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Gaming Industry

2016

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Methodology

This reports aims to highlight the gaming sector in Indonesia; to provide a general overview of the market, its business potential, as well as the existing challenges.

In the preparation of this report, EIBN drew on a variety of sources and methods that are briefly explained here. General information on the gaming sector was retrieved from publicly available sources, including articles from local newspapers, online news portals, as well as the Ministry of Communications and Information. However, as the gaming sector is just establishing itself in Indonesia, data is not yet abundant.

The primary source for this report was the publically available data and output from associations such as the Indonesian Game Association (AGI). Additional gaps in this information were filled using various sources, detailed above. If, for any reason, the latest official data has not yet been made available to the public, the latest data on hand was used. This report has been developed using data available in July 2016 and any data included is specifically mentioned in the report.

Executive Summary

The Indonesian gaming industry has so far had high growth value and continues to develop each year. According to Netherlands-based research group, Newzoo, Indonesia already accounts for 18% of the mobile game market in Southeast Asia. With a compound annual growth rate of 37.3% in the period 2013-2017, Indonesia will soon be generating USD 465 million in mobile game revenues by 2017.

The gaming industry is characterized by the shifting from PC-based games to mobile games, as many developers and publishers are changing their strategy to accommodate the mobile segment for a faster return on investment, as most spending is derived from mobile-based gaming. Consumers are shifting their preferences to smartphones and tablets as their favorite gadget on which to play games.

Aware of its huge potential, Creative Economy Agency (Bekraf), a government organization tasked with developing Indonesia's creative industry, has prioritized the gaming industry as one of its sectors for development. Recently, Bekraf has been in cooperation with Telkom, the largest Indonesian telecoms operator, to launch "Bekup"; a startup incubator to accelerate the creation of an ecosystem of local games developers in Indonesia[1].

The dynamic of the Indonesian gaming sector has enticed International game developers and publishers to expand their businesses in the country. They are targeting Indonesia as their market and at the same time, their production base, to export to ASEAN countries and the International market.

Game piracy is still rampant and a serious threat for the gaming industry, especially for console and PC game-based. In 2015, BSA (Business Software Alliance) reported that, on average, 85% of software installed on computers in Indonesia is illegal[2].

Internet providers are obliged to provide better Internet bandwidth. Broadband Internet connection is a key driver of growth in the video game industry, as it facilitates distribution of content, engagement with customers, multiplayer gameplay and provision of crucial software updates to improve gameplay.

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[1]http://www.antaranews.com/berita/565022/bekraf-gandeng-telkom-mikti-jalankan-program-bekup
[2]http://globalstudy.bsa.org/2016/downloads/studies/BSA_GSS_US.pdf#page=5

1. The Indonesian Video Gaming Industry in the ASEAN context

1.1. Overview of the ASEAN Gaming Market

ASEAN video gaming accounts for 4% of global consumption and ASEAN represents the fastest growing market, with annual growth of 30% and an estimated value of USD 1 billion in 2014. This growth is forecasted to reach USD 2.2 billion by the year of 2017[3].

Figure 1: South East Asia Country Comparison

	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Population (in mm)	252.8	30.2	100.1	5.5	62.2	92.5
Online Population (in mm)	52.6	21.4	42.0	4.1	21.1	44.7
% of Population Online	*20.8%*	*70.9%*	*42.0%*	*74.5%*	*33.9%*	*48.3%*
Gamers (in mm)	34.0	14.3	27.2	2.8	14.7	31.4
Gamers as % of Total Population	*64.6%*	*66.8%*	*64.8%*	*68.3%*	*69.7%*	*70.2%*
Paying Gamers (in mm)	19.9	6.6	11	1.1	8.3	12.3
Paying Gamers as % of Total Gamers	*58.5%*	*46.2%*	*40.4%*	*39.3%*	*56.5%*	*39.2%*
Annual Spend/Payer	$9.12	$32.61	$8.76	$189.30	$27.76	$12.67
2014 Revenues (Excl. tax in $mm)	181.1	214.2	96.8	201.6	230.3	155.8
CAGR 2013-2017E	37.3%	27.0%	36.5%	14.4%	30.9%	27.2%
Bank Account Penetration	36.0%	81.0%	28.0%	96.3%	78.0%	30.8%
Credit Card Penetration	1.6%	20.2%	3.2%	35.4%	5.5%	1.9%
Smartphone Penetration	24.0%	35.0%	15.0%	85.0%	37.7%	36.0%
Major Telecom Operators	Telkomsel, Indosat, XL	Celcom, Maxis Digi, U-Mobile	Globe Smart	Singtel, M1 Starhub	AIS, dtac Truemove	Viettel, MobiFone VinaFone

Source: Newzoo 2015 Report: Introduction to the Southeast Asian Games Market

The ASEAN video game market is mainly mobile-based. The six biggest countries for mobile gaming are; Thailand, Malaysia, Singapore, Indonesia, the Philippines, and Vietnam. Thailand is the top mobile gaming market in the region, generating USD 230.3 million in revenue. Indonesia has the largest number of gamers, with over 34 million, while Singapore remains the biggest gaming spender, with USD 189.3 spent per gamer annually.

Most game companies in ASEAN are focused on game development. However, there are some companies working on other game activities, such as user acquisition, advertising in games, digital marketing, mobile game application marketing, mobile networking and others.

Figure 2: Gaming Business Activities in ASEAN

Video Gaming Business...

Game Development	Game Publishing	Both	Others
61%	9%	23%	7%
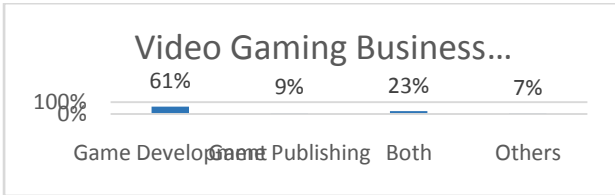
Source: South East Asia Game Industry Initiative report, 2015

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[3] Southeast Asia Game Industry Initiative, Malaysia's Multimedia Development Corporation (MDeC), March 2015, http://www.mscmalaysia.my/sites/default/files/pdf/booklets_brochures/GameIndustry_MDeC(FULL).pdf

According to a study conducted by Malaysia's Multimedia Development Corporation (MDeC), most game companies are start-ups and small studios, with between two and ten employees. Several global game companies such as Electronic Arts, LucasFilm, Koei, Gevo and Ubisoft in Singapore, Codemasters in Malaysia, Square Enix and Gameloft in Indonesia, Activision, Bioware, Bungie and Eidosin in Philippines and Gameloft in Vietnam have chosen to setup studios to expand their business in the region, by recruiting skilled talent at lower pay rates[4]. Additionally, in order to serve the region as their global production base, regional offices are also sometimes used for distribution in Southeast Asia.

Most game companies are focused on mobile games development, especially casual games (a simple video game that is easy to play) as it requires less production time, at an average rate of three to six months. These kind of games do not require many developer resources and therefore allow companies to generate revenue faster. For instance, in Indonesia, console and PC game development requires on average IDR 100 million (€ 7000), whereas mobile online games require just IDR 10 million (€ 700)[5]. These games can also be integrated into Facebook, iTunes and Google Play, an Android apps store to further increase revenue.

For game studios wanting to develop an IP (Intellectual property) game, development will take from 6 to 9 months, which will be able to generate higher revenue. It usually requires an average of 50 developers to produce an original IP game in the region.

Many game studios in the region are being subcontracted by big game studios or companies, as a way to maintain their cash flows and generate faster revenues, whilst at the same pursuing their ultimate goal of produce an IP game.

Figure 3: Game Company Projects in ASEAN
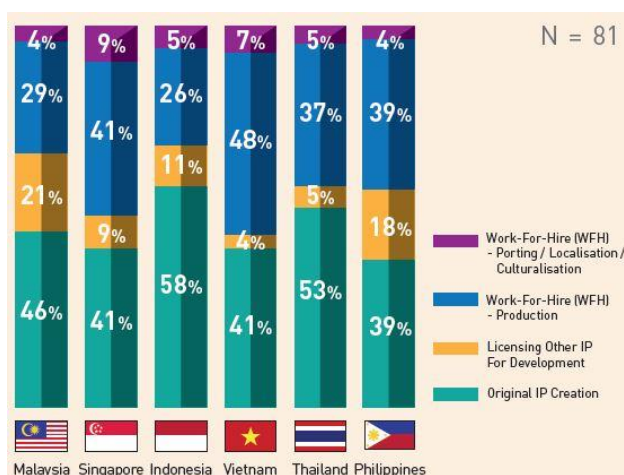
Source: South East Asia Game Industry Initiative report, 2015

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[4]Routledge Handbook of New Media in Asia, 2016

[5]Video Game around the World, 2016

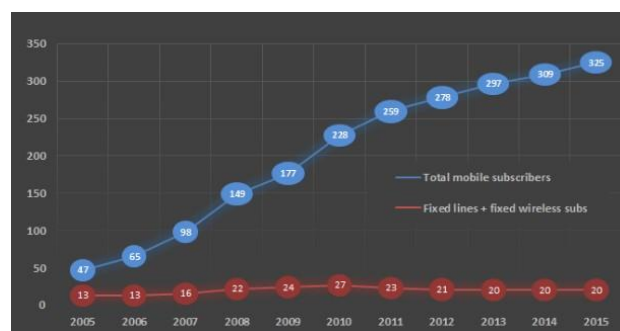## 1.2. Indonesia Has Great Potential for the Gaming Industry

The Indonesian gaming market has traditionally been focused on free to play, or cheap experiences that do not require major financial investment by players. This is due to the high price of gaming equipment and software. Previously, many Indonesian's would go to Internet cafés to carry out their online activities.

Video gaming growth has been boosted by the increasing popularity of smartphone apps and Indonesia is set to become the second largest mobile gaming market in Southeast Asia by 2017[6]. Smartphones also enable anyone to play games of any kind, anywhere they want, thus reducing the need to go to internet cafes. The domination of smartphones also represents a major threat to hand-held consoles, sales of which have reduced since 2012[7].

According to EuroMonitor, online and mobile games are still dominating the video games market in Indonesia, due to the affordability of mobile gadgets such as smartphones and tablets. By 2018, smartphones will represent around 40% of all handsets in Indonesia. Cheaper mobile internet services from mobile operators and more reliable mobile network connections are also contributing to the robust development of mobile games, which is set to continue in the years to come.

Indonesia has a population of over 250 million and mobile penetration has already reaching its saturation phase, with a penetration rate of 140% of its total population. Mobile broadband connections are improving, making Indonesia 4th in the world's top ten 3G markets[8], this is further intensified with current 4G (fourth generation network) deployment offering faster and more reliable connections.

Figure 4: Number of mobile vs fixed subscriptions in Indonesia

Source : Redwing Asia

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[6]http://jakartaglobe.beritasatu.com/business/indonesia-gears-456m-gaming-industry-2017/
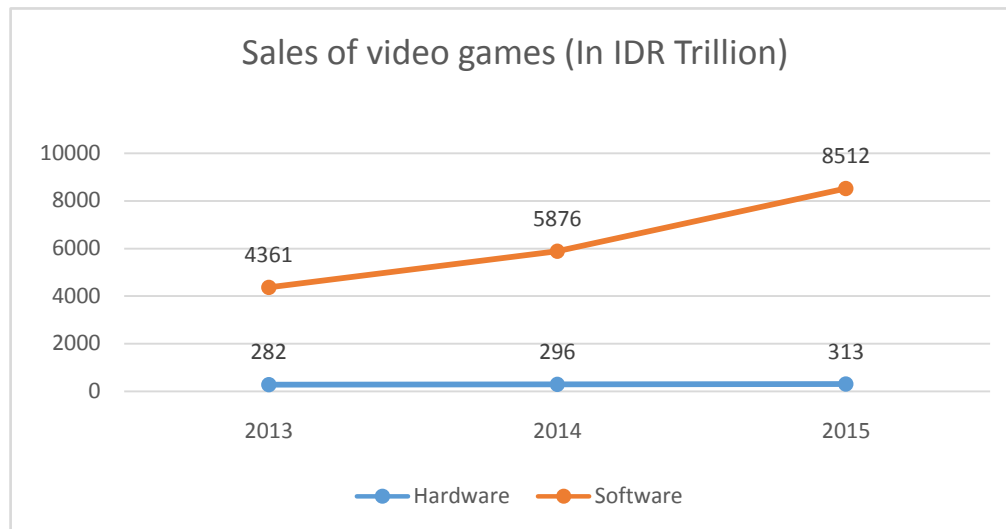[7]Euromonitor International, Video Games in Indonesia 2016
[8] https://mobiforge.com/research-analysis/global-mobile-statistics-2014-part-a-mobile-subscribers-handset-market-share-mobile-operators

2. Recent Development

In 2015, the overall sales of Indonesian retail games are IDR 8.5 trillion (€ 588 million) both for hardware (hand-held and static consoles, gaming accessories; toys-to-life, AR/VR accessories) and software (PC/online, mobile games and in-Game purchases), sales accounted for IDR 8.2 trillion (€ 567 million) and IDR 313 billion (€ 11 million) respectively.

Figure 5: Sales of Video Games in Indonesia

Source : Video Games in Indonesia, Euromonitor International, June 2016

The video gaming market is growth at 40-50% annually with the online and mobile games as the biggest contributor while the sales of video games hardware are stagnant from year to year. Indonesia is far above the average annual regional growth, estimated at 28.8%[9] for the period 2013 to 2017 including console, online and mobile games[10].

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[9]http://asia.nikkei.com/Business/Trends/Gaming-soars-in-Southeast-Asia-and-local-developers-follow
[10]Euromonitor International, Video Games in Indonesia June 2016

2.1 Consoles

All consoles in Indonesia were still importedmostly from Japan and USA with unit prices being driven solely by the IDR vs USD exchange rate. Due to low purchasing power for many Indonesias, the affordability of mobile gadgets (tablets and smartphones) and better platforms for social media games such as Happy Farm and Mafia Wars , the sales of games consoles have plummeted in recent years.

Figure 6: Sales of Console Games in Indonesia
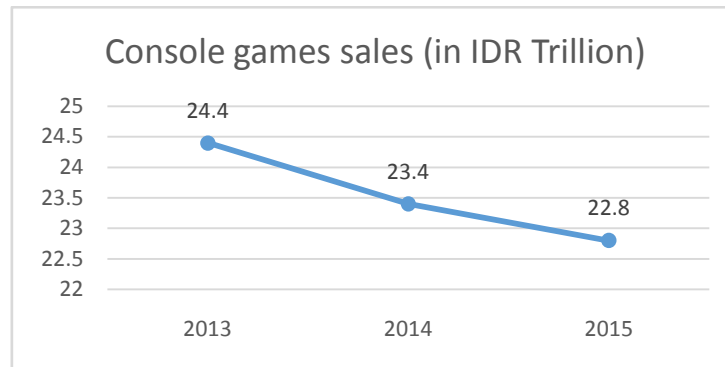
Source : Video Games in Indonesia, EuroMonitor International June 2016

There are no local manufacturers for game console hardware in Indonesia. However, the sotware development for this segment is widely populated by Indonesian developers. The first PS4 game software, "Fallen Legion" was created by an Indonesian developer and has paved the way for global expansion[11].

Figure 7: Market Share of Hardware
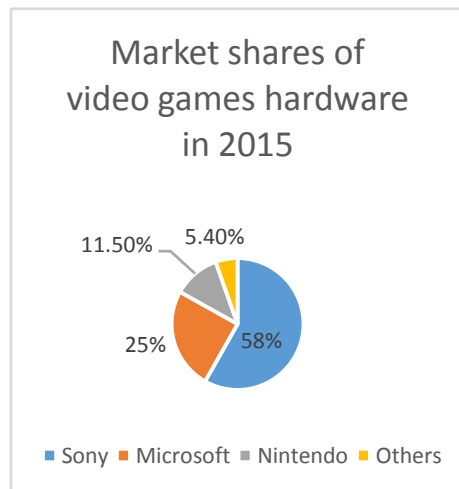
PT. Sony Indonesia. Sony holds the top position in video games consoles in Indonesia and offers a wide range of products through its Playstation brand. The hand-held video game consoles Playstation Portable and Playstation Vista are amongst the products that Sony Indonesia has commercialized, as well as a wide range of hardware accessories and software related to its console game products.

PT. Microsoft Indonesia. Holds second position with its Xbox static video games console.

Nintendo. The third competitor for both companies is Nintendo, with its hand-held video game[12].

Source : Video Games in Indonesia, EuroMonitor International June 2016

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[11]http://www.pharaboot.com/2016/02/game-baru-ps4-2016-pertama-dari.html
[12]Euromonitor International, Video Games in Indonesia, June 2016

Figure 8: Income per HouseHold vs Static Video Game Consoles per household

2014 Annual Disposable Income per Household vs
Static Video Game Consoles Spend per Household
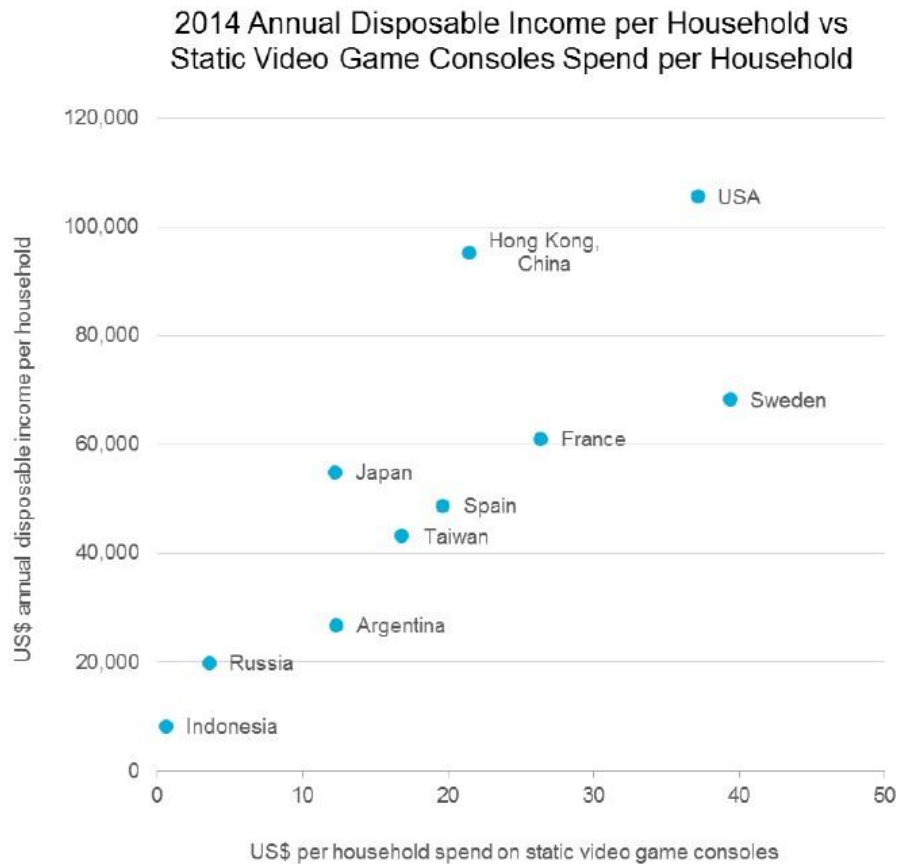
With an average annual disposable income of USD 3000 per household, Indonesia remains one of countries with the lowest level of expenditure on video games consoles in relation to the purchasing power of its population. In 2014, on average each Indonesian household spent just USD 1-2 on static video game consoles[13].

2.2 Online Games

Online and mobile games continued to lead growth in 2015 of overall growth of all gaming market.Growth was fuelled mostly by the presence of many free-to-play/freemium games which are readily available both in mobile stores and offline. As a result, the popularity of online and mobile gamescontinues to limit games growth for both computer and console games.

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[13]Video Games in Indonesia, EuroMonitor International June 2016

Figure 9: Online and Mobile Games Revenues

Online and Mobile Games (in IDR trillion)
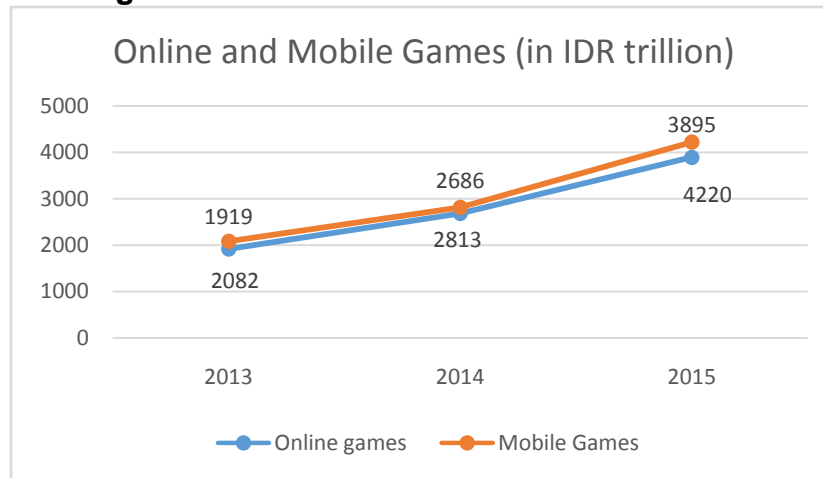
Source : Video Games in Indonesia, EuroMonitor International, June 2016

Unlike game hardware, gaming software is dominated by free-to-play online games, with local companies leading the way. Lyto Datarindo Fortuna and Megaxus Infotech both recorded sales shares of 12% in 2015. Both companies are publishing some of the most popular free-to-play online games in the country such as Ragnarök Online, Rising Force, AyoDance, and Valve's Counter-Strike. Blockbuster/AAA games from popular publishers such as Ubisoft and Electronic Arts continue to have issues with piracy, resulting in low sales in 2015[14].

2.3 Mobile Games

Google's Android and Apple's iOS are the two major platforms for mobile games in Indonesia. There are also web-based platforms playing through social media (Facebook) as a way for Indonesians to take part in social game interaction with their friends.

Figure 9: iOS and Android Game Composition
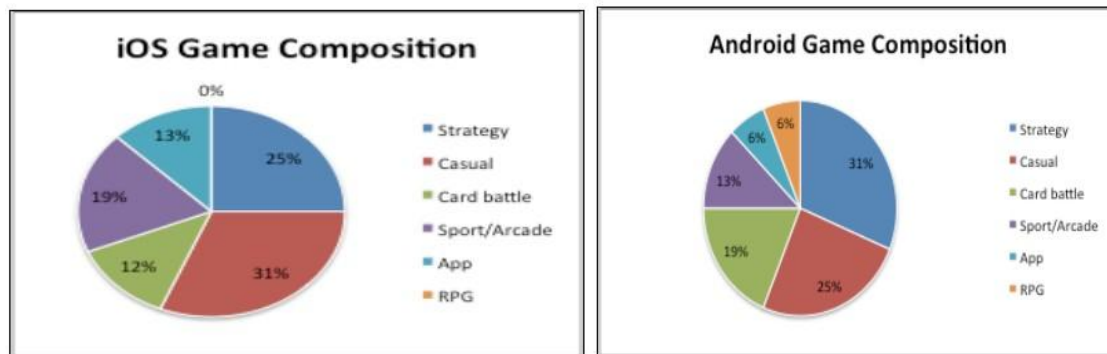
Source : Worldwide App Annie Index for Apps, June 2016

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[14]Video Games in Indonesia, EuroMonitor International June 2016

According to theNewzoo Report, 49% of gamers in Indonesia spent their money on mobile games. Strategy games are the most popular category, with similar percentages of game spenders and non-game spenders distributed across all of Indonesia's top five mobile genres.

Figure 9: iOS and Android Game Composition
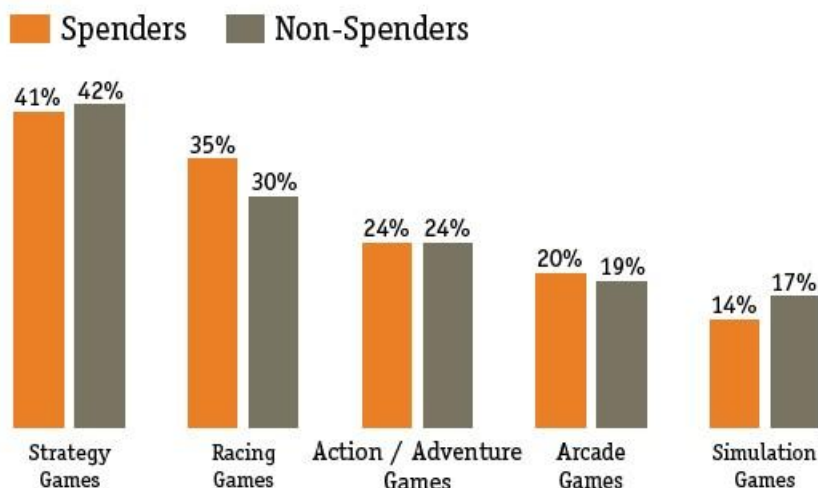
Source : South East Asia Games Market, Newzoo, 2015

3. Market Structure and Business Opportunities in the Gaming Industry

3.1. Game Developers

The gaming industry is still dominated by foreign game companies[15] and there are relatively few local game developers in Indonesia. According to the Indonesian Games Association (AGI), it is estimated that that there are currently around 1,000 local game developers active in Indonesia, which accounts for less than 2% of the online games that are played in Indonesia[16]. The other 98% are dominated by foreign games companies. The French company Gameloft SA is the leading player in mobile games, while other local games developers such as Agate Studio, Altermyth Studio, Toge Production, Tinker Game, Touch Ten Game, are increasing their share of the potential market in Indonesia. The latter mostly dominate in online PC-based games.

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[15]http://www.indonesia-investments.com/news/todays-headlines/indonesia-s-online-gaming-industry-dominated-by-foreign-games/item6422

[16]http://www.indonesia-investments.com/news/todays-headlines/indonesia-s-online-gaming-industry-dominated-by-foreign-games/item6422

Figure 10: Market share of all video games company (console, online and mobile platform)

	Company name	Game	Market share 2015
1.	Lyto Datarindo Fortuna PT	Lyto	12.1%
2.	Megaxus Infotech PT	Megaxus	11.7%
3.	Gameloft SA	Asphalt	4.9%
4.	Rovio Entertainment Ltd	Angry Birds	3.9%
5.	Epic Games Inc	Infinite Blades	2.8%
6.	Subatomic Studios LLC	Field Runners	2.3%
7.	Walt Disney Co	Where is my water?	1.5%
8.	Supercell	Clash of Clans	1.1%
9.	Halfbrick Studios	Fruit Ninja	0.5%
10.	King Digital Entertainment	Candy Crush Naga	0.2%

Source : Video Games in Indonesia, EuroMonitor International June 2016

In order to accelerate the development of a gaming in Indonesia, many mobile operators are launching incubation programs. In 2013, Indonesia's largest mobile operator Telkomsel launched a program called *TemanDev*[17] or "Friend of Developers" to help local developers commercilize their products both nationally and internationally. XL Axiata, the second largest mobile operator in Indonesia launched a similar program, *Gudang Aplikasi*, in 2015 to challenge the dominance of *TemanDev*[18]. In 2015, XL Axiata's app store had no fewer than 22,000 applications available for download.[19]

Meanwhile, Indosat has also jumped on the bandwagon by launching i-Aplikazone as a way to capitalize on the gaming market potential in Indonesia. It has claimed itself as the largest Android application store run by a telecommunication operator in Indonesia, with more than 10,000 applications created by local developers for Indosat customers[20].

Foreign game companies and publishers of video games software are expected to maintain their position in the coming years, as they are not yet expected to be significantly challenged by local companiees. However, local game developers are expected to improve their development efforts as they continue to be supported by the government and associations, and have the potential to

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[17]https://www.techinasia.com/indonesias-biggest-telco-strengthens-commitment-local-developers
[18]https://www.techinasia.com/xl-axiata-launches-android-app-store
[19]http://www.thejakartapost.com/news/2015/05/21/telco-operators-join-fray-app-stores-target-heavy-data-users.html
[20]https://indosatooredoo.com/en/investor-relation/about-indosat/corporate-profile/press-release/indosat-luncurkan-i-aplikazone

grow significantly in the coming years. Bekraf has recently lauched a program called *Bekup*[21] (BEKRAF for Startup) in collaboration with PT. Telekomunikasi Indonesia (Telkom), an Indonesian incumbent operator, with the aim of creating a succeful digital game company.

In 2009, Telkom launched an incubator program for start-ups, called Indigo Creative Nation. Since 2014, Telkom has created a Digital Innovation Lounge (Dilo): a creative camp for start-ups to share and incubate their innovative projects. Telkom provides integrated digital access for sharing knowledge, education and meet ups. Dilo is currently available in 14 major cities in Indonesia.

Telkom is very ambitious and wants to replicate the success of Silicon Valley incubation programs to contribute to the Indonesian digital ecosystem. Telkom appeals to all creative start-ups or new companies to propose their innovative ideas, growing and entering global market with Telkom Group through its international representative offices in 10 countries.

The Indonesian Game Association (AGI) was created in 2013 with the mission to bridge all stakeholders in the gaming industry; developers, publishers, platforms, event organization and payment gateways. The association also aims to benchmark against other advanced gaming events in other Asian countries, such as the Tokyo Game Show, China Joy, E3 etc. The other principal mission is to bridge the government and all gaming industry players to find the best solution to actual and future issues in the sector.

Recently, AGI has actively defended the gaming industry's interest by recently supporting the government draft of the Indonesia Game Rating System (IGRS), which regulates gaming consumption for children under 18 years of age, according to their age level[22]. The law has been in public consultation and is expected to be enacted this year.

3.2. In-Game Purchases

In the video games software sector, both in-game purchases and games sales are growing, with in-game purchases increasing most rapidly. In correlation with the recovery of purchasing power, almost half of all consumers are prepared to pay for in-game items, despite the low penetration of electronic payment methods. However, the payment method will vary depending on the gaming platform and its convenience. For example, most consumers use their phone credit to pay for mobile games, and credit cards to pay for online games. Other payment methods such as game vouchers, like Steam Voucher cards, are also available.

Steam Voucher has been recentlly become more accessible to more people, allowing the gamers to fill up their vouchers at minimarkets and convenience stores such as Alfamart and 7eleven. This is a breakthrough way to reduce the barriers for in-game purchases, allowing a larger number of gamers to opt for this services.

In 2015, Telkomsel launched an in-games purchase method via carrier billing for both prepaid and postpaid subscriptions. The operator charges 12% for every item purchased via this method.

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[21]http://www.antaranews.com/berita/565022/bekraf-gandeng-telkom-mikti-jalankan-program-bekup
[22]http://www.duniaku.net/2016/06/06/sistem-rating-game-indonesia-diresmikan-bulan-ini/

Meanwhile Indosat has launched a similar service through its carrier billing method, allowing all of its subscribers to purchase digital content, including in-game purchases. The company charges 10% for every item purchased.

The second largest bank in Indonesia, Bank Mandiri, has allowed its customers to purchase social gaming items on Facebook through E-Cash, an electronic online payment system[23].

3.3. Payment methods

There are certain ways to purchase games in Indonesia. However, the payment method will vary depending on the gaming platform and its convenience. For example, most consumers use their phone credit to pay for mobile games and credit cards to pay for online games. There are several payment methods for game transactions in Indonesia :

Credit cards. This payment method has relatively low adoption, as only 2% of adults reported having a credit card in 2015, up just slightly from 1.6% in 2014. This low adoption rate is due to strict rules imposed by Bank Indonesia, whereby only customers with relatively high incomes are eligible for a credit card[24].

Game Vouchers. This method is the most frequently used payment method for gaming in Indonesia. The largest payment gateway is UniPin, as it accepts various payment methods including online banking and credit cards, mobile payments, and bank transfers. Users can also buy physical vouchers at grocery retailers Indomaret and AlfaMart. Gamers can use Unipin credits to make purchases in popular games like Audition Ayo Dance and Counter Strike Online. Gamers can also top up their Steam Wallet using Unipin credits. Other principal game voucher payment systems are Indomog, MOL, AyoPay, Gudang Voucher[25].

Direct Carrier Billing. This payment method deducts from the customers's mobile phone creditor charges via monthly phone billing**.** All Indonesian mobile operators offer Direct Carrier billing as a way to buy games or make in-game purchases. However, this method is considered more expensive compared to other methods of payment, as most companies charge around 10-12% of purchased items.

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[23]http://www.beritasatu.com/bank-dan-pembiayaan/329769-mandiri-gandeng-boku-garap-transaksi-game-online-di-facebook.html

[24]http://www.bi.go.id/en/ruang-media/siaran-pers/Pages/sp_166914.aspx

[25]https://www.techinasia.com/5-top-payment-solutions-online-games-indonesia

3.4 Challenges

Piracy is still a serious problem in Indonesia. Although games are becoming cheaper and more affordable, the piracy rate is still high throughout the country, especially for computer and console games. The government is trying to take action through law enforcement of intellectual property rights and some video game retailers are also taking action by providing a greater variety of original games. However, their efforts have not yet been successful at reducing the piracy rate. As consumers cannot afford the high price of original games, they continue to resort to pirated games. One can purchase a pirated game with less than USD 2, with the same graphics and experiences as the original version.

For the manufacturers of video games, the issue of piracy still remains very challenging. Pirated video games are easily found in shopping areas targeting lower to middle income consumers. Legitimate video games are available through a limited number of retail outlets, their stocks are relatively modest and pricing tends to be relatively expensive. These are among the major factors that confine the sales of original video games in Indonesia.

Internet connection infrastructure also poses a crucial challenge for game development, especially for high resolution and bandwidth game consumption, as the Indonesian gaming industry is gradually shifting to mobile gaming.

Nevertheless, video games are also prone to threats. For example, to ensure a successful shift to digital gaming over the forecast period, better internet connectivity is crucial. However, the adoption rate of high-speed internet connections in urban areas has been slow compared to other ASEAN countries, and even worse in rural areas. Computer and console gaming is also very reliant on the IDR to USD exchange rate, with its current unstable nature set to keep prices high, thus limiting sales growth. Mobile games will also be threatened if smartphone penetration slows down.

Skilfull developers are in very high demand, but this demand can't be fulfilled by local resources. There are only a few universities offering gaming majors such as Institut Teknologi Bandung (ITB), BINUS University, Institut Teknologi Sepuluh November/ITS (Master Degree), Universitas Multimedia Nusantara (UMN), and Politeknik Elektronika Negeri Surabaya (PENS).[26]

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[26]http://nubigames.com/article/opini/5-perguruan-tinggi-di-indonesia-yang-memiliki-jurusan-game/

4. Conclusion

In conclusion, the Indonesian gaming industry has strong potential for growth as Indonesia will be experiencing an exponential growth and expansion. In 2017, the country will become the second largest mobile gaming market in ASEAN region. Therefore, the Indonesian gaming industry developmentwill be a mobile market-drivenwith the activities not only related to gaming development but other game activities such as advertising in games, digital marketing, mobile game application marketing, mobile payment platformetc.

With a huge mobile phone subscribers, the increasing adoption of smartphone and the latest mobile broadband network Infrastructure launched by mobile operators, the gaming Industry in Indonesia will leverage into unprecedented development in the next future.The European gaming companies are encouraged to take advantage of the strong development of gaming sector by entering the market as beingwitnessed by their European counterparts in Indonesia.

Moreover, it is worth to be highlighted that several challenges persisted. The issues on how to monetize the mobile gaming market in a country where traditionally been focused on free to play without initial investment by players, the rampant game piracies that needs to be addressed.

Relevant Contacts

Associations and Related Institutions

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Email:	info@agi.or.id
Website:	www.agi.or.id

Badan Ekonomi Kreatif (Bekraf)
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	Jakarta Pusat 10320 Indonesia
Tel:	(+6221)
Fax:	(+6221)
Contact Person:	Ms. Endah Susanti, Head of Public Relation
Email:	endah.susanti@bekraf.id
Website:	www.bekraf.go.id/

Directorate General of ICT Application (Aptika) - Ministry of Communication and Information

Building:	Gedung DEPKOMINFO
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Email:	humas@mail.kominfo.go.id
Website:	aptika.kominfo.go.id/

Abbreviations

3G	Third Generation Network
4G	Fourth Generation Network
AGI	Indonesian Game Association (Asosiasi Game Indonesia)
ASEAN	Association of South East Asian Nations
BEKRAF	Badan Ekonomi Kreatif (Creative Economy Agency)
BINUS	Bina Nusantara University
BSA	Business Software Alliance
DILO	Digital Innovation Lounge
IGRS	Indonesia Game Rating System
ITB	Institut Teknologi Bandung
MDEC	Malaysia Multimedia Development Corporation)
PENS	Politeknik Elektronika Negeri Surabaya
TELKOM	Telekomunikasi Indonesia
UMN	Universitas Multimedia Nusantara

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