

Role of Tax Incentives in supporting Digital TV Transition in Indonesia

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ABSTRACT

It is a digital TV era nowadays, where several countries have been successfully move from analogue transmission to digital transmission. Indonesia also have a clear roadmap of its digital TV transition and plan to switch-off all analogue transmission in 2018. However, it is important to analyze what kind of support could be provided by government to ensure this transition program. Tax incentives are one support that could be provided by government.

An investment-related incentive has been available, where 30% of incentives could be expensed equally in 6-years period. However, according to this research, incentives as tax credit (as provided by Canada and United States) increase the benefit of more than 20 times. Furthermore, it is suggested that government could consider to provide a labour tax credit, R&D tax credit and hotel tax exemption. For incentives directly attributable to users, VAT exemption will provide a 9% benefit for future users of Indonesian digital TV.

INTRODUCTION

Recent development of television (TV) transmission technology has reached a stage of digital transmission. With obvious major advantages compare to analogue transmission, it is a desirable policy choice by governments. Several countries have successfully make a transition from analogue to digital TV. Similar with other countries, Indonesia also have a clear roadmap of digital TV transition which according to its roadmap there will be analogue switch-off in 2018.

However, considering the high cost of this transmission project, it is important for government to provide incentives to support this program. One kind of incentives that could be considered to be given is tax incentives, which according to previous research have a significant positive effect on growth (although in some conditions, some other researchers also concluded that there is a negative correlation between tax incentives and growth).

As there are six main group of stakeholders in digital TV transition, focus on this research will be analyzing the alternative tax incentives to be given for content producers and equipment manufacturers. Although all six stakeholders are important, the main driver of success transition is the users. Users could considered a change to digital TV is they found a various and interesting program provided by digital TV, that's why tax incentives for content producers is important. Furthermore, digital TV require a new equipment to be bought by user. Of course, it is important for manufacturers to produce an affordable equipment. Tax incentives will contribute to a lower equipment price. This research will provide a list for Indonesian government to be considered to support digital TV transition in Indonesia based on comparison with tax incentives have been provided by other country which have been successfully make a transition to digital TV.

LITERATURE REVIEW

Digital TV: Introduction, Transition and Policies

Development of digital technology for TV broadcasting reached a stage where it was clearly superior to analogue in the early 1990s. Ever since showing its superiority to analogue, it is understood that the transition from analogue to digital transmission is inevitable (Brown, 2002). Due to significant advantages of digital transmission compare to analogue, making its adoption a desirable policy choice by governments (Colapinto and Papandrea, 2007).

Digital TV provides an improved picture and sound quality with the reduction or elimination of 'snow' and 'ghosting', and offers the option of high-resolution images. This picture and sound improvement allow viewers to feel a sense of reality through high-resolution images, wide screen ratios and giving the viewers a feeling of being connected with it (Brown, 2002; Lee and Lee, 2006). Furthermore, energy consumption of digital transmission is also lower compare to analogue, as it is required less power.

Similar with analogue TV, digital TV can be distributed by terrestrial, satellite or cable. Satellite and cable distribution systems have generally been converted to digital before terrestrial. One reason for the later start of terrestrial is the terrestrial digital broadcasting standard was defined later than satellite and cable (Brown, 2002;

European Commission, 1999). Digital broadcasting starts in the United States in 1990s; started with pay-TV digital satellite service in 1994 and followed by digital terrestrial TV broadcast in 1998. UK have also started the digital terrestrial TV broadcast in 1998. Most major countries start their digital terrestrial TV broadcast afterwards, i.e.: Sweden (1999), Spain (2000), Australia and Finland (2001), Italy (2003), etc.

As mentioned previously, the digital TV transition is a desirable policy choice by governments because of its significant advantages. However, it is also a crucial public policy issue as it has major social, political and economic impact. Government need to determine the timing of digital switching, arrangements for switching-off analogue transmission and ensuring an affordable digital reception equipment (Digital TV transition requires viewers to purchase new reception equipment in order to receive the digital transmission). While digital cable and satellite TV is driven by commercial forces, digital terrestrial TV driven by government policy.

There are two types of digital TV: Standard Definition TV (SDTV) and High Definition TV (HDTV). SDTV provides a similar picture with analogue TV in a wide screen format. While HDTV provides an improved picture in high resolution, provides cinema quality viewing, surround sound and closed captioning. It also provides different camera angles, access to websites, text-based information, etc. (Flew, 2002).

TV anywhere is also about cultural memories, industrial processes, programming, economics and regulation (Jacka and Turnbull, 2006). Their statement indicate that there are a lot of issues need to be seriously considered in the digital TV transition. More importantly, how the government issue regulation to support the transition process. According to Weerakkody (2007), there are six main group of stakeholders in the digital TV transition. They are:

1. The users/viewers;
2. Broadcasters (some of broadcasters also have major interests in Pay TV which has also adopted digital);
3. TV content producers;
4. Government;
5. Telecommunications organizations; and
6. Equipment manufacturers and dealers.

Of the six groups, the users are the least powerful as they are not sufficiently organized, equipped or resourced to be able to lobby the government or other groups. They are also the least benefited group from the digital TV transition as the digital TV transition do not change the programming or channels much. Most of the programming or channels are similar with the analogue transmission. However, the success rate of other groups will depend on them, as without the users purchasing new equipment to receive the digital transmission, the transition program will be in complete failure. The failure of digital TV transition will have a negative impact to other stakeholders. Therefore, it is important that government pay a serious attention to the users in order to have a successful transition. Some would argue that new technologies (in this case, digital TV transition) fail or are delayed simply because of a lack of consumer demand or poor marketing and/or regulatory policies (Weerakkody and Tremblay, 2003).

The first problem is, if the users are satisfied with the analogue TV, then they will need additional incentives in terms of costs and performance to be persuaded to make the transition to digital TV (Hawkins et al., 1994; Manross and Rice, 1986; Rogers, 1995). According to Weerakkody (2007), there are various opinions of Australian digital TV users on why they do not adopt digital TV. The selected response of Australian user are: they already happy with the existing system (analogue TV), too few incentives (the cost of new equipment needed is not worth it) and it is too expensive to purchase the new equipment. Furthermore, Weerakkody also conduct the survey to Australian users on what should be done to encourage digital TV adoption. She has received various response on that question, and one of major response received is the needs to provide tax and other incentives to manufacturers and equipment importers.

Weerakkody and Tremblay (2003) apply cross-impact matrix analysis for digital TV adoption in Australia and United States. In Australia, they found out that consumer incentives, communication policy, marketing of technology, cost of technology and industry incentives need to be improved in order to support digital TV adoption. While in the United States, consumer incentives is the most important area to be closely examined. It could be concluded that government could issue a regulation to give incentives to the mentioned-above stakeholders. As in this case, a tax incentives could be issued for consumer and also for industry. By giving income tax incentives to the industry, it will reduce cost of technology and boost marketing of technology. This way, government regulation (tax incentives) could support digital TV transition/digital TV adoption.

As communication policy is also important according to Weerakkody and Tremblay (2003), there are several communication policy implemented by government in order to support digital TV transition. For example, Australia implemented the following policy (Papandrea, 2009):

1. Banned new entry into the commercial TV industry until the specified date;
2. Mandating high definition TV (HDTV) as the format for digital transmissions –as a comparison, United States not mandating HDTV but only allowing HDTV as digital transmissions format–;

3. Set a minimum quota of broadcast of HD programs;
4. All available spectrums are allocated to current operators;
5. Banned commercial operators from using that spectrum for multi-channelling;
6. Created a very limiting conditions on datacasting; and
7. Set a minimum eight-year period for the simulcast of TV programs in both analogue and digital transmission.

Furthermore, Hazlett (2001) raise the “Negroponte Switch” to accelerate digital TV transition in the United States. The idea of Negroponte is digital TV transition via subscription service (DTTVSS). The DTTVSS is not a new thing for viewers, as previously millions of consumers are already abandoning free OTA (over the air) TV for fee-based services. The major benefit of DTTVSS implementation is avoided new reception equipment costs. The evidence of high cost of digital TV set is similar with Weerakkody and Tremblay’s research (2003) where they point out the need of closer examination of consumer incentives, industry incentives and cost of technology.

Digital TV Transition in Indonesia

Indonesia has started the process of digital TV transition back in 2010. According to the digital TV roadmap by Indonesian Ministry of Communications and Informatics, it is expected that the transition process will be concluded in 2017. Between 2010 to 2017, there will be a simulcast period where analogue and digital transmission will be broadcasted parallelly. Analogue transmission will be switched-off in 2018.

One of the main reason of this transition is the regulation of International Telecommunication Union (ITU) set June 17, 2015 as the deadline for transition from analogue transmission to digital. It is expected that the usage of the latest digital technology (DVB-T2) will provide an improved picture and sound, and also new programs available for users.

However, the success rate of digital TV transition will depend on whether the users are willing to purchase new reception equipment or not. The high cost of new reception equipment will remains a big question mark for digital TV transition in Indonesia. Government (Indonesian Ministry of Communications and Informatics together with Indonesian Ministry of Finance) are analyzing the possibility of new reception equipment subsidy for the poor. As for the new reception equipment, Indonesian Communications and Informatics (2011) require at least 20% domestic components and gradually increase to a minimum 50% domestic components in five years period.

Tax Incentives

There are arguments over the effects of government tax incentives on economic growth, especially in developing countries (Engen and Skinner, 1992). Negative correlation between government tax incentives and growth was found by Grier and Tullock (1989), Kormendi and Meguire (1985) and Landau (1983, 1986). However, in contrary, there are other research that conclude government tax incentives are a productive investment input where there is a strong and significant positive effect on output growth (Glomm and Ravikumar, 1991 and Ram, 1986). According to Kneller et al. (1999), distortionary taxation reduce growth while non-distortionary taxation does not. Distortionary taxation in their research are taxation on income and profit, social security contributions, taxation on payroll and manpower and taxation on property. For non-distortionary taxation is taxation on domestic goods and services.

Conventional wisdom of tax incentives are that tax incentives are both bad in theory and practice (Easson and Zolt, 2002). Tax incentives are bad in theory because they distort investment decision, and bad in practice because are often ineffective, inefficient and prone to abuse and corruption. However, almost all countries use tax incentives, which in developing countries are used to encourage domestic industries and attract foreign investment.

Tax incentives are special exclusions, exemptions, or deductions that provide special credits, preferential tax rates or deferral of tax liability. Zee et al. (2002) define tax incentives as a tools to reduce effective tax burden for a specific project. As tax incentives have a purpose to attract investment (both domestic and foreign), tax incentives could not make up the serious deficiencies in design of the tax regime, investment environment, political stability, legal and regulatory framework or inadequate infrastructures (Clark, 2000; Morisset and Pirnia, 2000). Easson and Zolt (2002) also underlined that costs of tax incentives may exceed the benefit from new investment.

Most commonly employed tax incentives are: reduced corporate income tax rates, tax holidays, investment credit or allowances, tax credit, accelerated depreciation, favorable deduction rules for certain type of expenditures, deduction or credits for reinvested profits, reduced rates of withholding tax on remittances to the home country, personal income tax or social security reductions for executives and employees, sales tax or VAT

reductions, reduced import taxes and custom duties, property tax reductions and creation of special zones (Easson and Zolt, 2002).

Tax Incentives related to Digital TV Transition

In Brazil, there are several tax incentives to support the digital TV industry (Duran, 2013). Brazilian corporations that join Program of Support to the Technological Development of Equipments for the Television Industry will be benefited by the reduction to zero tax rate of: PIS taxes (tax charged to all legal entities with normal rate 0.65% to 1.65% from gross revenues), Cofins taxes (tax for social security financing charged to corporations who collect taxes based on added value. Normal rate of this tax is 3% or 7.6%), IPI taxes (import tax, with normal rate ranging from 0% to 300%) and CIDE taxes (tax on royalty payments, technology transfers, technology supply and technical assistance with normal tax rate of 10%).

Canada also provide tax incentives to support the digital TV transition. If Brazil give industry incentives, Canada focus on TV content producers incentives. There are various tax incentives provided to digital-related producers in Canada, with selected incentives are as follows (PWC, 2013):

1. British Columbia Interactive Digital Media Tax Credit: 17.5% of qualified BC labour directly attributed to interactive digital media activities.
2. British Columbia Investment Capital Program Tax Credit: a 30% of investment (non-refundable credit for corporation as investor, refundable credit for individuals as investor with a maximum \$60,000 credit per taxation year).
3. Manitoba Interactive Digital Media Tax Credit: 40% of eligible labour for prototyping and product development and up to \$100,000 of eligible marketing and distribution expenses with a maximum \$500,000 credit per project.
4. Scientific Research and Experimental Development (SR&ED): joint federal and provincial research and development tax credit program that compliments various provincial tax incentives. SR&ED expenditures may qualify for investment tax credits, cash refunds or both.

In the United States, there are also tax incentives to support digital TV transition. Almost similar with Canada, United States also focus on incentives to content producers. Motion picture industry in Louisiana can receive a 30 percent, fully transferable tax credit for production expenditures made within Louisiana and additional credit of 5 percent for labour costs related to hired Louisiana residents. Digital interactive media industry receive a 25 percent transferable for production expenditures and an additional 10 percent for resident labour (Baxter, 2011). This tax incentives brought a \$24.6 million economic impact in three years period (2008-2010) in cost of \$ 4.3 million tax incentives provided.

Other states in the United States also provide the similar tax incentives to support digital content producers according to Baxter (2011). New Mexico provide a 25 percent film production tax rebate up to \$15 million projects, no hotel tax for stays over 30 days; and no state sales tax. In Georgia there are following tax incentives: 20 percent investment tax credit for projects with a minimum expenditure of \$500,000 with an additional 10% investment tax credit bonus if Georgia logo is included and exemptions of sales tax. In Michigan, a refundable tax credits up to 42 percent for expenditures and 25 percent credit for new investment are available as tax incentives. Pennsylvania provides a 25 percent tax credit for projects that spend 60 percent of its budget in the state and no hotel tax on stays over 30 days. While North Carolina offers four tax incentives: a 25 percent tax credit not to exceed \$20 million, expansion of what qualifies as expenditures (i.e.: fringe benefits), no hotel tax on stays over 90 days and tax credit of 25 percent of amount invested by qualified businesses up to \$50,000.

Furthermore, in relation to digital TV transition, there must be a substantial attention for R&D tax incentives as it is understood that R&D is essential in order to produce a new technology in an effective and efficient way. Tax incentives have a potential to encourage R&D investment by lowering the user cost of R&D as a response to high levels of risk associated with this investment (Lokshin and Mohnen, 2012; Russo, 2004; Tasse, 2007). Research show that R&D tax incentives produce a substantial increases in R&D investment (Hall and Van Reenen, 2000; Lokshin and Mohnen, 2012; Russo, 2004). Billings (2003) also found that average growth rate for industry with tax incentives are more than four times compare to industry without tax incentives.

The R&D concept used by OECD is an activity designed to increase knowledge or to devise new applications of knowledge which includes basic research and applied research. R&D expenditures includes salaries or wages, materials cost, machinery and equipment lease and R&D contract. Most countries allow tax incentives (tax credit or immediate expensing) for R&D capital expenditures which accounted about 10-13% of total R&D expenditures (Hall and Van Reenen, 2000). Most common form of R&D tax incentives is tax credit with various rate. Incremental tax credit provided by France and United States with rate of 50% and 20% respectively. While a flat tax credit of 20% is available in Canada, and 10%-15% in Japan.

RESEARCH METHODOLOGY

As outlined by Graham and Smith (1998) and Anwar and Mulyadi (2012), simulation method is the most common method used in analyzing income tax incentives. This research employ the following simulation method to analyze the income tax incentives options available.

$$TIB_{user} = \frac{(NPP_0 - DTEP_{ii})}{NPP_0} \times 100\%$$

$$NPP_0 = DTEP_0 + VOI$$

$$TIB_{corp} = \frac{(\Delta CB_0 - \Delta CB_{ii})}{\Delta CB_0} \times 100\%$$

$$\Delta CB_0 = \sum_{i=1}^n IB_{t,i} - \sum_{i=1}^n IC_{t,i}$$

$$\Delta CB_{ii} = \sum_{i=1}^n IB_{ii,t,i} - \sum_{i=1}^n IC_{ii,t,i}$$

Where:

- TIB_{user} = tax incentives benefit for user;
- DTEP_{ii} = digital TV equipment price with tax incentives;
- NPP₀ = net purchase price without tax incentives;
- DTEP₀ = digital TV equipment price without tax incentives;
- VOI = VAT Out – VAT In;
- TIB_{corp} = tax incentives benefit for content producers and manufacturers;
- ΔCB₀ = incremental cost benefit difference without tax incentives;
- ΔCB_{ii} = incremental cost benefit difference with tax incentives;
- IB_{t,i} = incremental benefit without tax incentives at t-time with proper i-interest rate;
- IC_{t,i} = incremental cost without tax incentives at t-time with proper i-interest rate.
- IB_{ii,t,i} = incremental benefit with tax incentives at t-time with proper i-interest rate;
- IC_{ii,t,i} = incremental cost with tax incentives at t-time with proper i-interest rate.

RESULT AND DISCUSSION

Tax incentives available in Indonesia

Tax incentives provided by Indonesian government are regulated in Chapter 2 of Government Regulation 52/2011. These income incentives will be given in case taxpayer realize at least 80% of their investment plan:

1. Reduction of net income. The amount of reduction is 30% of investment, which could be expensed equally throughout 6 years (5% each year).
2. Accelerated depreciation and amortization. The useful life of Group I, II, III and IV is 2, 4, 8 and 10 years consecutively. While permanent building has 10 years useful life and 5 years of non-permanent building.

Type of Assets	Depreciation Rate (Straight Line) With Incentives	Depreciation Rate (Straight Line) No Incentives	Depreciation Rate (Double Declining) With Incentives	Depreciation Rate (Double Declining) No Incentives
Non Building – Group I	50%	25%	100%	50%
Non Building – Group II	25%	12,5%	50%	25%
Non Building – Group III	12,5%	6,25%	25%	12,5%
Non Building – Group IV	10%	5%	20%	10%
Permanent Building	10%	5%	-	-
Non Permanent Building	20%	10%	-	-

Table 1. Summary of Indonesian depreciation rate

3. Special rate of income tax on dividend payable to foreign taxpayer. The tax rate is 10% or lower rate available based on applied tax treaties.
4. Extended loss carry forward, more than 5 years (normal period) and maximum 10 years.

Television industry which produce 3D TV, LCD TV, LED TV and OLED TV is included as eligible industry based on the above regulation. Although not specifically mentioned digital TV industry, it is the only related industry with digital TV transition. Television industry could receive the above tax incentives if the minimum investment is IDR 100 billion with a minimum 100 employees for new investment or minimum 50 employees for an expansion.

Analysis of tax incentives available for user

The only tax incentives that could be directly attributable to the user is the exemption of sales tax (GST/VAT). Current VAT rate in Indonesia is 10%. For taxable enterprise, VAT do not have direct impact as Indonesia use a credit system where VAT In and VAT Out will be offsetting each other. However, for non-taxable enterprise VAT means an additional 10% to its purchase price. There are regulations exempting items from VAT, however there is no specific regulation exempting digital reception equipment is exempt from VAT.

Let x be the digital TV equipment price (DTEP) from manufacturers and assumption there is no VAT Out, simulation of tax incentives benefit for users are available in Table 2. Without tax incentives (exemption of VAT), the price paid will be 10% higher than DTEP. However, taxable enterprise could net-off the VAT In from purchase of digital TV equipment with their VAT Out. In this simulation, an assumption of compensation/restitution of VAT amount is used. With this compensation/restitution, the net purchase price (NPP) for taxable enterprise is not affected whether there is tax incentives or not. But for non-taxable enterprise, the application of tax incentives (VAT exemption for sales of digital TV equipment) will result in a 9 percent tax incentives benefit for user. Considering the demographic of Indonesia, where most of the future buyer of digital TV equipment is not a taxable enterprise, VAT exemption could be considered as one option to support digital TV transition in Indonesia.

Users	DTEP	DTEP _{ti}	DTEP ₀	VOI	NPP ₀	TIB _{user}
Taxable enterprise	x	x	$1.1x$	$(0.1x)$	x	-
Non-taxable enterprise	x	x	$1.1x$	-	$1.1x$	9.09%

Table 2. Simulation of tax incentives benefit for users

Analysis of tax incentives available for content producers and manufacturers

This research will compare income tax incentives available for content producers and manufacturers available in Indonesia, Canada and United States. The exclusion of Brazilian income tax incentives due to the difference of tax regime with these three countries. However, it is important to note that Brazil also provide tax incentives to support digital TV transition as have been discussed in previous section. Summary of tax incentives in Indonesia, Canada and United States are available in Table 3.

Tax incentives	Indonesia	Canada	United States
Investment related	30% investment expensed equally in 6 years (5% each year)	30% (British Columbia) as tax credit	20% - 30% (vary) as tax credit
Labour tax credit	NA	17.5% - 40%	5% - 10%
R&D tax credit	NA	20%	20%
Hotel tax exemption	NA	NA	Yes

Table 3. Summary of tax incentives for content producers and manufacturers

Tax incentives available in Indonesia, Canada and United States could be grouped to four: investment related, labour tax credit, R&D tax credit and hotel tax exemption with the latter serve as tax incentives for content producers. From table 3, it could be seen that Indonesia only provide one tax incentives compare to Canada (three) and United States (five).

Indonesia provide tax incentives in investment as an expense, that must be expensed equally in 6 years. While in Canada and United States, it is a tax credit. In Canada the amount of tax credit is 30%, while in United States vary from 20% to 30%. Let x be the net income (prior to tax incentives), y be the investment, and assumption of a 8% increase of net income each year (taken from Indonesia's 2013 inflation rate), a 7.5% interest rate (Indonesia central bank rate) and 25% of income tax rate. Simulation of tax incentives benefit in three countries are available in Table 4.

Based on table 4, it can be seen that investment-related tax incentives as a tax credit has a comparably higher impact than expensed the investment in 6 years period. From that comparison, the lowest tax credit available in the United States (20%) give benefit more than 20 times compare to 30% investment expense in Indonesia. Furthermore, if compare to 30% rate provided by Canada (and also United States), the benefit is more than 30 times.

Country	ΔCB_0	ΔCB_{ti}	TIB _{corp}
Indonesia	1.52 x	1.52 x - 0.06 y	1.97%
Canada	0.25 x	0.25 x - 0.3 y	60%
United States (20%)	0.25 x	0.25 x - 0.2 y	40%

Table 4. Simulation of tax incentives benefit for content producers and manufacturers

Moreover, as Indonesia do not provide four latter incentives, no comparison is provided. Labour tax credit is a tax credit (that directly reduce the amount of tax to be paid) according to percentage of labour cost. The amount of labour tax credit is vary, ranging from 5% to 40% (in Canada and United States). By providing this incentives, labour-intensive industry (TV manufacturers) could hire more employees. More employees means higher economics of scale, and also higher tax credit available. This way, manufacturers could sell its product with cheaper price (due to its higher economics of scale and additional advantage of labour tax credit) and in the same time also create a new jobs to the unemployed.

Both Canada and United States provide a 20% R&D tax credit. There are two natures of R&D in Canada and United States. First, it is an expense that will reduce corporate net income. Second, it is also a tax credit that will directly reduce the amount of tax to be paid. R&D is very important in a technology industry. As an additional note, currently Indonesia do not allow R&D activity outside Indonesia as an expense. This could be counter-productive as sometimes research and development need to be conducted outside Indonesia, following the latest technology development. Therefore, it is important for government to consider R&D tax credit and also allowing R&D expenditure outside Indonesia as a deductible expenses.

Hotel tax exemption is an attempt by state/province to attract activity in its area. In Indonesia, the highest rate of hotel tax is 10%. This hotel tax exemption is important for TV content producers. With this hotel tax exemption, TV content producers will enjoy a lower expense which in turn create a higher income. For the state/province, hotel tax exemption will be a promotion for its region.

CONCLUSION

Tax incentives are important to support economic growth. As in this case, tax incentives also important to support government policy to make a transition from analogue TV to digital TV. There have been tax incentives provided in Indonesia, although not specifically related to the digital TV industry. Based on comparison with other countries that have been successfully make the transition, there are several recommendations that could be considered by Indonesian government.

First, in order to reduce the digital TV equipment price, it is important for government to exempt digital TV equipment as VAT object. This way, digital TV equipment price will be reduced 10% and will give a 9% tax incentives benefit for a non-taxable enterprise user.

Second, it is important for government to reconsider the type of investment-related tax incentives. Currently, investment could be expensed equally over the period of six years. While based on comparison, Canada and United States provide this investment incentives as a tax credit. The incentives benefit of tax credit is more than 20 times higher compare to the investment expense.

It is also recommended for province to exempt hotel tax for a specific length of stay for content producers. The exemption of hotel tax will reduce the province income, but in the same time also serve as promotion for the region because of the activity conducted by content producers.

As a final recommendation, Indonesia do not have labour tax credit and R&D tax credit. But it is important to consider these tax credit, as labour tax credit will increase manufacturers' economics of scale and also provide a new jobs for unemployed. Furthermore, digital TV industry also require an extensive R&D. Therefore, the introduction of R&D tax credit and also allowance of R&D activity conducted outside Indonesia as deductible expense could be considered as well.

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