

The magnitude of the investment yield of sharia insurance in Indonesia

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ABSTRACT

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The aim of this paper was to investigate the effect of the gross domestic product (GDP) and population on the investment yield of sharia insurance in Indonesia. This research used a causal research design with Indonesian sharia insurance as the focus. The secondary data were sourced from the Financial Services Authority (OJK) of Indonesia in 2016–2017. The analysis was performed with Smart Partial Least Square (PLS) software and indicated that the GDP did not influence the investment yield; however, the population did influence the investment yield of sharia insurance in Indonesia. The implications of this study are expected to recommend to the Indonesia Financial Services Authority regarding the impact of the GDP and population on the investment yield in Indonesia. In addition, the implication provides support for the Indonesian monetary policy authorities to anticipate the monetary policy by the Fed, regarding dovish and hawkish sentiments, to encourage capital inflows to emerging countries due to the impact on the development of Sharia/Takaful insurance in Indonesia. A social implication is that the sharia insurance industry in Indonesia can develop if the public can enjoy convenience in applying for premiums and ease in receiving sharia insurance claims. The majority of Indonesia's population of Moslems requires an openness in the process. This study takes a sample of different sharia industry characteristics to compare sharia and conventional types of industry.

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1. Introduction

Economic growth is the development of activities in the economy that cause goods and services to be produced in society. Economic growth can be viewed as a long-term macroeconomic problem (Tarmizi et al., 2017, Banerjee & Majumdar, 2018; Rethel, 2018; Shah et al., 2018). The ability of a country to produce goods and services can increase over time. This ability is a factor of production, which can experience an increase in output and quality (Abdulkader, 2005 & Ahmed, 2010). The business world has continued to change and this has led the Islamic insurance business to also change with the times. Now is the time to move in a modern direction. This paper will cover topics ranging from concepts, models, and even to the media and ways of promotion that must be changed from conventional methods to new ways in the digital era of economists. Investment will increase the amount of capital goods (Suryomurti, 2018. Lian et al., 2020 and Savitska et al., 2020). The technology used is growing and the workforce increases as a result of population development. Experience and education also add to the skills of the workforce. Each economy must use a proportion of its national income to replace damaged capital goods (buildings, equipment, and materials). However, with the increase of the rate of the economy, new investments are also needed as additional capital stock. The economic growth depends on its natural resources, human capital, business, technology and so forth (Clarke & Gholamshahi, 2018; Muda et al., 2018; Dong et al., 2020; Tejedo et al., 2020). However, economic growth is unlikely to occur as long as the social institutions, political conditions, and moral values in a nation are not supportive. For economic growth, the social institutions, cultural attitudes, moral values, and political and institutional conditions are non-economic factors. The political

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stability, government economic policy, natural resources possessed, quantity and capability of labor, the availability of persistent entrepreneurs, and the ability to develop and use modern technology are some of the important factors affecting economic growth. The factors of economic growth are the talents, abilities, qualities, capacities and abilities, attitudes, customs, values, goals and motivations, as well as political and institutional structures. The income increase is measured in real terms, meaning that it is expressed in constant prices. This also simultaneously describes the remuneration operating in the area (land, capital, labor, and technology) which means that it can roughly illustrate the prosperity of the area. The prosperity of an area other than determined by added value created in the region is also determined by how much income flows out of the region or the flow of funds into the region. Regional economic growth is increasing in the era of regional autonomy. This is quite logical because in the era of regional autonomy, each region is vying to improve the prosperity of the community. Therefore, the discussion of the structure and factors of regional growth will be very important for local governments in determining the efforts that can be done to encourage economic growth in their regions. In general, for the global and domestic macroeconomic conditions, there are still various challenges and turmoil. From the global side, world economic growth is estimated to still not strengthen (Alqahtani, 2018; Faisal, 2018; Panagopoulos, 2018, Shaikh, 2018, Zafar et al., 2020; Erdogan et al., 2020). Economic improvement in the United States in quarter II-2016, which is referenced to the global economy grew below estimates and investment is still slowing down. Meanwhile, the European economy in 2016 was expected to grow moderately along with continued post-uncertainty Brexit and its impact on the confidence of market participants. Next, the economy in China was estimated to have limited growth by 6.5% in 2016 due to deceleration despite private sector investment and interest rates being maintained low.

Indonesia has great potential in the Islamic insurance industry in Asia and the world. This is because Indonesia is one of the countries in Asia that has high growth in developing the sharia insurance industry (Amron et al., 2018; Widodo, 2018; Panorama, 2018; Qoyum et al., 2018). In addition, the population is high and the accelerated high market expansion of the middle class provides more value for Indonesia to become an industrial source of Islamic insurance in Asia (Jiang, 2018). According to Business Monitor International (BMI), a world research institution headquartered in London, England, predicted that the industrial development of Islamic insurance in Indonesia will increase. Likewise, the Global Business Guide, an institution engaged in business promoters and this investment explained the insurance industry projections for Indonesia. This institution, based in Paris France, explained that insurance requires proper and accurate regulation so that it is capable of creating healthy competitiveness between the insurance industries. There are a number of things worries in the insurance industry and insurance market players in Indonesia. Among them is the growth of the market for some parties as regulations are less supportive and regulators in the financial sector are seen as minimal and require a great deal of changes. The amount of sharia insurance in Indonesia is increasing and the development of sharia law also continues to increase. With regulations from the government regarding the minimum insurance capital as well as plans for several sharia insurance companies to provide spin-off services according to the insurance law, we predict that for the coming years, the number of sharia insurance providers will continue to grow and ultimately have an impact on economic growth. In 2017, the growth of sharia insurance assets was 17% and the premium retreated by 20%. In 2018. The figure was lower than the 15% asset growth projection and 17%–18%. The overview of sharia non-bank financial industry statistics from 2017 are as follows in Table 1.

Table 1
Indonesian sharia non-bank financial institutions statistics overview 2017

Notes	Number of Sharia Industries (Units)	Number of Sharia Business Units (Units)	Assets (Billion IDR)	Liabilities (Billion IDR)	Temporary <i>Syirkah</i> Funds (Billion IDR)	Equities (Billion IDR)	Productive Assets (Billion IDR)
1. Sharia Insurance	12	47	35.249	7.047	-	28.203	30.631
a. Sharia Life Insurance	7	21	28.927	3.913	-	25.014	26.278
b. Sharia Non-Life Insurance	4	24	4.906	2.663	-	2.244	3.232
c. Sharia Reinsurance	1	2	1.416	471	-	945	1.120
2. Sharia Finance Institutions	7	41	37.637	24.202	-	13.435	34.550
a. Sharia Finance Company	3	37	36.490	23.291	-	13.199	33.746
b. Sharia Venture Capital Company	4	3	1.042	811	-	230	804
c. Sharia Infrastructure Finance Company	-	1	106	100	-	6	-
3. Sharia Specialized Financial Institution	2	4	19.612	13.747	-	1.166	533
4. Sharia Micro Finance Institution	17	-	70	39	21	10	32
Total	38	92	92.57	45.035	21	42.815	65.746

Sources: Financial Services Authority (OJK) Indonesia (2017).

Based on Table 1, the growth of sharia insurance assets in 2011–2015 fluctuated. This resulted in the market share for Islamic insurance assets fluctuating since 2011. From the data per July 2016, insurance growth assets sharia was decreased by 8%. From the data we predicted that at the end of the year sharia insurance assets would only decrease or raise slightly. Investments are one component of growth supporting sharia insurance. The growth of sharia insurance investments fluctuated from 2011 until July 2016. The amount of sharia insurance investment in Indonesia at the end of 2015 was Rp, 23.1 trillion and, as of July 2016, was

predicted to be IDR 27.5 trillion. Researchers concluded that Islamic insurance investments experiencing average growth amounted to 31.6% (Karim Consulting Indonesia, 2017). Sharia insurance in Indonesia has grown rapidly. Sharia insurance business competition in Indonesia is increasingly crowded with the emergence of new players both from life insurance and loss insurance/general with the sharia principle. While Islamic insurance also experienced changes in composition, i.e., from the overall company in the form of a sharia business unit, there is one company that is fully focused on sharia insurance. We concluded that the amount of insurance sharia in Indonesia is relatively increasing and the development of sharia law continues to increase. With regulations from the government regarding the minimum insurance capital, as well as plans for several sharia insurance companies to do spin-offs according to the insurance law, we predict that, for the coming years, the number of sharia insurance companies will continue to grow. Domestic economic growth is not evenly distributed. From a sectoral perspective, economic recovery is supported by the financial sector and by agricultural services. Increased financial services are encouraged widening of the net interest margin (NIM) spread on credit interest rates and rates of deposit interest while improving the agricultural sector. The uncertainty of the economic recovery has an impact on the direction the monetary policies of the world's central banks and the increase in volatility in the financial market (Baber & Zaruova, 2018; Barbu & Boitan, 2018; El Ouadghiri & Peillex, 2018; Elsner et al., 2018; Kail et al., 2018; Kesa, 2018; Samad, 2018; Corbet et al., 2019; Arellano et al., 2020). The release of the developed country macroeconomic data, such as from the USA, becomes a sensitive issue and becomes a driving sentiment in market finance. The Fed's monetary policy is also an indicator of Indonesia's economic development, including the development of sharia insurance in Indonesia. When the expectations and sentiments are more "Hawkish", there is a flow of funds into the advanced economy (Mishra et al., 2018). As a result. the exchange rate and price of financial assets in emerging countries is depressed. This also happens in reverse, "Dovish" expectations and sentiments, followed by risk-on-market behavior, eventually push the flow of funds back to emerging countries (Bennani et al., 2018, Bonam, & Goy, 2019; Baranowski et al., 2020). The dovish and hawkish sentiments of the Fed's monetary policy change the dynamics of the global financial markets. The result increases the risk in global financial markets due to the increased volatility, which directly impacts Indonesia. Related studies have examined the role of developing Islamic insurance, among others, including Ahmed et al., (2018); Albetairi et al. (2018); Alshammari et al., (2018); Benlagha & Hemrit. (2018); Boakye. (2018); Effendi. (2018); Hasyim. (2018); Motsepe. (2018); Purwaningrat. (2018); Syed et al., (2018); Yas et al., (2018); Alam et al., (2019) and Siddiqui & Yousaf (2020).

2. Literature Review

2.1. Establishment of an Investment Portfolio

The insurance industry as one of the financial institutions managing public funds in large especially life insurance is very dependent on the success of managing investments in an effort to realize the company's goals (Alhomaidi *et al.*, 2018; Fuentes, 2018; Shetty & Basri, 2018; Reyna & Yu et al., 2018; Keenan et al., 2019; Buckle & Thompson, 2020; Park & Kim, 2020; Ismanto, 2018). Realizing this, financial management and investment experts attempt to develop measures that can be used to determine the risks. For example. whether or not an investment proposal is feasible or how successful an investment is in meeting the expected level of take. A portfolio is a collection of integrated forms of investment for the purpose of obtaining investment returns. The main purpose of establishing an investment portfolio is to obtain optimal results with minimal risk. If the investor is an institution as well as a life insurance company. Thus, the main objective of the investment portfolio is to obtain a high rate of return with a small level of risk to fulfill obligations to policyholders or for company growth.

2.2. Diversifiable Risk

The basic function of insurance is an effort to overcome uncertainty regarding specific losses for pure losses and not speculative losses so that the definition of risk can be given as an uncertainty regarding the occurrence or non-occurrence of an event (Darwish, 2018; Fonta *et al.*, 2018; Sinha, 2018). Diversifiable risk (unsystematic risk) is a unique risk from a form of investment, namely business risk and financial risk (Abdi & Cheluget, 2018; Suryawati & Unsun, 2018; Eklund, 2019; Shileche et al., 2020). The stock price of a company will decrease if the performance of a company is not good enough to decrease the estimated profit which is a diversifiable risk.

2.3. Non-diversifiable risk

Non-diversifiable risk (systematic risk) is the risk of each form of investment. That is the risk that occurs due to war, inflation, international events, or due to politics (Sundh & Juslin, 2018). The risk of market shifts in general will change the return of each security as a non-diversifiable risk (Abelson & Dalton, 2018). Therefore, for a business to be successful and profitable, the business should be based on sound, wise, and careful decisions. The results that will be achieved by making sound and wise decisions will be real and durable.

2.4. Differences in Takaful insurance vs. Conventional Insurance

Islamic insurance appeared after the concept of general insurance. Takaful insurance appeared for the purpose of Islamizing general insurance, which is considered to have some deficiencies or even fraud, which is detrimental to the insurance participant (Mroueh & Waal, 2018). The difference between takaful and conventional insurance is in Table 2.

Table 2

Takaful (sharia) insurance vs. conventional insurance

No	Dimension	Sharia Insurance	Conventional Insurance
1	Principle	Seek the pleasure of God	World orientation only
2	History	Derived from Al-qur'an like ta'wil dream of the prophet Yusuf	Taken from the story of the Babylonian people
3	Source of law	Al-quran, Hadith, and positive law	Law and positive law
4	Contract	Main contract (Tabarru contract)	- Commercial Contract (Mudharabah, Mutsyarakah, etc.) - More buying and selling with uncertainty
5	System	Sharing risk	Transfer of risk
6	Structure	There is a sharia supervisory board	There is no supervisory board
7	Accounting system	Separation of funds between tabarru funds and investment funds	There is no separation of funds
8	The role of the company	The company is only as manager	The company becomes the owner of participant funds
9	Product design	Avoid usury, Maysir (interest), and Gharar (betting)	Its products often involve elements of usury, maysir, and gharar
10	Tourist attraction	Insurance investment funds are included in investments that are in accordance with sharia law	There is no prohibition for that. can be invested in anything
11	Marketing pattern	Tied with the ethics of economic and Islamic business	Not tied with any specific ethics
12	Payment of claims	Derived from tabarru funds	Comes from a company account
13	Surplus under writing	Re-distributed to participants	To belong to the company
14	Scorched Fund Policy	There is no policy	There is a policy
15	Corporate culture	Based on Islamic work culture	Based on universal values and humanity
16	Good Corporate Governance (GCG)	GCG refers to sharia law and is positive	GCG only refers to positive law
17	Other obligations	Tax burdened	There are no tax obligations

Sources: Differences in conventional vs. conventional insurance in the table (Koswara 2018).

Based on Table 2, in sharia insurance, everything has an overhaul as everything that is done in the management of this insurance must be based on the basic values of Islam from the al-qur'an, hadith, fatwa of ulama, and others.

3. Methods

The method of research used causal methods. The population taken was all sharia-based insurance companies that were under the supervision of the Financial Services Authority of the Republic of Indonesia. The number of sharia insurance and reinsurance companies reached 62 companies. The data used were secondary data sourced from the Financial Services Authority Republic of Indonesia in January 2015–September 2017. This study used data analysis methods including SmartPLS version 3.0 software. Smart-Partial Least Square (PLS) is a variant-based structural equation (SEM) analysis that can simultaneously test measurement models at once. Data processing was conducted using the SmartPLS software. PLS uses a bootstrapping method or random copying. Therefore, the assumption of normality will not be a problem for PLS.

Apart from being related to data normality, by doing bootstrapping, PLS does not require a minimum number of samples. Research that has a small sample can still use PLS. In PLS, the measurement model (outer model) is often called the outer relation or measurement mode, which defines how each indicator block relates to its latent variables. This Outer Model analysis specifies the relationship between latent variables and their indicators, or it can be said that the outer model defines how each indicator relates to its latent variables. Inner model testing or structural models were performed to investigate the relationship between latent constructs or variables, as seen from the R-square value of the research model and also by looking at the coefficient of the structural path. The higher the R² value, the better the predictive model of the proposed research model. The formation of a path diagram in the PLS-SEM process is a visualization of the research conceptual framework so that it is easier to understand and learn. In addition, this path diagram will be tested through goodness of fit to see the suitability of the model with the existing reality.

4. Result and Discussion

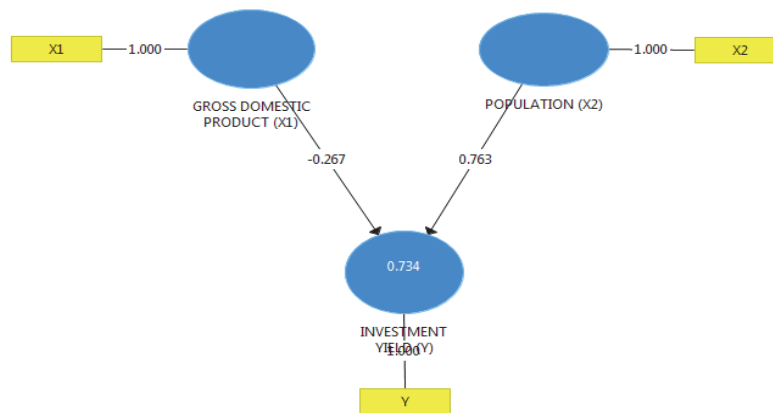
4.1. Result

Based on the data the results of the descriptive statistics are in Table 3. Based on Table 3, the gross domestic product (X₁) had a minimum of 983 trillion and a maximum of IDR 12.407 trillion. The population in people had a minimum of 259 million people and a maximum of 262 million people. The investment yield variable had a minimum of IDR 23.134 billion and a maximum of IDR 33.517 billion. This result was developed using SmartPLS as presented in Fig. 1 and Table 4.

Table 3
Descriptive Statistics

	Investment Yield (Y)	Gross Domestic Product (X ₁)	Population (X ₂)
Mean	28743.9524	5988.0952	260.2857
Std. Deviation	3046.68901	3408.77102	1.52128
Skewness	-.208	.224	.311
Std. Error of Skewness	.501	.501	.501
Kurtosis	-.896	-.965	-2.115
Std. Error of Kurtosis	.972	.972	.972
Minimum	23134.00	983.00	259.00
Maximum	33517.00	12407.00	262.00

Source : Data analysis (2018).



Sources : SmartPLS result (2018).

Fig. 1. Overall model with coefficient

The results are shown in Fig. 1 as the entire Model with coefficient. While the value of standard error (SE) was used to calculate the statistical *t* value by dividing the regression coefficient with the standard error in the Table 4 is as follows.

Table 4
The result of bootstrapping

	Standard Deviation	<i>t</i> Statistics	<i>p</i> Values
Gross Domestic Product (X ₁) → Investment Yield (Y)	0.440	0.607	0.544
Population (X ₂) → Investment Yield (Y)	0.156	4.881	0.000

Sources : SmartPLS result (2018).

In Table 4, the population (X₂) produced a coefficient of less than 0.005. The results show that population was a significant variable on investment yield. In addition, this can be proved by using SmartPLS output visually in Fig. 2.

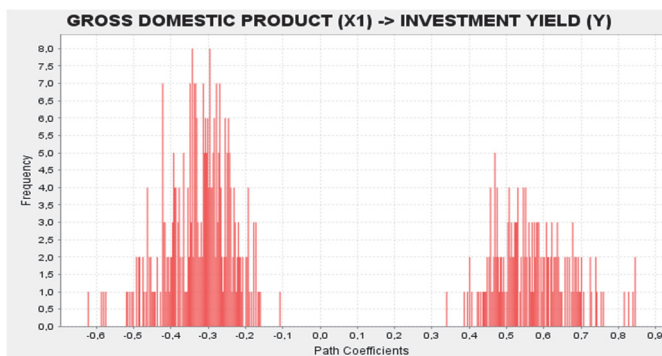


Fig. 2. Path Coefficient of the Gross Domestic Product Visually

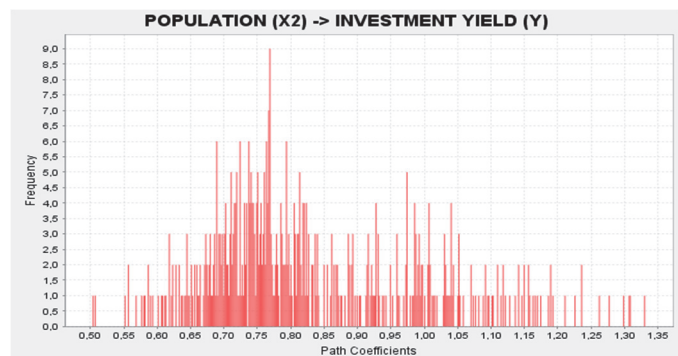


Fig. 3. Path Coefficient of the Population Visually

Sources : SmartPLS result (2018).

Based on Fig. 2 in the Visual Path Coefficient Output, the meaning is the Gross Domestic Product variable is not dominant and uneven. The Population variable is dominant based on Fig. 3. The Visual Path Coefficient Output in Fig. 3 above shows that the population variable on the variable investment yield is dominant and evenly distributed. The Adjusted R-Square was generated as follows in Table 6.

Table 6

R² Value

	R Square	R Square Adjusted
Investment Yield (Y)	0.734	0.704

Sources : SmartPLS result (2018).

Based on Table 6, the structural model (inner model) predicts the causality relationship between variables. Through the bootstrapping process, statistical *t* test parameters are obtained to predict the causality relationship. The structural model (inner model) is evaluated by looking at the percentage of variance explained by the R² value for the dependent variable using size. Based on Table 6, the variation of the R-Square value is 73.4%. Thus, the population provided a contribution to the investment yield of sharia insurance. The effect size (F square) is a measure of the practical significance of the research results in the form of a measure of the magnitude of a correlation or difference or the effect of a variable on another variable. This measure complements the results of the analysis information provided by the significance test in Fig. 4 as follows.

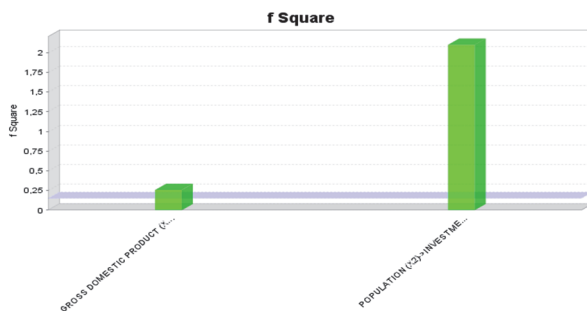


Fig. 4. F Square

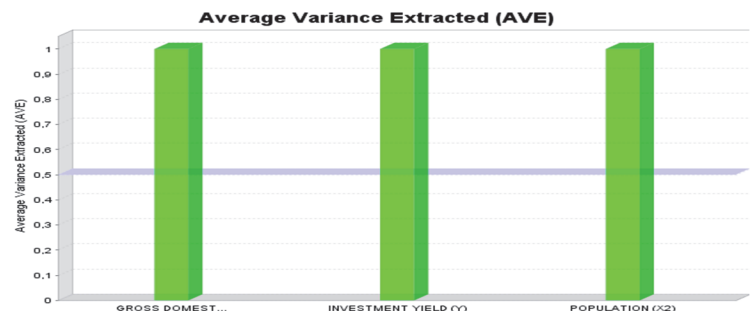


Fig. 5. The average variance extracted (AVE) values

Sources : SmartPLS result (2018).

Based on Fig. 5, the population bar graph diagram, the figure is higher than the gross domestic product (GDP) showing that the variable is significant and is in accordance with the results of the calculation of the significance parameters. The average variance extracted (AVE) value in Fig. 5 measures the amount of variance that can be captured by the construct compared to the variance caused by the measurement error. AVE values must be greater than 0.5. This is illustrated in Fig. 5. Based on Fig. 6, the average variance extracted (AVE) meaning expects an AVE value > 0.5. The AVE value is between 0–1. If the AVE value = 1. This indicates that the indicator has the magnitude of the variant contained in the construct that is perfect. An AVE value = 1 occurs in constructs that have only one indicator.

4.2. Discussion

Activities covered by the trade subsector include both buying and selling goods and can be grouped into two types of activities, i.e., wholesalers and retailers (Keren, 1997). The financial sub-sector consists of banks as well as insurance services, pension funds, mortgages and financing institutions as a promising field that are adequate for shareholders (Saad, 1995; Medani, 1997; El-Gamal, 2006; Aisyah, 2018; Mihajat & Iman, 2018; Samad, 2018; Shaban & James, 2018; Gree, 2019; Styhre, 2020). The rental sub-sector includes the leasing of buildings and land, including those concerning residential and non-residential buildings, such as offices and ground rental businesses. There are the general and defense sub-sectors of the government as well as the private sub-sector. Government services are principally divided into two, namely the first ministry of the ministry and defense, and the services provided by the bodies under the department, while the second service is called other government services. The private sub-sector consists of social services, and entertainment and recreation services, as well as personal and household services (Bruner, 2018). The service sub-sector of the company consists of legal services accounting services, processing services and data entry services, building services, architects and engineering, advertising services, and marketing research and rental services.

The level of welfare of a country's population can be measured by looking at the increase in real income per capita. Real income per capita is calculated from the overall real national income generated during the year divided by the total population. The level of population welfare will be achieved if the national real income increases faster than the population growth. There are two factors that can affect the high and low real income of a country, namely population and labor. When viewed from its role, there are two important roles of the population in increasing the economic development outcomes of a country, namely (1) residents act as consumers in terms of demand and (2) residents act as producers in terms of supply. The development of the population is not

always an obstacle to economic growth. provided that this population has a high capacity to produce and absorb the resulting production. This means that the high population growth must be accompanied by high levels of income. High population growth with low-income levels will have no meaning for economic growth in a country. The investment climate reflects a number of factors related to opportunities and incentives for capital owners to conduct business or investment productively and develop or a business climate that encourages someone to invest at the lowest possible cost and risk and produce the highest possible long-term profits. In economic and business activities, there are various types of risks that must be addressed. As an effort to tackle risk and at the same time constitute one of the community funds raising institutions as takaful (sharia insurance), the insurance business has a strategic position in the business and economic life of the country in an effort to create prosperity (Demertzis & Zenios, 2018; Ismant, 2018; Kuldashev, 2018; Ngwu *et al.*, 2018; Porter & Kramer, 2019; Hiam-Galvez *et al.*, 2020). As an institution that collects funds belonging to the community that must run their business by referring to sound and responsible business principles, the insurance business is a business sector that must be subject to government regulation. The "spin off policy" is a form of regulation policy (Wulandari *et al.*, 2018; Rasmussen *et al.*, 2020). The aim of the spin-off policy is that the management of Islamic insurance can be conducted more independently than when managed by the sharia unit in the insurance company. With the spin-off policy, it is expected that insurance companies can pay more attention to their sharia units. The spin-off encourages the independence of the management of the sharia unit organization, which indeed should be independent. However, if regulations are implemented, Islamic insurance in Indonesia faces a problem, namely independence. Before the spin-off policy, most sharia insurance still experienced a dependency between the subsidiaries resulting from the spin-off of the parent. In addition, there is still a large influence of the parent on the spin-off entity. After the spin-off, the parent can fully release its subsidiary entity and otherwise, the subsidiary must have the courage to act independently without expecting management and advice from the parent of the sharia insurance company.

5. Conclusions

The Gross Domestic Product did not influence the investment yield; however, the population did influence the investment yield of sharia insurance in Indonesia. In addition, there is an implication to support the Indonesian monetary policy authorities to anticipate the monetary policy by the Fed, regarding dovish and hawkish sentiments, to encourage Capital Inflows to emerging countries as this can impact the development of sharia/Takaful insurance in Indonesia. The social implication is that the sharia insurance industry in Indonesia can develop if the public can enjoy convenience in applying for premiums and is reasonable in disbursing sharia insurance claims. The majority of Indonesia's population of Moslems requires openness in the process. This study took a sample of different sharia industry characteristics from sharia and conventional types of industry. This research method did not consider Fixed Effects and Random Effects Tests. The implications of this study are expected to be recommended to the Indonesia Financial Services Authority regarding the GDP and Population impacts on the investment yield in Indonesia.

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