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DIGITAL TRANSFORMATION OF THE INSURANCE INDUSTRY: THE POTENTIAL OF INSURANCE TECHNOLOGY (INSURTECH) IN INDONESIA

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Abstract

The insurance industry cannot be separated from the demands to keep up with the times and carry out digital transformation of its business. Digital transformation in the insurance industry has driven the emergence of insurance technology (InsurTech). The development of insuretech in Indonesia is quite fast and will continue to grow with the emergence of various digital insurance service providers such as PasarPolis, E-Bancassurance, Fuse and so on. Insurtech can be utilized throughout the lifecycle of insurance products including pre-contract, product development, post-contract, back office operations and in risk control. The digitalization of technology in Indonesia has driven the development of InsurTech's business. Key players in this industry include PasarPolis, Qoala and Simas Insurtech. InsurTech's high potential in Indonesia is not only supported by the development of InsurTech start-ups, but also due to low insurance penetration. The challenges that arise for InsurTech are mainly related to the current regulations that do not yet specifically discuss InsurTech.

Keywords: *Digital Transformation, Insurance, InsurTech*

1. INTRODUCTION

Technological developments have encouraged people to enter the digitalization era which has an impact on customer behavior, processing methods, information management, and so on. This transformation to the digital age has reorganized the economy and business environment of organizations and consequently changed the way people work (Apdillah et al., 2022). The impact of digitalization is then considered as the fourth wave of industrialization, which will dramatically change the business world. Therefore, the sustainability of a business will depend on its ability to handle the new challenges that come with digitalization (Kramaric, 2020).

Digital transformation can be interpreted as a change in the way business works, roles, and offerings caused by the adoption of digital technology within an organization, or in the organization's operating environment (Parviainen et al., 2017). Digital transformation will then encourage businesses to use various digital technologies in their business processes. This then provides various benefits to the business. Digital technology complements and/or enriches existing products and services and enables the construction of entirely new business models (Legner et al., 2017). Therefore, businesses need to invest in building an information technology architecture with the aim of being able to take advantage of the tools and services offered by digitization (Şerban, 2017).

The insurance industry cannot be separated from the demands to keep up with the times and carry out digital transformation of its business. In Indonesia itself, the demand for life insurance protection continues to increase which can be seen from the trend of increasing total gross insurance premiums and insurance density (Saputra & Wicaksono,

2020). This is partly driven by digitalization in the insurance sector which has led to increased insurance penetration in Indonesia. Research conducted by the Swiss Re Institute shows that 76% of Indonesians are interested in buying digital insurance products, especially those provided through fintech and e-commerce (Amalia, 2021).

Digital transformation in the insurance industry has driven the emergence of insurance technology (InsurTech). InsurTech is a digital technology or platform that provides insurance aggregators, digital agents, online claims features, and marketplaces; and integrate these features with big data, blockchain, and the Internet of Things (IoT) (Uyun et al., 2020). The development of insuretech in Indonesia is quite fast with the emergence of various digital insurance service providers such as PasarPolis, E-Bancassurance, Fuse and so on. This can be seen from the development of the insurance market, one of which is AstraLife which has increased 500% until February 2021 (AstraLife, 2021). This shows that the development of InsurTech in the insurance industry in Indonesia shows tremendous potential. This paper aims to explain the concept of InsurTech and its potential for development in Indonesia.

2. RESEARCH METHODS

The method that will be used in this paper is a qualitative method. Qualitative research is research that is used to examine the condition of natural objects, where the researcher is the key instrument (Sugiyono, 2013). Meanwhile, according to Lexy (2005) what is meant by qualitative research is research that intends to understand phenomena about what is experienced by research subjects such as behavior, perceptions, motivations, actions, etc. holistically, and by way of description in the form of words and phrases. language, in a special natural context and by utilizing various natural methods.

The purpose of qualitative research is to explain a phenomenon as deeply as possible by collecting the deepest data, which shows the importance of depth and detail of the data being studied.

3. RESULTS AND DISCUSSION

3.1. InsurTech

Digitization is something that has been applied by various insurance companies to face competition in the digital era. It mainly focuses on the effectiveness of digital technologies used to promote insurance products and risk miscalculation (Dolganova et al., 2019). Stoeckli et al., (2018) then introduced the term InsurTech and explained that InsurTech can influence the creation of firm-level value. InsurTech is a focused, innovation-driven organization whose vision is to deliver value to clients and/or insurers by combining infrastructure operations, service delivery, and network operations to disrupt or solve problems across the insurance value chain through technology engagement by following the continuous alignment of a combination of lean and user-centric approaches (VanderLinden et al., 2018). InsurTech's goal is to provide opportunities that focus on flexibility, effectiveness, and accelerate the process of automation of routine activities that are cost-effective and focus on user experience to improve knowledge management systems and customer relations based on empathy for brokers, underwriters, and customers (Uyun et al., 2020).

InsurTech basically implements a digitalization process which, according to ri and Szabó, (2018) has the key success factors, namely strong leadership, agile and scalable digital operations, leveraging digital business strategies, and continuous monitoring of the digital landscape. InsurTech also has two components in InsurTech's transformational capability model, namely the development of services that must be supported by data-based infrastructure to create new insurance products and provide digital services; and customer behavior on a product to create new insurance digital service provision and service development. These two components are then integrated with the promotion network of customers and partners (Stoeckli et al., 2018). IsurTech is then considered to be able to change the way insurance companies and customers interact, influencing all business processes, changing existing products and enabling new product offerings such as cyber risk insurance (Eling & Lehmann, 2018).

Insurtech can be a strategic step for insurance companies to expand the utility of insurance products offered. InsurTech can be applied as a digital agent, anti-money laundering and fraud detection, online finance and procurement, 24/7 customer service mobile application, and online actuary and underwriter. In the company's internal operations InsurTech can be leveraged for internal operations, claims processing and outbound recording to customer experience and relationship management, and verification; and diagonally and across departments within insurance companies for risk management. InsurTech can ensure that all processes will be clear, transparent, and aligned with the company's business processes by facilitating communication between employees and all business unit leaders and key users (Uyun et al., 2020).

3.2. The role of InsurTech in the insurance life cycle

Digital transformation of insurance companies using InsurTech can be applied at various stages in the life cycle of insurance products. InsurTech can be applied throughout the life cycle of insurance products from product development, underwriting and distribution platforms to administration and claims processing (Wilamowicz, 2019). The implementation of InsurTech can be divided according to the steps of the insurance cycle and how the existing technology is utilized for the benefit of insurance companies and customers. Lin & Chen (2020) describe several roles of InsurTech in the insurance product cycle as follows:

a. The role of InsurTech in the pre-contract stage

   According to Lin & Chen (2020), the role of InsurTech is very prominent in the pre-contract stage. The provision of digital services at this stage can provide solutions to the problems of prospective clients. This can take the form of digital services that help customers find the best or cheapest insurance product available to them (comparison). Other InsurTech companies help customers better manage their insurance policy portfolios and provide integrated services from finding suitable insurance products to claims and insurance management. Insurance products can also be distributed digitally, for example by selling online, or providing a better digital infrastructure, providing an online self-service portal or chatbot. This will involve a combination of technologies such as artificial intelligence, machine learning, Big Data and the Internet of Things.

b. InsurTech's role in InsurTech's product development

   Could assist the development of company-provided insurance products, such as flight delay insurance products embedded with smart contracts, enabling automatic payments triggered by information retrieved from the Internet regarding flight

delays. There are also new use-based insurance providers that offer ad hoc temporary insurance that provides coverage only when the customer actually uses the insured property. This can provide a reduction in overall insurance costs and have an insurance plan that is better tailored to the needs of the customer.

c. InsurTech's role in the post-contract

phase In the post-contract phase, InsurTech can make the claims process smoother and more convenient, reducing the costs associated with filing insurance claims. This can be achieved by having a platform that connects insured persons, vehicle repair shops and insurance companies, assists with disaster-related claims inspections or connects patients with doctors and insurance companies. This service aims to provide a better experience for customers so that the claim process can be carried out in an easier way. This is mainly because claim settlement is one of the most important elements of customer involvement in insurance products

d. InsurTech's role in back-office operations

InsurTech can be leveraged to assist back-office operations of insurance companies, including underwriting, risk management or regulatory compliance. InsurTech can help insurers to assess customer risk profiles in a more precise way through better calibrated data analysis tools and/or through more comprehensive Big Data analytics. For example, traditional risk profiling methods usually result in young men having to pay higher premiums for vehicle insurance than women of the same age group because it is assumed that men tend to drive more recklessly. Therefore, the availability of personalized information can provide sufficient information to provide a premium load according to the conditions of each client.

e. InsurTech in risk control

InsurTech can improve risk control or loss assessment to reduce moral hazard after policy issuance. This is an important plus for the operation of an insurance company or insurance intermediary. For example, several InsurTech companies have developed tools to identify the risks certain drivers pose to fleet safety or are using smartphone telematics to track customers' driving habits. A more precise risk assessment translates into better decision making because the insurer can more accurately balance the factors that must be considered when deciding whether to cover a risk. In the same vein, InsurTech can facilitate the loss adjustment process by ensuring better customer service during the claims stage. It is not uncommon for life insurance companies to utilize technological products to promote certain healthy habits that help improve the health and well-being of clients and, thereby, reduce the insured's risk. Technology can also help insurers to conduct know-your-customer (“KYC”) checks, detect fraud, and facilitate compliance with anti-money laundering guidelines. In particular, blockchain technology has been used to fight insurance fraud, improve identity management, track the origin and ownership of property and assets, and enable fraud intelligence sharing among insurance service providers. In addition, technology can also help insurance companies to make better investment decisions.

3.3. Potential of InsurTech in Indonesia

The insurance industry has a significant impact on the economy by mobilizing domestic savings. Insurance makes it possible to reduce losses, increase financial stability and promote trade and commerce activities that result in economic growth and

development. Thus, insurance plays an important role in sustainable economic growth. Current technological developments have a significant impact on a country's economic growth and bring society into the digital economy era. Indonesia is one of the countries with high digital economy development potential, where four sectors achieved the highest rapid growth: the financial sector; the cultural, tourism, and creative economy sectors; agricultural sector and agro-logistics sector. The general insurance sector is one of the main contributors to the country's gross domestic product (GDP), which also has high potential and continues to grow. This is indicated by the performance of the insurance industry which continues to increase from year to year, which is in line with Indonesia's economic growth (Kartono et al., 2021).

The insurance industry in Indonesia is one of the promising industries in Indonesia because of its constant development despite the economic recession due to the pandemic. OJK noted that the insurance industry in general grew 5.91 percent year-on-year to Rp 913.8 trillion in 2019 from Rp 862.8 trillion in the previous year (Fachriansyah, 2020). This shows the positive development of the insurance industry in Indonesia. This continued to experience promising growth in the following year, one of which was shown by the development of AstraLife's business which increased 500% until February 2021 (AstraLife, 2021).

InsurTech is one of the business models of financial technology (fintech). Fintech is defined as technologically enabling financial innovation that creates new business models, applications, processes, or products with related material effects in financial markets, institutions, and the provision of financial services (Diniyya et al., 2020). FinTech companies participating in the insurance sector (InsurTech) have the potential to influence not only insurance marketing and distribution, but also underwriting, risk pricing and claim settlement. Risk management also pays attention to the commitment and registration of guarantees and guarantees in credit operations (Nizar, 2017).

Indonesia has a dynamic start-up environment with a growing number of new startups in recent years. Of the various forms of fintech that have emerged in Indonesia, 6% of them are InsurTech (Diniyya et al., 2020). InsurTech can take the form of Micro-Insurance, P2P Insurance, Insurance Comparison, or any other form of InsurTech. Micro-Insurance is a solution that provides microinsurance and fractional insurance. P2P Insurance is a platform that provides insurance based on other people/institutions investing in it. Finally, a comparison site to compare/choose the best insurance products.

InsurTech applications can be analyzed according to various business models adopted by market participants. This can be seen from how market participants target different user bases. One way is to target consumers directly, with a focus especially on the younger generation. Another way is to target companies rather than individuals, giving them a platform to give employees access to a variety of health and wellness offerings. InsurTech companies can also target these two profiles simultaneously, namely through direct policy offerings to consumers and through business-to-business partnerships (Lin & Chen, 2020).

Currently, there are several key players in InsurTech startups in Indonesia, namely PasarPolis, Qoala and Simas Insurtech. PasarPolis or Paspol is a Jakarta-based insurtech startup founded in 2015 by Cleosent Randing who previously founded the performance marketing firm Valuklik. Initially it was an insurance comparison site, but the company later switched to microinsurance. Paspol became famous after offering car insurance to Gojek and Gocar drivers. Paspol then solidified its position when it was invested by three unicorns: Gojek, Traveloka, and Tokopedia in August 2019. PasarPolis offers several

types of Travel, Gadget and Auto-Insurance insurance. Most PasPol services are integrated with Gojek, Traveloka, and Tokopedia. PasPol also operates in several countries where Gojek operates, namely Vietnam and Thailand, with development offices in India. They claim to process up to 2 million policies per day. With this amount, Paspol can become the market leader for insurtech in Indonesia (Ahmadi, 2020).

Qoala is an insurance aggregator startup founded in 2018. The company initially specifically provided travel and flight insurance but has expanded into gadget insurance, health and P2P loans. The company has amassed 1.5 million seeds, led by Sequoia India (Surge). Qoala offers 3 properties of value: 1 day claim, no paperwork, and a seamless payment experience. Similar to Paspol, Qoala offers Aviation, Gadget, and Micro Health insurance through integration with e-commerce such as Tokopedia and Bukalapak. Qoala users can also download apps and check all their policies in one place even if they buy them on multiple platforms (Ahmadi, 2020).

SimasNet or Simas Insurtech is a platform published by Asuransi Sinarmas in 2015. This is a form of digital insurance from Asuransi Sinarmas. In the Insurtech industry, SimasNet is probably the most integrated insurance principal. They are integrated with insurtech brokers such as PasPol, Qoala and fuse, comparison services such as Cermati and GoBear, and direct integration with platforms such as Traveloka. In 2018, SimasNet achieved a gross premium of Rp54 billion. In June 2019, they had reached this figure with a 2019 financial year gross premium target of 100 billion. The impressive double-digit growth was only contributed by digital channels (Ahmadi, 2020).In addition, there is also Fuse Pro which is an insurance agent application. Users can register to sell various insurance products. The concept is similar to agent model applications such as Kudo or TruMoney but specifically for insurance products. Insurance agents will earn up to 30% commission for each insurance sale. The commission is added in the application balance which can be cashed out through a bank account. Agents can also earn loyalty points. This application has collaborated with the e-commerce channel Tokopedia (Ahmadi, 2020).

Indonesia's population of around 270.2 million is a significant target market for the development of digital innovation, including for the insurance industry (Kartono et al., 2021). But then this amount is not equivalent to the amount of insurance penetration in Indonesia. Overall insurance penetration is among the lowest in the world at <2% (CB Insights, 2019). The low penetration of insurance indicates that the market is still untapped and has great potential for growth. This then led regulators to encourage the use of digital channels in insurance. In addition, market opportunities and potential can be seen from the growth of the digital technology-literate young population who need sophisticated financial products and services that meet their needs and expectations well, especially in the provision of insurance (Belli, 2018). This then shows that there is promising potential in the development of InsurTech in Indonesia.

However, in the development of InsurTech in Indonesia, there are still various challenges, the main one being policy and regulatory issues related to this. The insurance digitization policy in Indonesia is still seen as not being in line with other policies in the financial services sector, such as the capital market and banking, so this can still be optimized by the government (Pratama, 2021). This is partly because there is no regulation in Indonesia that provides special arrangements for InsurTech.

An InsurTech start-up, like other types of fintech, needs to register with the Financial Services Authority (OJK) before it can operate in Indonesia. This requirement

can be a bottleneck for InsurTech startups. This then results in a company falling within the scope of the regulation but failing to apply for a licence, the company can be penalized for operating an illegal insurance business and may be subject to mandatory dissolution, depending on the discretion of the regulator. The challenges that may be faced by InsurTech startups do not stop there, once the permit has been obtained from the OJK, compliance with other relevant regulations remains an ongoing process that requires high costs. These regulations may include solvency and capital adequacy regulations, and corporate governance, business conduct or anti-money laundering requirements(Ori & Szabó, 2018). This then indicates high compliance costs and may lead to blocking new InsurTech propositions. This is in line with the (Lin & Chen, 2020) that strict regulations, high capital constraints, and difficulties in obtaining permits to operate have been identified as the main challenges facing new entrants in the insurance sector.The emergence of start-up InsurTech as a new business model may also pose challenges for regulators. The development of products provided by InsurTech is still relatively easy to define whether a new service is a type of insurance. An example is a product that offers automatic payments due to flight delays is a kind of insurance because the company promises to make payments due to unforeseen and adverse events in the future. But then in the future there may be new products that challenge the definition of 'insurance'. This then provides the consequence for regulators to be able to define whether a service is insurance. The attitude of the financial regulator will then have significant implications for future market developments

4. CONCLUSION

Era of digitalization has encouraged various businesses, including insurance, to develop their businesses towards digitizing business processes. This is shown by the emergence of various types of InsurTech in Indonesia. InsurTech is simply the use of digital technology in the provision of insurance services. Insurtech can be utilized throughout the lifecycle of insurance products including pre-contract, product development, post-contract, back office operations and in risk control. The digitalization of technology in Indonesia has driven the development of InsurTech's business. Key players in this industry include PasarPolis, Qoala and Simas Insurtech. InsurTech's high potential in Indonesia is not only supported by the development of InsurTech start-ups, but also due to low insurance penetration. The challenges that arise for InsurTech are mainly related to the current regulations that do not yet specifically discuss InsurTech.

REFERENCES

Ahmadi, K. (2020). *Market Overview of Insurance & Insurtech in Indonesia*. https://linuxgembel.files.wordpress.com/2020/05/insurance-insurtech-blog-post-kikiahmadi.com1_.pdf

Amalia, H. (2021). *Digitalization Helps Insurance Penetration in Indonesia*. BeritaSatu. https://www.beritasatu.com/economy/755967/digitalisasi-bantu-penetrasi-asuransi-di-indonesia

Apdillah, D., Panjaitan, K., Stefanny, N. T. P., & Surbakti, F. A. (2022). The Global Competition In The Digital Society 5.0 Era: The Challenges Of The Younger Generation. *Journal of Humanities, Social Sciences and Business (JHSSB), 1*(3), 75–80. https://doi.org/https://doi.org/10.55047/jhssb.v1i3.151

AstraLife. (2021). *Astra Life's Digital Insurance Business Grows Up to 500%.* ps://www.astralife.co.id/corporate-news/bisnis-asuransi-digital-astra-life-tumbuh-to-500/

Belli, M. (2018). InsurTech in Turkey–Challenges and Opportunities. *The InsurTech Book: The Insurance Technology Handbook for Investors, Entrepreneurs and FinTech Visionaries*, 102–105.

CB Insights. (2019). *The Massive Opportunity For Insurance Tech In Indonesia.* https://www.cbinsights.com/research/insurtech-startups-indonesia/

Diniyya, A. A., Aulia, M., & Wahyudi, R. (2020). Financial Technology Regulation in Malaysia and Indonesia: A Comparative Study. *Ihtifaz: Journal of Islamic Economics, Finance, and Banking*, *3*(2), 67–87.

Dolganova, Y. S., Istomina, N. A., & Terentieva, M. N. (2019). Approaches to the regulation of the development of digitalization of finance in the regional economy. *1st International Scientific Conference" Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth"(MTDE 2019)*, 268–272.

Eling, M., & Lehmann, M. (2018). The impact of digitalization on the insurance value chain and the insurability of risks. *The Geneva papers on risk and insurance-issues and practice*, *43*(3), 359–396.

Fachriansyah, R. (2020). Insurance industry posts 5.91 percent growth despite Jiwasraya debacle. *JakartaPost*. https://www.thejakartapost.com/news/2020/02/19/insurance-industry-posts-5-91-percent-growth-despite-jiwasraya-debacle.html

Kartono, E., Bernarto, I., Sudibjo, N., & Pramono, R. (2021). Transformational Leadership and Organizational Innovation: The Role of Goal-Oriented Synergistic Interaction. *The Journal of Asian Finance, Economics and Business*, *8*(6), 909–920.

Kramaric, T. P. (2020). The Impact of Digitalization on Croatian Listed Companies' Corporate Performance Measured with Tobin's Q. In T. Kovačević & I. Akrap (Ed.), *AD Plastik Group* (hal. 29–37). University of Split University Department of Professional Studies. https://doi.org/ISBN 978-953-7220-52-5

Legner, C., Eymann, T., Hess, T., Matt, C., Böhmann, T., Drews, P., Mädche, A., Urbach, N., & Ahlemann, F. (2017). Digitalization: opportunity and challenge for the business and information systems engineering community. *Business & information systems engineering*, *59*(4), 301–308.

Lexy, J. M. (2005). Metode penelitian kualitatif. *Bandung: Rosda Karya*.

Lin, L., & Chen, C. (2020). The promise and perils of InsurTech. *Singapore Journal of Legal Studies*, *Mar 2020*, 115–142.

Nizar, M. A. (2017). Financial technology (Fintech): it's concept and implementation in Indonesia. *Munich Personal RePEc Archive*, *98486*, 15.

Őri, D., & Szabó, Z. (2018). EAM based approach to support IT planning for digital transformation in public organizations. *European Conference on Advances in Databases and Information Systems*, 377–387.

Parviainen, P., Tihinen, M., Kääriäinen, J., & Teppola, S. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. *International journal of information systems and project management*, *5*(1), 63–77.

Pratama, W. (2021). *Digitalization of Insurance, Regulatory Inequality Still Shadows*. https://finansial.bisnis.com/read/20210316/215/1368021/digitalisasi-asuransi-

kenotsetaraan-regulation-masih-mebayangi

Saputra, A., & Wicaksono, A. (2020). Developing New Wave Marketing Initiatives to Optimize Bancassurance Distribution Channel: Case Study: PT ABL. *Proceedings of the 2nd International Conference on Inclusive Business in the Changing World (ICIB 2019)*, 470–481.

Şerban, R.-A. (2017). The Impact of Big Data, Sustainability, and Digitalization on Company Performance. *Studies in Business & Economics*, *12*(3).

Stoeckli, E., Dremel, C., & Uebernickel, F. (2018). Exploring characteristics and transformational capabilities of InsurTech innovations to understand insurance value creation in a digital world. *Electronic markets*, *28*(3), 287–305.

Sugiyono, S. (2013). Metode penelitian kualitatif. *Bandung: Alfabeta*.

Uyun, A., Sekarhati, D. K. S., Amastini, F., Nefiratika, A., Shihab, M. R., & Ranti, B. (2020). Implication of InsurTech to Implementation IT Decision Domain Perspective: The Case Study of Insurance XYZ. *2020 6th International Conference on Computing Engineering and Design (ICCED)*, 1–6.

VanderLinden, S. L. B., Millie, S. M., Anderson, N., & Chishti, S. (2018). *The insurtech book: The insurance technology handbook for investors, entrepreneurs and fintech visionaries*. John Wiley & Sons.

Wilamowicz, A. (2019). The great FinTech disruption: InsurTech. *Banking & Finance Law Review*, *34*(2), 215–238.