growth rate of labour-intensive labour sector industry

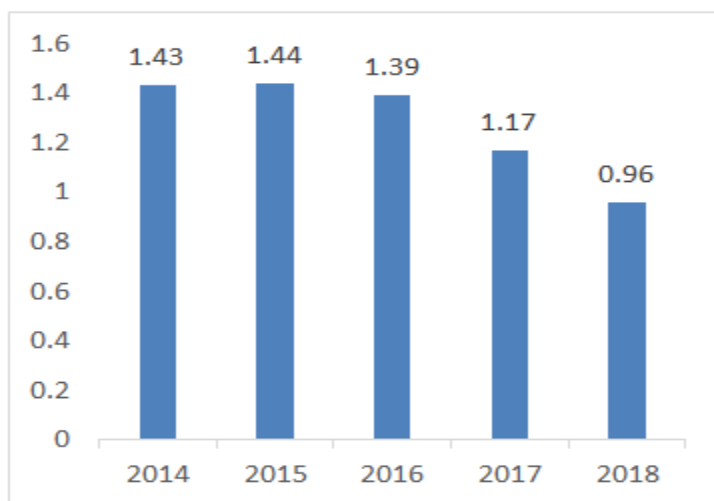
Lt = number of labour-intensive industrial sector workers in year t

Lt-1 = number of labour-intensive labour-intensive industrial sectors in year t-1

Compared to 2018, PMDN investment growth in the first quarter of 2019 increased by 14.1%, from Rp76.4 trillion in the first quarter of 2018 to Rp87.2 trillion. Meanwhile, FDI investment in the first quarter of 2019 fell 0.9% compared to the first quarter of 2018, which amounted to Rp108.9 trillion to Rp107.9 trillion. Referring to the data in the first quarter of 2019, there was a positive trend towards the growth of foreign direct investment, which in the first quarter of 2018 was -11.6% to -0.9% in the first quarter of 2019.

However, employment from investment decreased from 2014 to 2018. It can be seen in Graph 2. below.

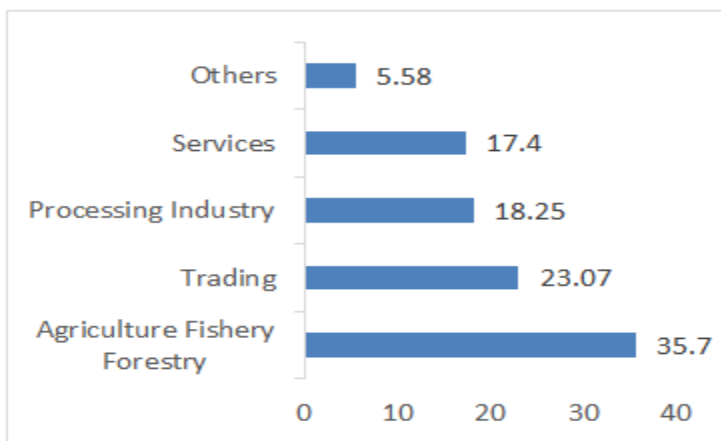
Graph 2. Absorption of labour from investment



Source: BPS

The government must pay close attention to the declining trend of employment from investment activities, which has taken place in the last three years. Because of the shrinking ability to add labour, it will weaken people's income and purchasing power. As a result, the growth of the consumer sector will be hampered so that it could potentially hinder the rate of economic growth because the consumption sector has so far been the main motor of Indonesia's economic growth with a contribution of more than 50 percent. The decline in employment had confirmed that Indonesia's economic growth was lacking in quality. The main sectors absorbing labour, such as agriculture and the manufacturing industry, actually decreased their investment portion.

Graph 3. Employment by sector by August 2018



Source: BPS

In 2018, the share of investment in the manufacturing industry sector fell to 30.8 percent from 39.7 percent in 2017. Meanwhile, in the service sector, which absorbs relatively fewer workers, the portion increased to 50.9 percent from 42.3 percent.

The Central Statistics Agency (BPS) also noted the growing trend of new workers is slowing. In August 2018, the growth of the working population only reached 2.47 percent or a slight increase from the previous year, which was 2.2 percent. Whereas in 2016, new job creation could grow 3.12 percent. This fact raises concerns that the downward trend in employment will continue until this year. As a result, the target of employing two million people this year could be missed.



Conclusion

The Importance of This Work for Policy, and Its Limitations

We draw several conclusions based on our simulations of Indonesia's tax incentive program. As a general matter, the use of tax credits lowers recipient firms' real resource costs and increases their demand for factors in ways that make sense given the structure of the legislation. Our approach is finer-grained than that of others, particularly in its incorporation of specific features of the legislation. Our modelling of the channels through which tax incentives operate allows us to quantify induced effects with more detail and provides a better means to explore the effects of policy changes. Referring to the simulation results above, tax incentives for the industry should focus on the real sector industries, namely agriculture, forestry, and fisheries, where the three sectors absorb a lot of labour.



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