

THE FIRM'S VALUE EMPIRICAL MODELS IN AUTOMOTIVE AND COMPONENTS SUBSECTORS ENTERPRISES: EVIDENCE FROM DEVELOPING ECONOMY

Sarwani *, T. Husain **

* Corresponding author, Postgraduate Program, University of Pamulang, Banten, Indonesia

Contact details: Postgraduate Program, University of Pamulang, Jl. Raya Puspitpek No. 11, Buaran, Serpong, Kota Tangerang Selatan, Banten 15310, Indonesia

** Department of Information Systems, STMIK Widuri, South Jakarta 11480, Indonesia



Abstract

How to cite this paper: Sarwani, & Husain, T. (2021). The firm's value empirical models in automotive and components subsectors enterprises: Evidence from developing economy. *Journal of Governance & Regulation*, 10(1), 83-95.
<https://doi.org/10.22495/jgrv10i1art9>

Copyright © 2021 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).
<https://creativecommons.org/licenses/by/4.0/>

ISSN Print: 2220-9352
ISSN Online: 2306-6784

Received: 15.12.2020
Accepted: 19.02.2021

JEL Classification: C12, G320, N65
DOI: 10.22495/jgrv10i1art9

Individuals and organizations cannot avoid the era of the Fourth Industrial Revolution (Industry 4.0) in any part of the world by utilizing the latest technological bases. These transformations will change the way humans live and interact in the future. Enterprise decisions are taken and become the most important from the firm's value empirical models. This study aims to establish the implications of an empirical model of a firm's value through some determinant factors, i.e., financial ratios with profitability and leverage, intellectual capital with human capital employment, the dividend policy, and audit quality with Big 4 category proxy. The research uses a causal-comparative type with a quantitative approach. Eleven final samples of automotive and components subsectors enterprises of the listed shares in Indonesian Stock Exchange (IDX) were appointed, from 2013 till 2019 by purposive sampling technique. Multiple regression was applied to analyze data on the proposed equation models. The findings state that the profitability and audit quality has positive significance, but leverage, intellectual capital, and dividend policy insignificant implications for predicting the firm's value empirical model.

Keywords: Profitability, Audit Quality, Firm's Value Empirical Models

Authors' individual contribution: Conceptualization - S. and T.H.; Methodology - S. and T.H.; Formal Analysis - S.; Investigation - S. and T.H.; Writing - Original Draft - S.; Writing - Review & Editing - T.H.; Supervision - S.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Individuals and organizations cannot avoid the era of the Fourth Industrial Revolution (Industry 4.0) in any part of the world by utilizing the latest technological bases. These changes and transformations will change the way humans live and interact in the future (Roblek, Meško, & Krapež, 2016). The automation and technical enhancements and continuous alteration in Asia's robotics sector industry have increased swiftly, with an even sales crank up of 12 percent per year. The average

increased to around 212,000 units, increasing about 84 percent compared to the 2005 to 2008 midpoint. A significant increase occurred, especially in 2012-2016 (IFR, 2017). The application of this robot installation will be very widely used by the heavy industry or manufacturing category, one of which is automotive sector companies face short-term obstacles and must use an integrated organizational approach to technology and innovation to remain sustainable in the industrial ecosystem 4.0 (Deloitte Insights, 2020, p. 7). Furthermore, the growing cyber threat should focus on the manufacturing industry

through knowledge sharing among other industry categories (p. 12). One of these transformations can be applied in an optimization design that requires thinking to consider manufacture efficiency, develop standardization to propose large-scale customization, and easy transportation and assembly. According to the McKinsey & Company report, this case can be implemented in the automotive industry, in which business models and plants maximize efficiencies and quality and their productivity betwixt 3-12 percent (Bertram et al., 2019, p. 28).

Forecast of annual worldwide supply of industrial robots predicts in 2017 until 2020 generate information about average per year forecast rate for robot installations in 2018 to 2020 is 15 percent at least, i.e., 15 percent in America, Asia, and Australia, and 11 percent in European countries. Aggregate sales will extend globally in 2020 to about 520,900 units, with a span of time in 2017 and 2020, extending 1,7 million fresh manufacturing robots installed in factories worldwide. In 2017, around 346,800 units or 18 percent, with a majority in Asia or Australia of 21 percent. The performance of the practice in the manufacturing industry with digital concepts on the concept in the United States with the term "Advanced Manufacturing", in China with the term "Made in China 2025", and in Germany with the term "Industrie 4.0" until 2019 emerging new sectors are not a concern mainly (Pardi, 2019). Several data from the global report and working paper above give a shred of evidence that the automotive enterprises, which implement a revolution industry, can a good prospect for investor take on business decisions to reach the firm's value. On the other side, this phenomenon becomes tools for the regulator, third parties, costumer, lender or bank, and another to take transparent information as monitoring, description, assessment, and monitoring mechanisms. The financial ratio tool will be the main reference for investors and stakeholders to obtain information from the firms. Commonly reviewed proxies are the enterprise's solvency and profitability, which describe its business capabilities and attractiveness.

Competition in the global world of career, especially the younger generation through creativity and enthusiasm, can generate an intellectual property in human resources and provide input for companies to formulate strategies to improve optimal business performance (Deloitte, 2018). Descends of this concept called for a range of quality and innovative human resources to support business people to continue to exist. The ownership theory exhibits investors' interest in investing in good physical, human, and structural capital resources and increases their value. The cost-benefit analysis of detailed human capital investment (HCI) requires each project's appropriate parameter to develop specifications and their impact on the business returns. Value creation requires human capital using the enterprise goal, namely efficiency, when the enterprise has competence compared to other competitors, such as new production methods that can lead to reduced production costs, this will have a strike on grow-up sales and firm's value (Abdelrhman, Labib, & Elbayoumi, 2014). Investing in human capital depends on a firm manager's attitude

in making decisions that impact the enterprises' financial health (Veltri & Silvestri, 2017); this condition will certainly directly impact a firm's performance.

Enterprise optimization analysis and processing modeling will be very important for enterprises for strategic decision-making. This decision can be seen from the firm's value in the portfolio of shares, bonds, PBV ratio, MPS ratio, and other proxies. The theoretical firm value can be defined as the amount paid by someone to buy or take over a business entity based on book or market value to maintain the enterprise's survival and compete in a superior and competitive manner (Teece, 2018). The dividend policy, which is included in the firm's equity, is inseparable from the previous year's dividend distribution experience in institutional ownership become a policy problem for management. The dividends also pose the firm's capital as a percentage of gain is called payout ratio, and a hundred percent less payout percentage is called retention ratio (Gunarathne, Priyadarshanie, & Samarakoon, 2016). Investors realize that income growth will build a stable dividend payment policy and not impact companies' growth with high growth expectations (Ahmad, Barros, & Sarmiento, 2018). The prediction of dividend payments also comes from investors who tend to pressure the management in the short term, as stated in agency theory. The principal will prefer this on behalf of future investment opportunities (Driver, Grosman, & Scaramozzino, 2020). Changes in share prices can motivate investors to withdraw or sell their shares. This condition is very detrimental to the enterprise, urging management to formulate policies such as paying available cash to institutional shares to maintain its value. However, institutional ownership having a significant amount of majority shares will automatically take part in the dividend determination process. Stakeholders will directly monitor huge companies that sell their shares to the public. Improving the quality of intellectual capital disclosure will get better benefits than low disclosure; this impacts the lower cost of available information. This situation can convince management to make important information for business actors and market share to increase a firm's value (Vitolla, Raimo, & Rubino, 2019). The appointment of a public accounting firm (PAF) and the pricing of audit fees in an audit engagement are also of particular concern to all stakeholders, especially in facing the global market. Audit quality can be understood as the possibility or attempt to detect audit failure, limiting opportunistic management behavior. The measured components include auditor characteristics, task characteristics, and environmental characteristics (IAASB, 2014). The audit quality likewise brings down agency problems betwixt of management and stockholder' well-of welfare, information asymmetry, and material misstatements of international diversified corporate (Alsmairat, Yusoff, Md Salleh, & Basnan, 2018).

The firm's value has always been known as the most important for academics in a review and research. It is interesting to analyze, study, and research with research models on several factors such as financial ratios, dividend policy, and others. Financial ratios and dividend policy that influences the firm's value, i.e.,

1) The profitability with retention policy positively and no significant towards dividend policy. In contrast, the dividend policy is significant toward the corporate value at 36 cement sector of manufacturing enterprises listed on the Karachi Stock Exchange (Malik & Maqsood, 2015).

2) The significant leverage factors determinant and implication towards the firm's value are insignificant and negatively impact the company's value using Tobin's Q ratio at 27 property and real-estate enterprises listed in the Indonesian Stock Exchange (IDX) (Hakim & Sunardi, 2017).

3) Dividend policy with cash and stock dividend are in disagreement with the dividend irrelevance theory hint at the price-earnings ratio at 198 firms listed on Chittagong Stock Exchange (Abdullah, Quader, & Saha, 2018).

4) The dividend payout policy has a positive and significant direct effect while insignificant to be a connecting factor on 320 CFOs enterprise's financial performance in 11 leading industries in Pakistani Stock Exchange (Hunjra, 2018).

5) The leverage ratio and dividend policy be found no significant result toward the firm's value with Tobin's Q proxy at 11 breweries and beverages enterprise listed in the Nigerian Stock Exchange (Odum, Odum, Omeziri, & Egbunike, 2019).

6) The dividend policy and profitability have a significant toward the firm's value. In contrast, leverage has no significance toward the firm's value with Tobin's Q proxy at 21 financial sectors listed in the IDX (Endri & Fathony, 2020).

7) The dividend policy found a positive toward the firm's value. In contrast, profitability and leverage have no indirect consequence on the firm's value through Tobin's Q proxy in assessing dividend policy with at 11 enterprises of automotive and components subsectors listed in the IDX (Kadim, Sunardi, & Husain, 2020).

Some research has done on intellectual capital factors contributing to the firm value model's development, i.e.,

1) Intellectual capital with VAIC™ method consists of VACA, VAHU, and STVA has a positive correlation on enterprise performance with ROE, EPS, and annual stock return at 327 firms listed in Singapore Stock Exchange (Tan, Plowman, & Hancock, 2007).

2) Intellectual capital with HCE, SCE, and CEE has a positive correlation toward enterprise performance with the accounting-based approach. In contrast, insignificant with a marked-based approach (Tobin's Q proxy) at Saudi Financial Market consists of 171 firms from 15 sectors and Bahrain Bourse of 27 firms from 6 sectors (Hamdan, 2018).

3) IC-disclosure has a positive and significant toward enterprise performance with ROE proxy on 45 integrated reports sections of the IIRC website (Vitolla et al., 2019).

4) Intellectual capital with VACA proxy failed to predict each of the dividend policy and firm's value at IDX of 11 firms from automotive and components subsectors (Kadim et al., 2020).

5) HCI with ability, education, experience, knowledge, skill, and training dimensions has a high contribution towards organizational performance on 95 lecturers respondent of the UiTM Kelantan (Nawi, Tambi, Samat, & Baistaman, 2020).

The research likewise has done on audit quality measurement contributing to the firm value model's development, i.e.,

1) Audit quality with audit fee proxy has a positive and significant correlation. In contrast, audit rotation proxy has an insignificant relationship toward the firm's performance with Tobin's Q proxy at 980 firms in Malaysian listed companies (Sayyar, Basiruddin, Abdul Rasid, & Elhabib, 2015).

2) Audit quality with three lines consists of two non-Big 4 PAF, each of one Big 4 and non-Big 4 PAF, or two Big 4 PAF have positive and significant toward value relevance of accounting measures at 1.836 firms in Kuwait Stock Exchange (Alfraih, 2016).

3) Audit quality with Big 4 categories has a significant correlation toward the firm's value with excess value proxy at a financial and non-financial industry in Amman Stock Exchange (Alsmairat et al., 2018).

The concept of Industry 4.0 in Indonesia switches to the latest technology and reducing the workforce opens up opportunities for the fabrication ability of the national motor vehicle fabrication with a moldable fabricating system that strikes low operational costs (Kementerian Perindustrian, 2017; Kadim et al., 2020). Optimistic the Association of Indonesian Automotive Industries (GAIKINDO) on the automobile trading target load of 1,1 million items by passenger wheels market. Based on the Ministry of Industry of the Republic of Indonesia's release, the achievement has reached 50 percent of exports until July 2019. There were 347 thousand units of CBU and CKD exports and more than 86,6 million components in 2018. The contribution GDP of 10,16 percent supports this industrial subsector in 2017 with a target of 1,29 million wheels for 2020. This study will develop an empirical model-based, which focuses on the firm's value aspects as an aim of this research. This model uses the financial ratio factor with profitability and leverage measurement, and then dividend policy for describing the firm's value contribution, which many have findings impact from researcher's previously. Additionally, the intellectual capital approach with human capital employees especially, which not many yet examining. Audit quality and firm's value model contribution, with dominant, is still researched, is the public accounting firm's Big 4 category measurement from prior study proxy.

This study focuses and prevails on automotive and components subsectors operating in the IDX, one of the most rapidly emerging markets to generate a gross domestic product as a capita's national income, from 2013 till 2019 years. The initial period state is background have implemented International Financial Reporting Standard (IFRS) in financial reporting information to investigate this firm's value empirical model. The results state that enterprises by profitability and solvency ratios attain better firm's value. Further, the higher is the payout ratio of dividend policy, the higher firm's value the performance with Tobin's Q score. Both of them instrument consistently with the agency and signaling theory. While for the human capital employee measure of intellectual capital, results reveal that the higher resource ownership is also regarded as a goodwill increase value of equity. The audit quality with Big 4 PAF category in this

proposed study expectable to add a literature a firm's value empirical model in an emerging market, especially in the Indonesia context.

The contribution of this study is twofold. First, the paper provides novel proof on the firm's value between the Big 4 of size PAF and considers the specific context of the IDX market, i.e., automotive and components subsectors. Prior research still uses an instrument partial empirical model as a seat on one or two of the diverse factors, but this research allows all diversity factors. Second, it reflects on the audit quality factors *viz.* Big 4 category of measurement to combining the financial ratios, intellectual capital, and dividend policy the automotive and components subsector of better prospect against any future firm's value. The structure of the paper is arranged as follows. Section 2 lays out the literature review and research hypotheses. Section 3 plots the research patterns. Section 4 reports the findings of the research and Section 5 presents the discussion. Section 6 sum up and extend implications for hereinafter study in the future.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Literature review

Agency theory was familiarizing, i.e., Jensen and Meckling (1976), underlies the enterprise's business practice, which commences with the merger of economic theory, decisions, and sociology, and organization. This theory also explains the problem of stakeholders' interests who have agency conflicts because of the enterprise's tendency not to act following the principal's interests. Managers have every encouragement to consume corporate wealth since such consumption costs are not borne by themselves (Iqbal-Hussain et al., 2015); this gap raises agency costs to safeguard the principal's interests in the investment framework and firm's value. A financial ratio is used as one tool to predict investor wealth as a return on investment. Audit quality in this study is that the better the company that is assessed based on the audit opinion audited by the Big 4 category of public accounting firms, the better the impact on increasing stakeholders' confidence in the firm's value. This condition trusted can reduce every conflict of interest betwixt management and principal in agency theory. On the other hand, Hill and Jones (1992) stated that managers also crave high leverage to leverage the enterprise's investment and working capital. Meantime, the stakeholder theory believes that the enterprise is a relation of the bond between sundry stakeholders', both implicitly and explicitly (Firmansyah & Estutik, 2020). As an intangible asset, intellectual capital craves human resources with supporting technology that will bring employees explicit knowledge to increase their value in stakeholders' theory. According to Miller and Modigliani (1961) summaries, whether the profits earned will be distributed in the form of dividends or will be retained does not affect the value of the enterprise in dividend irrelevance hypothesis theory. Furthermore, academic research serves theories and sub-models that specify dividend policy, but no sole arrangement can direct dividend

policy as various factors influence the dividend judgment (Malik & Maqsood, 2015). Fund budgeting policy towards dividend payout ratio assumes that the income distribution between dividends and retained earnings does not affect investors' benefits level. On the other side, the dividend policy becomes a tool for judging an investment to measure a real firm's value (Koutsoyiannis, 1982).

The firm's value model was originally Miller's in 1974, with the assumption widely used by researchers: investors' wealth will be comparable to other investors investor confidence in management that investors can trade and sell their ownership at market prices, exchange for lending and borrowing at a certain rate, and sale of assets resulting from continuous sales and trading (Sundaresan, 2013). This model explains that the firm's value of shareholder wealth will be obtained by owning it, and the full trust is given to management (company agents) to execute investor ownership in enterprise activities with the expectation of a certain level of return, both adding to their personal wealth and adding or making investment decisions. This return rate is manifested in a dividend policy that is fully regulated by management, while the expected interest rate is the return promised in the agency contract.

Brigham and Houston (2015) stated that a firm's value could also be illustrated as is the present worth of presuming free cash flow computed a balanced on the average cost of capital. The enterprise value can calculate exert the ratio information toward market value *viz.* the price-to-earnings ratio (PER), price/cash flow ratio (PCFR), the price-to-book value (PBV) ratio, and market-book ratio (MBR). The PER is regularly applied to approximate the owners' largeness of quantum value. This ratio the largeness that investors are throw away to allowance for every dollar of enterprise income. This ratio degree specifies the reliance that investors have on the firm's schedule to convert. The high-rise the PER, the sizeable the investor reliance. PER is quantified by divide market price per share of common stock with earnings per share (Gitman & Zutter, 2015, p. 82). The PCFR yield an investor repeatedly peer the amount stock is chain more attentive to cash flow than a net. PCFR is quantified by divide price per share with cash flow per share (Brigham & Houston, 2015, p. 116). The MBR yield mediates on how investors view the enterprise's achievement, which ties-up the market share of the enterprise's share to its book value - austere accounting - benefit. MBR is quantified through divide common stock equity by the number of shares of common stock outstanding (Gitman & Zutter, 2015, p. 83). Professor James Tobin deployed another proxy as a relief applied to count a firm's value. This ratio is handy because it shows the immediate money markets on each incremental investment dollar. Tobin's Q proxy is quantified by divide the market value of equity added to total debt with total assets (Klapper & Love, 2004). Brigham and Houston (2015) stated that profitability is the total assets' return is the potentials of the mostly effectiveness of input the income enterprise with its obtainable assets. In the past, the manager's surveillance was based usually on net income from accounting approach, obvious income, income before tax expense,

profitability ratios (ROA, ROA, ROS), the quantity of income from sales or cash flow (Fijałkowska, 2014). ROA proxy is quantified by divide the net income after tax with total assets (Gitman & Zutter, 2015, p. 81). Leverage is one of the solvency ratios, which is utterly popular among researchers. The total debt divided by equity ratios is in the use of capital structure components connected mutually. This ratio is called the debt-to-equity ratio (DER) proxy. DER is quantified by divide the total debt with total capital (Brigham & Houston, 2015, p. 452).

Public (2000) deployed proxy to measure intellectual capital. This measurement assumes the company's main resources effectiveness and usually measures regional efficiency past Croatia events. Intellectual capital can be supposed that traditional accounting is derived from cost control. Synchronously, value creation is gripping into account, and the business focuses on the long term. Business success indicators are profit, cash flow, market and leadership share, and revenue growth, deliver questions and notice its value creation for shareholders/owners. The knowledge base and value creation in the modern economy are closely related to investing. Knowledge is the main competitive tool, namely the leverage to increase human labor productivity and organizational value (Iazzolino & Laise, 2013). The nature of the value invention process (profit, the high price per share) relates to intangible forms of value invention, such as a good reputation and human resources investment. The VAIC™ component is a performance assessment that is supposed to happen in the modern economies involves counting the firm's main resources (Fijałkowska, 2014). This method prioritizes labor treatment as an entity for value added (VA); this describes the newly built wealth of a time. VA is separated into two sections, amount to human and structural capital (HC; SC). The two components use physical capital (CA) or the shortened by VACA in value added capital coefficient. VACA is quantified by divide value added with engaged physical capital (Tan et al., 2007).

The shareholder's desire to derive from the enterprise retained earnings for a look at a future period described by dividend policy. The flotation costs that appear appropriate to the sale of new stock occasion changes in share prices and influence dividend policy (Brigham & Houston, 2015, p. 345). The dividend policy can decide the share price and raises certainty about the shareholders' answers. Dividend policy measurement is widespread using the dividend payout ratio (DPR). The dividend policy can decide the share price and raises certainty about the shareholders' answers. Dividend policy measurement is widespread using the dividend payout ratio (DPR). DPR proxy is quantified by divide dividend with net income. (Titman, Keown, & Martin, 2013, p. 259).

Research studies explorations the audit quality model construct that uses audit firms' proxy measures. Good quality of audits is bringing out by list the PAF ever released research on audit quality and auditor size (DeAngelo, 1981; IAASB, 2014). Audit quality is an arrange recognition states that improving the standard of dimension reporting on the audit quality is an operation that is not constructed by the earnings management compensate of the auditor's propensity to going-

concern opinions (Svanström, 2013). The audit quality focuses more on input for the process than the PAF reporting by looking at the comprehensive particular lacking (Christensen, Glover, Omer, & Shelley, 2016). According to the Auditing Standard No. 2, the audit views the importance of disclosing the name of the engagement counterpart on the accountant public (AP) form to the audit quality engagement in detect weaknesses of materiality level in internal control in the context of the internal and external environment of the client (PCAOB, 2015). Furthermore, the rotation of PAF is essential in responding to problems that arise over audit findings to increase the entity's accountability and impact audit quality (Khorunzhak, Belova, Zavytii, Tomchuk, & Fabiianska, 2020). Thus, the reputation of the auditor or PAF is crucial to make good audit quality. The audit quality is quantified with divided a PAF with Big 4 and non-Big 4 categories. In particular of context in Indonesia because there is no difference in measurement using natural log fee audit (LNFE) proxy and Big 4 denominations (Husain & Syniuta, 2020).

2.2. Hypothesis development

The profitability of financial ratio based on prior research has linked imply with a firm's value. This standard is the easiest benchmark for investors to determine whether the firm's performance is good or bad as a signaling theory cue. Malik and Maqsood (2015) discovered that the net profit margin in measuring profitability positively impacts market capitalization but insignificant, representing one of the firm's values dimensions. Investor views the enterprise's performance from its profitability, so managers should focus on developing high growth opportunities to increase their market capitalization. Alsmairat et al. (2018) stated that the return on assets as a control firm's characteristics has positively impacted the excess value and insignificant, representing one of its firm's value proxy. Managers need to comprehend enterprises' characteristics in advanced and developing countries in the context of global diversification for identifying the better firm's value. Odum et al. (2019) found that the profit after tax in measuring profitability ratios positively impacts the firm and significant. Enterprise managers whose interest is to up the firm's value to create a positive climate for future investors and the desire to invest will increase. Endri and Fathony (2020) concluded that the return on assets in measuring profitability ratios also positively impacted its value and significance. This proxy plays a crucial role for a manager in maintaining a firm's sustainability and presents a firm's prospects to investors. Kadim et al. (2020), through these findings, show that the ROA proxy in measuring profitability has a positive effect on the firm's value but not insignificant. This condition is stimulating for enterprise managers to evaluate profitability as a benchmark in achieving a firm's performance. A good profitability ratio performance will increase the enterprise's benefits in the nowadays period as an asset return, which implies increasing firm value. In consequence, the first alternative hypothesis declaration as follows:

H1: A firm's value positively impacted by profitability ratio.

The solvency of financial ratio based on prior research has linked imply with a firm's value. This standard is also the benchmark for investors to determine whether the firm's performance has the ability to meet its debt obligations as a stakeholders theory, which management responsible to stakeholders in disclosing enterprises information about existence. Sayar et al. (2015) discovered that debt to total assets has negatively impacted the firm's performance and insignificance. These findings describe that obligations can degrade level shareholders by over-investment is cause the augmented risk of default and the increasing cost of borrowing due to low firm performance. Odum et al. (2019) stated that the total debt divides total assets in measuring solvency ratios positively impacts Tobin's Q score and significantly representing one of the firm's values dimensions. Hakim and Sunardi (2017), Kadim et al. (2020), Endri and Fathony (2020) found that the debt-to-equity ratio in measuring leverage also negative and positively impacted the firm's value and insignificance, which all of them used Tobin's Q proxy. These findings above describe leverage as one of the solvency ratios that identify how much debt the enterprises have for ownership that comes from the company and investors. A high solvency ratio performance will increase the enterprise's ability to source by third parties, and equity, which users can add working capital, implies increasing firm value. In consequence, the second alternative hypothesis declaration as follows:

H2: A firm's value positively impacted by solvency ratio.

The intellectual capital based on prior research has linked imply with a firm's value when an enterprise's manager as a firm's agent has the strength to create value added by utilizing the enterprise's resources, both human capital, physical capital, and structural capital - three elements in this stead which can boost the company's performance generally (Abdelrhman et al., 2014). Besides, knowledge-based generate of intellectual capital has more functions as an enterprise tangible assets and creates intellectual capital determinant of non-tangible assets (Fijakowska, 2014). In particular, the manager needs up-to-date technology and human resource roles to encounter Industry 4.0 and emerging market. Tan et al. (2007) give the initial evidence that VAICTM proxy of intellectual methods relates to companies' financial return. Hamdan (2018) discovered that HCE of value added intellectual elements has a statistically significant link towards market value, representing the Bahrain model with Tobin's Q proxy; this condition gives empirical proof of its importance intellectual capital approach in emerging market-based performance especially. Vitolla et al. (2019) found that the low quality of intellectual capital disclosure (ICD) in the integrated reports generates a return on equity, representing one of the firm performance dimensions. An investor can certainly and relevant information about intellectual capital disclosure, which minimizes the charge of accumulated private information while the regulator can judge the benefits and costs of ICD's arise. Kadim et al. (2020), through these findings, show that the VACA proxy of intellectual capital has no significant impact on the firm's value, so it a crucial to evaluate

this measurement. Nawi et al. (2020) also give a piece of empirical evidence, describe HCI in the internal context imply to the performance. An efficient firm's performance implied by HC from the VAICTM approach will be better if measuring a high score. In consequence, the third alternative hypothesis declaration as follows:

H3: A firm's value positively impacted by VACA.

Dividend policy is a tool that formulates one of the essential destination enterprises to shareholders, i.e., payment of dividends. These mechanisms become medium betwixt agent and principal as a coincident in agency theory. Malik and Maqsood (2015), Gunarathne et al. (2017), Hunjra (2018), Endri and Fathony (2019), Kadim et al. (2020) discovered that the payout ratio proxy positively impacts the market capitalization, market value, and firm's performance. Abdullah et al. (2018) found that the cash dividend and stock dividend proxies positively impact market capitalization and market value. Investors need to understand this discretion due to its influence on share prices to formalize a risk-minimal and safe investment framework. In contrast, Odum et al. (2019) state that the dividend payout ratio has no impact on a firm's value. A high payout ratio in dividend policy ability sign to improve shareholders' welfare and then implies increasing the firm's value. In consequence, the fourth alternative hypothesis declaration as follows:

H4: A firm's value positively impacted by dividend policy.

Audit quality is a tool for measuring public PAF in an audit task that is ultimately contained in the independent auditor's report. The Big 4 categorization measure has been widely used in academic circles for the last 20 years until nowadays. Sayyar et al. (2015) discovered that the natural log of audit fee in measuring audit quality positively impacts Tobin's Q proxies and significantly representing one of the firm's performance dimensions. Investor views the firm's performance from its audit quality to signal that enterprise who audited with good quality will increase market value. Alfraih (2016) found that an audit with four types of proxy of a Big 4 category has positively and significantly implied the value of accounting relevance, representing a market participant. In contrast, Alsmairat et al. (2018) stated that the financial industry's audit quality is no significant. Still, the non-financial industry is significant, and both of them have a positive towards the firm's value. The better audit quality will increase the stakeholders' trust in enterprises, which the Big 4 category proxy in prior research gives evidence as a positive and significant impact. In consequence, the fifth alternative hypothesis declaration as follows:

H5: A firm's value positively impacted by audit quality.

3. RESEARCH METHODOLOGY

The research using causal-comparative type, which is variable or between model-based on the quantitative approach, a design that presupposes establishing what is occasioning as far as specific factors are concerned (Salkind, 2010, p.124). The study population takes a part of fabricating enterprises of automotive and component

subsectors indexed of the IDX as the number of thirteen companies. The data type uses secondary data in annual and financial statements, i.e., profitability and leverage ratios obtained from the summary of reporting yearly. Intellectual capital takes from the notes to the statements of financial reporting, dividend policy makes use of section from the annual report, audit quality take from audit opinion the releasing of public accounting firms, and firm's value performed by enumerating from combining the calculation of market capitalization value by the IDX data report and also balance sheet financial statements.

The study deal with the time round between 2013 until 2019. Data collection methods use observation and documentation techniques facile from data achieved through ICMD, IDX, and every official website enterprise. The sampling technique takes in non-probability with the purposive method in consort with judgment is: 1) fabricating enterprises in subsectors of automotive and components have published annual reports consistently from 2013 to 2019, and 2) enterprise

use foreign currency units as reporting currency will be converted into Bank Indonesian's middle rate.

The initial sample was defined as thirteen companies. According to these sampling technique judgments, the amount of enterprise can be used as the sample is thirteen companies. Two companies were eliminated because due to conduct initial public offerings (IPO) in 2015, and one of the enterprises only released the annual report until 2017 in this surveillance. Therefore, the amount of research subject can be taken off eleven enterprises' so that the final sample is 77 observations (2013-2019 period) (IDX, <https://www.idx.co.id>). The summary measurement of variables is computed by variable name, proxies, the sign of alternative hypothesis, and reference of this calculated from the prior study literature. The overall data use ratio scale, except for measure audit quality variable, is dummy variables if the enterprise's audit by the public accounting firms, i.e., Big 4 category take the score "1" or vice versa while so, that calculates each of proxy compute as follow:

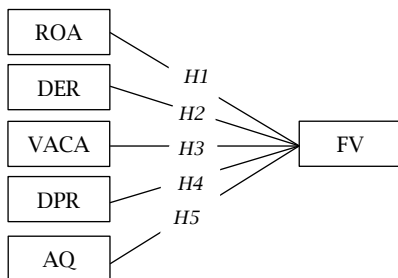
Table 1. Variable measuring

Variable	Proxies	Symbol abbreviation	Exegesis	
			Sign	Reference
Profitability	Return on assets	ROA	+/-	Heras, Canibano, and Moreira (2012), Hakim and Sunardi (2017), Ahmad et al. (2018), Hamdan (2018), Endri and Fathony (2020), Kadim et al. (2020).
Leverage	Debt-to-equity ratio	DER	+/-	Sayyar et al. (2015), Hakim and Sunardi (2017), Endri and Fathony (2020); Kadim et al. (2020).
Intellectual capital	Value added capital employee	VACA	+/-	Pulic (2000), Tan (2007), Iazzolino and Laise (2013), Fijałkowska (2014), Kadim et al. (2020).
Dividend policy	Dividend payout ratio	DPR	+/-	Malik and Maqsood (2015), Gunarathne et al. (2016), Alsmairat et al. (2018), Odum et al. (2019), Endri and Fathony (2020), Kadim et al. (2020).
Audit quality	Big 4 category	AQ	+/-	DeAngelo (1981), Heras et al. (2012), Svanström (2013), IAASB (2014), Alfraih (2016), Alsmairat et al. (2018), Husain and Syniuta (2020).
Firm's value	Tobin's Q	FV	+/-	Klapper and Love (2004), Sayyar et al. (2015); Hakim and Sunardi (2017), Hamdan (2018), Endri and Fathony (2020), Kadim et al. (2020).

Source: Summary of literature and previous study.

The entire data is inputted into a tabulation or worksheet that has been framed to get the final result of each of these measurement proxies. Hereinafter, each of these proxies is poured into a model. The research model constructs as follow:

Figure 1. Proposed research model



After the entire input data were complete, then proceed with data analysis. In this research, this analysis can be investigated with the regression technique to see a direct contribution and enormity assessment of firms' value empirical models. Regression initiate with descriptive statistical analysis utilizes to give a spread data overview, classical assumptions test as a requisite to

hypothesis testing ere, which this model must require all classical assumption tests to yield an estimated value trait, "BLUE", which abbreviates best, linear, unbiased, and estimator. This assumption can verify by sighting at the normality, linearity, and homoscedasticity of the variables by their residual scores. This research uses models to assess a firm's value using multiple regression analysis (Ghozali, 2017, p. 27). This equation for multiple regression is computed as follow:

$$FV = \alpha + \beta_1 ROA + \beta_2 DER + \beta_3 VACA + \beta_4 DPR + \beta_5 AQ + \varepsilon \dots \quad (1)$$

To analyze the empirical models of a firm's value in the impact of the independent variables tested, itemize each notation at the research result stage describe after passing the classical assumption test (Section 4).

4. FINDINGS

4.1. Descriptive summary

The descriptive summary view at 77 observation data for each of the variables yield as follows:

Table 2. Descriptive summary

<i>Variable (proxy)</i>	<i>χ-score</i>	<i>Min-score</i>	<i>Max-score</i>	<i>Std. dev. score</i>
ROA	0.0480	-0.1340	0.7160	0.1042
DER	1.0975	0.0713	8.260	1.1410
VACA	0.9514	-0.1650	11.7198	1.6942
DPR	0.2816	0	3.5464	0.4950
AQ	0.7100	0	1	0.4550
FV	1.1506	0.3390	4,2530	0.7409
Observation data = 77				

Source: Authors' elaboration.

Table 2 summarizes descriptive, including χ -score (mean), min-score (minimum), max-score (maximum), and standard deviation scores. Besides the dummy variable, AQ is analyzed at 71 percent, meaning mostly enterprise audited by PAF. The Big 4 category or vice versa only 29 percent audited by non-Big 4 PAF. The minimum and maximum ROA score about between minus 13.40 percent until 71.6 percent with a mean score of 4.8 percent and 10.42 percent of deviation while DER scores about between 0.0713 until 8.26 times with a mean score of 1.0975 times and 1.1410 times of deviation. The data above indicates that the average value of financial ratios has a fairly small deviation score on *profitability* while quite large on *leverage*. *Intellectual capital* with VACA has the minimum and maximum score between minus 0.1650 until 11.7198 with a mean score of 95.14 percent and 1.69 points of deviation.

The dividend policy with DPR proxy has the minimum and maximum score between zero until 3.5464 with a mean score of 28.16 percent and 49.50 percent deviation. The *firm's value* with Tobin's Q proxy has the minimum and maximum score between 0.3390 points until 4.2530, with a mean score of 1.1506 points and a 0.7409 deviation. The data above indicates that the average value of VACA, DPR, and Tobin's Q proxy has quite a large deviation score.

4.2. Estimate of classical assumptions test

The initial phase of completing the classical assumptions with normality verified using the One-Sample Kolmogorov-Smirnov technique in terms of the residual score, spread probability is less than 0.05.

Table 3. Normality tests

<i>Unstandardized residual</i>	<i>Score</i>
Kolmogorov-Smirnov Z	1.313
Probability sig.	0.064

Source: Authors' elaboration.

Table 3 states that the probability score for unstandardized residual is less than 0.05 points imply that the residual value has been complying with normality assumptions. Hereinafter, this phase will

include multicollinearity assumptions regarding the condition of variance inflation factors (VIF) score is less than 10 points, and the tolerance score is greater than 0.1.

Table 4. Summary multicollinearity tests

<i>Model</i>	<i>VIF score</i>	<i>Tolerance score</i>
ROA	1.195	0.837
DER	1.214	0.824
VACA	1.071	0.934
DPR	1.076	0.929
AQ	1.100	0.909

Source: Authors' elaboration.

Table 4 states that the VIF score for each of the prediction variables is less than 10 points. The tolerance score is more than 0.1 points for this model; imply that the regression model does not content multicollinearity matter betwixt the prediction variables. The heteroscedasticity test is

computed by replacing the absolute residual score (or Glejser's test) with the equation as follows:

$$|Ut| = \alpha + \beta_1 ROA + \beta_2 DER + \beta_3 VACA + \beta_4 DPR + \beta_5 AQ + vt \quad (2)$$

Table 5. Summary heteroscedastisity tests

<i>Independent variables</i>	<i>Significance score</i>	<i>Examine results</i>
ROA	0.000	< 0.05
DER	0.002	< 0.05
VACA	0.423	> 0.05
DPR	0.574	> 0.05
AQ	0.389	> 0.05
(Constant)	0.529	> 0.05

Source: Authors' elaboration.

Table 5 states that the general of independent variables result in more than 0.5 significant scores,

meaning that the regression model does not contain heteroscedasticity.

4.3. Assessment of appropriate models

The assessment of the appropriate model explains with a view the curve fitting technique in containing the firm's value empirical models (see Table 6).

Table 6 states that the linearity tests with a view of the curve fitting technique parsimony of

concepts approach, result in a choice model is linear with F-statistics score is more than 3.000 each of variable and the significance value is less than 0.05 generally (H_0 is rejected), so stated that a specification model is linear and can be continued to the hypothesis of tests.

Table 6. Summary assessment models (curve fitting technique)

Variables	Linearity tests (curve fitting technique)					
	Type of model (equation)	df1	df2	F-statistics	R ² score	Sig.
ROA	Linear	1	75	20.029	0.211	0.000
DER	S	1	75	6.444	0.079	0.013
VACA	S	1	75	3.049	0.039	0.085
DPR	Linear	3	73	6.923	0.221	0.000
AQ	Linear	1	75	14.030	0.158	0.000

Source: Authors' elaboration.

4.4. Hypothesis of tests

The initial phase of completing the test hypothesis is an assessment of the coefficient determination (R^2) is accomplished to predict the power of impact that transpires betwixt each of the independent variables toward the dependent variable, i.e., the firm's value. The assessment of the determination coefficients output program is as follows:

Table 7. Summary coefficient determination

	Coefficient R	Coefficient adjusted R ²
Model	0.607	0.324

Source: Authors' elaboration.

Table 7 states that the coefficient correlations (R) to sight link between financial ratios, *intellectual capital, dividend policy, and audit quality* with *firm's value* in this model result in an R score is 0.607. It indicates that 60.7 percent of the firm's value has robust. The coefficient determination test to predict a firm's value results in a coefficient determination (R^2) score is 0.324. This indicates that 32.4 percent of the *firm's value* is explained by financial ratios (*profitability and leverage*), *intellectual capital, dividend policy, and audit quality*. In comparison, the residualized 67.4 percent is influenced by distinct factors not put in the submitted model research. According to the summary of coefficient determination. This model explains the financial ratios (*profitability and leverage*), *intellectual capital, and dividend policy*, including *audit quality*, because it has a medium R^2 score. Hereinafter, the next phase of assessment F-tests yield output program as follows:

Table 8. Summary F-tests

F-tests	Score
df1	5
df2	71
Sum of squares	15.380
Mean square	3.076
F-statistics	8.291
Sig.	0.000

Source: Authors' elaboration.

Table 8 states that the summary of the ANOVA test for predict the *firm's value* simultaneously results in an F-statistics score is 15.380. Compared with the F-table at (df5 = 2, df2 = 71) on alpha is 0.05 yields a known F-table score is 2.34368.

The F-statistics score is 15.380 more than F-table (2.34368). The result produces a significant level of less than 0.05 (0.000, H_0 is rejected) so that can be concluded that financial ratios, intellectual capital, dividend policy, and audit quality simultaneously predictable the firm's value. The last phase of assessment T-tests yield output program as follows:

Table 9. Summary T-tests

Independent variable	T-tests		
	Coefficients (β)	Sig. probability	Hypothesis statement
ROA	3.335	0.000	Accept H_1
DER	0.029	0.668	Reject H_2
VACA	0.034	0.433	Reject H_3
DPR	0.073	0.618	Reject H_4
AQ	0.636	0.000	Accept H_5
(Constant)	0.452	0.009	

Source: Authors' elaboration.

The result of the multiple regression equation stated as follows:

$$FV = 0.452 + 3.335ROA + 0.029DER + 0.034VACA + 0.073DPR + 0.636AQ \quad (3)$$

Table 9 states that the T-test summary for predicting the firm's value empirical model partially produces a constant value is 0.452. This means that if FV is well-thought-of constant, then the determinant is appointed at 0.452 of the points. ROA to quantify the *profitability* of financial ratios has $\beta_1 = 3.335$, which significant probability score is less than 0.05, i.e., 0.000. This finding represents a positive solid impact between *profitability* and a *firm's value* and significant result, as the meaning accepted first alternative hypothesis (H_1). DER to quantify the *leverage* of financial ratios has $\beta_2 = 0.029$, which significant probability score is more than 0.05, i.e., 0.668. This finding represents a positive weak impact between *leverage* and a *firm's value* and insignificant result, as the meaning rejected the second alternative hypothesis (H_2). $VACA$ to quantify the human capital of intellectual capital has $\beta_3 = 0.034$, which significant probability score is more than 0.05, i.e., 0.433. This finding represents a positive weak impact between *intellectual capital* and a *firm's value* and insignificant result, as the meaning rejected the third alternative hypothesis (H_3). DPR to quantify the payout ratio of dividend policy has $\beta_4 = 0.073$, which significant probability score is more than

0.05, i.e., 0.618. This finding represents a positive weak impact between *dividend policy* and a *firm's value* and insignificant result, as the meaning rejected the fourth alternative hypothesis (*H4*). *AQ* to quantify public accounting firms as an audit quality produced has $\beta_5 = 0.636$, which significant probability score is less than 0.05, i.e., 0.000. This finding represents a positive solid impact between *audit quality* and a *firm's value* and significant result, as the meaning accepted the fifth alternative hypothesis (*H5*).

5. DISCUSSION

The impact of financial ratios on firm's value

The multiple regression for first predict model firm's value as an empirical yield discover the positive impact and significance points. This finding approves with several studies that Alsmairat et al. (2018), Odum et al. (2019), and Endri and Fathony (2020) each of excess value, profit after tax, and return on assets (ROA). This yield confirms the agency theory and suggests that profitability can reduce conflict of interest betwixt agents and shareholders in maximizing the firm's value through the expectation of a certain level of return. While this yield cannot confirm several studies that Malik and Maqsood (2015) make use of net profit margin proxy, Hakim and Sunardi (2017) and also Kadim et al. (2020) of them use ROA proxy. The greater the ROA ratio that is owned, the enterprise is getting better at knowing the efficiency level in the enterprises operations makes a profit. The second prediction model, firm's value, discovers the positive impact and insignificance points as an empirical yield. This finding no approves that research of Odum et al. (2019) utilize the total debt in the solvency ratio's proxy (DR), but confirming several studies that Sayyar et al. (2015), Hakim and Sunardi (2017), Kadim et al. (2020) and also Endri and Fathony (2020) with insignificance impact use Tobin's Q proxy. This yield cannot confirm the stakeholders theory and suggests that leverage does not become a prediction in increasing a firm's value. In emerging market enterprises, such as Indonesia, a fabrication of sub-sectors automotive and components industry may have high risk. Long-term investors will be very interested in this profitability ratio analysis that describes a business attractiveness. Many factors are a problem in analyzing a firm's value in analyzing stock price movements, such as low enterprise profitability and, on the one hand, the increased company risk (Hakim & Sunardi, 2017). Firm assets are resources controlled by the enterprise, provide future economic benefits, make productive contributions, and are part of its operational activities that will be utilized very carefully. Besides, leverage in enterprise funding also requires business expansion to increase a long-term firm's value, although it has many risks. Naturally, it will reduce the level of shareholders investment when there is a significant increase in default risk due to low firm's performance (Sayyar et al., 2015). In this study, a solvency ratio no always takes the determination for the firm's value. Enterprises may add working capital but retain such a firm value no always from the third parties. They can still obtain earnings, which return on assets yield a positive and strong significant impact.

The impact of intellectual capital on firm's value

The multiple regression for first predict model firm's value as an empirical yield discover the positive impact and significance points. This yield disagrees with stakeholders theory: intellectual capital utilizing human resources will bring employees explicit knowledge as intangible assets to increase the firm's value as an empirical model. These findings are contrary to all several studies that: 1) Abdelrhman et al. (2014) give a piece of empirical evidence that human capital, physical capital, and structural capital can boost the enterprise's performance generally; 2) Hamdan et al. (2018), through human capital employees, has an association in line with market-based performance with Tobin's Q proxy; 3) Vitolla et al. (2019), through intellectual disclosure quality and the firm's performance with return on equity (ROE) proxy; 4) Nawi et al. (2020), through high positive significance from the human capital investment with the lecturer perceptions approach. On the other hand, these findings only confirming studies that Kadim et al. (2020) utilize of the VACA proxy with insignificant impact on the firm's value, which is also used Tobin's Q proxy. In developing market companies, such as Indonesia, the automotive subsector fabrication and the component industry have not fully exploited the human capital part in the context of intellectual capital. This way is planned to serve information about the efficiency of value creation of tangible and intangible assets in an enterprise during operations need extra performance by managements (Tan et al., 2007), which may entail many periods and the implementation of the Industry 4.0 in Indonesia. On the other hand, it is obligatory to lengthen the performance measurement tool with a non-financial measurement oncoming (Fijałkowska, 2014). Humans are assets and become cling the principal for business people and technology assist in upgrading a firm's as employ three intellectual capital part, i.e., VACA, VAHU, and STVA, which are indissociable entities (IIRC, 2015). A value added capital employee as an intellectual capital proxy in this research has a positive but insignificant implies to the empirical model of a firm's value.

The impact of dividend policy on firm's value

The multiple regression for first predict model firm's value as an empirical yield discover the positive impact and significance points. This yield approves with the dividend irrelevance hypothesis theory by Miller and Modigliani (1961) that the benefits obtained will be hand out in the dividends enterprise or nature will withstand does not implication towards firm's value. These findings are contrary to all several studies: 1) Malik and Maqsood (2015) give a piece of empirical evidence that the dividend policy role in link betwixt financial ratios and earned equity implication as movement payout dividend in positive and significant towards a firm's value; 2) Hunjra (2018) appoints that decisions on dividend policy formularization to reach the ultimate organizational fruitfully and objective can effectively serve value creation; 3) Endri and Fathony (2020) are also portraying the role of management when set to give dividends to shareholders, where small companies lean to pay dividends in low shares, and the residual will be re-invested in equity component, which indirect implication towards the stock price;

4) Kadim et al. (2020), through empirical evidence, that modeling with dividend proxy can suffice to appraise the enterprise's dividend rules. In developing companies, such as Indonesia, the automotive subsector fabrication and the component industry do not exploit the dividend ratio in the context of increased firm value. This sector is the heavy industry might to low payment obligations business for decrease business risk, especially encounter emerging market for going-concern in the Industry 4.0 era sustainability enterprises. The yield of retained earnings value will re-invest for the promises a high return on the firm's performance. Besides, Gunarathne et al. (2017) confirm this study; the link betwixt the nowadays ratio and previous dividend period proxy implications for stock price volatility through positive and negative relationships are also insignificant. Furthermore, Odum et al. (2019) utilize of dividend payout ratio proxy. The greater the payment of the dividends to shareholders, the more potential to bring the extra funds used to expand the enterprises as reinvestment. The retained earnings are an internal fountain of capital that can be used to finance firm activities. Consequently, the lower retained earnings will reduce the company's ability to obtain any benefits, minimizing dividend accretion. A dividend payout ratio as a dividend policy proxy in this research has a positive but insignificant implies to the empirical model of a firm's value.

The impact of audit quality on firm's value

The multiple regression for first predict model firm's value as an empirical yield discover the positive impact and significance points. This yield approves by several studies that Sayyar et al. (2015), Alfraih (2016), and Alsmairat et al. (2018), which fee audit and Big 4 categories of PAF in assessing to firm's value and relevance accounting measurement. These findings are supported in agency theory, which stated that high audit quality might reduce conflict of interest betwixt agent and principal through agency cost. This funding is outlined in one of the policies. Choosing a PAF is a good reputation, such as the Big 4 category, which is strengthened from the descriptive data analyzed at 71 percent use of Big 4 PAF. According to the International Auditing and Assurance Standards Board (IAASB, 2014, p. 12), the involved audit standards and necessities for PAF internal control must utilize information technology appropriately and sound management planning to achieve an effective and efficient audit process, which can fulfill a good audit quality. A good quality control system is needed for the audit process to better the quality of audit treatment. It uses auditors' certifications by international standards that many PAF has in the Big 4 category (Khorunzhak et al., 2020). This sector is the heavy industry still the PAF Big 4 category because of complexity business operational as need source of the auditor has the competence, task-experience from large-scale enterprises and professional judgment to decide in the make decision of audit reporting phase and also high fee audit. The selection of audit quality in this study will increase public trust, especially the minor share and independent institution ownership for taking side towards stakeholders in monitoring to management as an agent. In Indonesia's context because there is no difference in the empirical study of measurement

using natural log fee audit (LNFE) proxy and Big 4 denominations from an enterprise which conducting the IPO (Husain & Syniuta, 2020). A Big 4 category as an audit quality proxy in this research positively and significantly implies the empirical model of a firm's value.

6. CONCLUSION

This study aims to establish the impact of an empirical model of a firm's value through some determinant factors, i.e., financial ratios with profitability and leverage, intellectual capital with human capital employment, the dividend policy, and audit quality with Big 4 category proxy. The study takes part in fabricating enterprises of automotive and component sub-sectors indexed of the IDX as the final sample of 77 observation data from 2013 until 2019. The yield statistic program empirical utilize of regression analysis has a determinant coefficient of 32.4 percent yield. Its meaning has a medium impact score describing the determinant factors of them to measure a firm's value - also, relation the betwixt of these factors quite high of 60.7 percent. The empirical evidence exhibits a positive of a firm's value model impact from simultaneously test in this regression analysis with a significant probability as financial ratios use return on assets proxy in quantifying probability. Unfortunately, leverage ratio with debt-to-equity denominator has insignificant implies. Intellectual capital with human capital dimensions is a value added capital employee (VACA) proxy that cannot predict an empirical model of a firm's value with insignificant yield probability. The dividend policy with dividend payout ratio proxy also fails to predict the empirical model of a firm's value with an insignificant result of probability. Meanwhile, audit quality with Big 4 proxy has a significant probability in predict the empirical firm's value model.

This study has some restrictions. The index score measurement of firm's value empirical model utilizes Tobin's Q proxy according to calculate from the calculation of market capitalization value and financial reports since current and previous research only involve the part in manufacturing, i.e., enterprises of automotive and component subsectors indexed in the IDX. While this proxy many uses from prior research, several factors fail to predict leverage, intellectual capital, and another in Indonesia's emerging market. This study's number of sample enterprises is restricted because of the focus on developing the Industry 4.0, based on optimism GAIKINDO and Indonesia Government on the passengers' automobile trading target wheels in an emerging market and implement of IFRS since 2013.

Hereafter, studies can utilize adding another sector at least in manufacturing enterprise by basic and chemical industry, various industries, and consumer goods industry, especially having a complex business or the large scale of firm size. Future studies may take another sample out of enterprises listed on emerging markets, such as Southeast Asia or Africa. The research yields become more representative describe the firm's value an empirical model for the next study is better. Further research may apply another proxy in intellectual capital; the overall VAIC™ approach consists of value added capital employed (VACA), value added human capital (VAHU), and structural capital value added (STVA), and several guidelines

from challenge and solution for the digital transformation from many kinds of literature for formulating another intellectual capital proxy, and also another proxy to measure audit quality, such as audit fee, audit tenure, auditor changing, characteristics of firms (client) and another, especially in firm's value model empirical better.

The Indonesian Institute of Certified Public Accountants (IAPI) can become these findings as material in evaluating a framework for engagement to the PAF in an audit standard (SA 200), about the overall objectives of independent auditors and conducting audits based on audit standard and

another rule can support in creating a value of audit quality. Besides, IAPI must identify more early in the practices PAF of or enterprise, which involve accounts in a specific accounting cycle for the narrow down opportunity of firm increase firm's value through bad accounting practices. Hereinafter, these findings can add literature empirical as a reference stakeholder in deciding framework of investment, especially based on return on assets (ROA) and audit quality (Big 4 category), which significantly implication a firm's value model empirical by academics.

REFERENCES

1. Abdelrhman, A. N., Labib, K. Z., & Elbayoumi, A. F. (2014). Measuring audit firms' intellectual capital as a determinant of audit quality: A suggested model. *Journal of Modern Accounting and Auditing*, 10(1), 59-79. Retrieved from https://scholar.cu.edu.eg/sites/default/files/amrnameeb/files/6-measuring_audit_firms_intellectual_capital_as_a_determinant_of_audit_quality_a_suggested_model.pdf
2. Abdullah, M. N., Quader, S. M., & Saha, J. (2018). Impact of payout policy on market value. *International Review of Business Research Papers*, 14(1), 109-131. <https://doi.org/10.21102/irbrp.2018.03.141.07>
3. Ahmad, N. G., Barros, V., & Sarmiento, J. M. (2018). The determinants of dividend policy in Euronext 100. *Corporate Ownership & Control*, 15(4), 8-17. <https://doi.org/10.22495/cocv15i4art1>
4. Alfraih, M. M. (2016). The role of audit quality in firm valuation: Evidence from an emerging capital market with a joint audit requirement. *International Journal of Law and Management*, 58(6), 575-598. <https://doi.org/10.1108/IJLMA-09-2015-0049>
5. Alsmairat, Y. Y. Y., Yusoff, W. S., Md Salleh, M. F., & Basnan, N. (2018). International diversification, audit quality and firm value of Jordanian public listed firm. *Journal of Corporate Finance*, 22(1). Retrieved from <https://www.abacademies.org/articles/international-diversification-audit-quality-and-firm-value-of-jordanian-public-listed-firm-7095.html>
6. Bertram, N., Fuchs, S., Mischke, J., Palter, R., Strube, G., & Woetzel, J. (2019). *Modular construction: From projects to products*. Retrieved from <https://www.mckinsey.com/business-functions/operations/our-insights/modular-construction-from-projects-to-products>
7. Brigham, E., & Houston, J. (2015). *Fundamentals of financial management* (14th ed.). Boston, MA: Cengage Learning.
8. Christensen, B. E., Glover, S. M., Omer, T. C., & Shelley, M. K. (2016). Understanding audit quality: Insights from audit professionals and investors. *Contemporary Accounting Research*, 33(4), 1648-1684. <https://doi.org/10.1111/1911-3846.12212>
9. DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183-199. [https://doi.org/10.1016/0165-4101\(81\)90002-1](https://doi.org/10.1016/0165-4101(81)90002-1)
10. Deloitte. (2018). *Preparing tomorrow's workforce for the Fourth Industrial Revolution. For business: A framework for action*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-preparing-tomorrow-workforce-for-4IR.pdf>
11. Deloitte Insights. (2020). *Industry 4.0 in automotive: Digitizing the end-to-end automotive value chain*. Retrieved from https://www2.deloitte.com/content/dam/insights/us/articles/automotive-news_industry-4-0-in-automotive/DL_Automotive-News-Supplement.pdf
12. Driver, C., Grosman, A., & Scaramozzino, P. (2020). Dividend policy and investor pressure. *Economic Modelling*, 89, 559-576. <https://doi.org/10.1016/j.econmod.2019.11.016>
13. Endri, E., & Fathony, M. (2020). Determinants of firm's value: Evidence from financial industry. *Management Science Letters*, 10, 111-120. <https://doi.org/10.5267/j.msl.2019.8.011>
14. Fijałkowska, J. (2014). Value added intellectual coefficient (VAIC™) as a tool of performance measurement. *Przedsiębiorczość i Zarządzanie/Entrepreneurship and Management*, 15(1), 129-140. <https://doi.org/10.2478/eam-2014-0010>
15. Firmansyah, A., & Estutik, R. S. (2020). Environmental responsibility performance, corporate social responsibility disclosure, tax aggressiveness: Does corporate governance have a role? *Journal of Governance and Regulation*, 9(4), 8-24. <https://doi.org/10.22495/jgrv9i4art1>
16. GAIKINDO. (2018). *GAIKINDO optimistis penjualan mobil 2018 capai 1,1 juta unit*. Retrieved from <https://www.gaikindo.or.id/gaikindo-optimistis-penjualan-mobil-2018-capai-11-juta-unit/>
17. Ghozali, I. (2017). *Aplikasi analisis multivariate dengan program: IBM SPSS 23* (8th ed.). Semarang, Indonesia: Badan Penerbit Universitas Diponegoro.
18. Gitman, L. J., & Zutter, C. J. (2015). *Principles of managerial finance* (14th ed.). Boston, MA: Prentice Hall.
19. Gunarathne, U. G. V. D. D., Priyadarshanie, W. A. N., & Samarakoon, S. M. R. K. (2016). Impact of dividend policy on stock price volatility and market value of the firm: Evidence from Sri Lankan manufacturing companies. *Corporate Ownership & Control*, 13(3-1), 219-225. <https://doi.org/10.22495/cocv13i3c1p8>
20. Hakim, L., & Sunardi, N. (2017). Determinant of leverage and its implication on company value of real estate and property sector listing in IDX period of 2011-2015. *Man in India*, 97(24), 131-148. Retrieved from <http://repository.upi-yai.ac.id/1766/>
21. Hamdan, A. (2018). Intellectual capital and firm performance: Differentiating between accounting-based and market-based performance. *International Journal of Islamic and Middle Eastern Finance and Management*, 11(1), 139-151. <https://doi.org/10.1108/IMEFM-02-2017-0053>
22. Heras, E. d. L., Canibano, L., & Moreira, J. A. (2012). The impact of the Spanish Financial Act (44|2002) on audit quality. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad*, 41(156), 521-526. <https://doi.org/10.1080/02102412.2012.10779734>
23. Hill, C. W. L., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies*, 29(2), 131-154. <https://doi.org/10.1111/j.1467-6486.1992.tb00657.x>

24. Hunjra, A. I. (2018). Mediating role of dividend policy among its determinants and organizational financial performance. *Cogent Economics & Finance*, 6(1), 1-16. <https://doi.org/10.1080/23322039.2018.1558714>
25. Husain, T., & Syntiuta, A. (2020). Audit fee and "The Big-Four": A comparative study at Initial Public Offerings (IPO) companies in Indonesia Stock Exchange (IDX). *Multidisciplinary European Academic Journal*, 2(4), 1-7. Retrieved from https://www.researchgate.net/publication/344228558_Audit_Fee_and_The_Big-Four_A_Comparative_Study_at_Initial_Public_Offerings_IPO_Companies_in_Indonesia_Stock_Exchange_IDX
26. Iazzolino, G., & Laise, D. (2013). Value added intellectual coefficient (VAIC): A methodological and critical review. *Journal of Intellectual Capital*, 14(4), 1469-1930. <https://doi.org/10.1108/JIC-12-2012-0107>
27. International Auditing and Assurance Standards Board (IAASB). (2014). *A framework for audit quality: Key elements that create an environment for audit quality*. Retrieved from <https://www.iaasb.org/publications/framework-audit-quality-key-elements-create-environment-audit-quality-3>
28. International Federation of Robotics (IFR). (2017). *Executive summary world robotics 2017 industrial robots*. Retrieved from https://ifr.org/downloads/press/Executive_Summary_WR_2017_Industrial_Robots.pdf
29. Iqbal-Hussain, H., Shamsudin, M. F., Ali, A., Salem, M. A., Sajilan, S., Rahman, N. A., & Ani, N. (2015). Agency problems and its impact and relevance on firms borrowings. *Review of Integrative Business and Economics Research*, 4(3), 272-282. Retrieved from <https://ssrn.com/abstract=2735298>
30. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
31. Kadim, A., Sunardi, N., & Husain, T. (2020). The modeling firm's value based on financial ratios, intellectual capital and dividend policy. *Accounting*, 6(5), 859-870. <https://doi.org/10.5267/j.ac.2020.5.008>
32. Kementerian Perindustrian. (2017, November 28). *Produsen otomotif nasional terapkan sistem industri 4.0*. Retrieved from <https://kemenperin.go.id/artikel/18487/Produsen-Otomotif-Nasional-Terapkan-Sistem-Industry-4.0>
33. Khorunzhak, N., Belova, I., Zavytii, O., Tomchuk, V., & Fabiianska, V. (2020). Quality control of auditing: Ukrainian prospects. *Independent Journal of Management & Production (IJM&P)*, 11(8), 712-726. <https://doi.org/10.14807/ijmp.v11i8.1229>
34. Klapper, L. F., & Love, I. (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, 10(5), 703-728. [https://doi.org/10.1016/S0929-1199\(03\)00046-4](https://doi.org/10.1016/S0929-1199(03)00046-4)
35. Koutsoyiannis, A. (1982). The dividend-retention decision of the firm. In *Non-price decisions* (pp. 414-457). London, UK: Palgrave. https://doi.org/10.1007/978-1-349-16729-6_9
36. Malik, M. S., & Maqsood, M. (2015). Impact of changes in dividend policy on firm's value: A case study of cement sector of Pakistan. *Journal of Basic Sciences and Applied Research*, 1(4), 41-52. Retrieved from [https://www.textroad.com/pdf/JBSAR/J.%20Basic%20Sci.%20Appl.%20Res.%201\(4\)41-52,%202015.pdf](https://www.textroad.com/pdf/JBSAR/J.%20Basic%20Sci.%20Appl.%20Res.%201(4)41-52,%202015.pdf)
37. Miller, M., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business*, 34(4), 411-433. <https://doi.org/10.1086/294442>
38. Nawi, F. A. M., Tambi, A. M. A., Samat, M. F., & Baistaman, J. (2020). Human capital investment (HCI) determinants affecting the institution's performance: The practicality of partial least squares structural equation modelling (PLS-SEM) approach. *Humanities & Social Sciences Reviews*, 8(2), 175-183. <https://doi.org/10.18510/hssr.2020.8221>
39. Odum, A. N., Odum, C. G., Omeziri, R. I., & Egbunike, C. F. (2019). Impact of dividend payout ratio on the value of firm: A study of companies listed on the Nigerian Stock Exchange. *Indonesian Journal of Contemporary Management Research*, 1(1), 107-119. <https://doi.org/10.33455/ijcmr.v1i1.84>
40. Pardi, T. (2019). Fourth industrial revolution concepts in the automotive sector: Performativity, work and employment. *Journal of Industrial and Business Economics*, 46, 379-389. <https://doi.org/10.1007/s40812-019-00119-9>
41. Public Company Accounting Oversight Board (PCAOB). (2015). *Concept release on audit quality indicators* (PCAOB Release No.2015-005). Retrieved from https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/rulemaking/docket_041/release_2015_005.pdf?sfvrsn=de838d9f_0
42. Pulic, A. (2000). VAIC™ - an accounting tool for IC management. *International Journal of Technology Management*, 20(5-6-7-8), 702-714. <https://doi.org/10.1504/IJTM.2000.002891>
43. Roblek, V., Meško, M., & Krapež, A. (2016). A complex view of industry 4.0. *SAGE Open*, 6(2), 1-11. <https://doi.org/10.1177/2158244016653987>
44. Salkind, N. J. (2010). *Encyclopedia of research design*. <https://doi.org/10.4135/9781412961288>
45. Sayyar, H., Basiruddin, R., Abdul Rasid, S. Z., & Elhabib, M. A. (2015). The impact of audit quality on firm performance: Evidence from Malaysia. *Journal of Advanced Review on Scientific Research*, 10(1), 1-19. Retrieved from http://www.akademiabaru.com/doc/ARSRV10_N1_P1_19.pdf
46. Sundaresan, S. (2013). A review of Merton's model structure with its wide applications. *Annual Review of Financial Economics*, 5, 21-41. <https://doi.org/10.1146/annurev-financial-110112-120923>
47. Svanström, T. (2013). Non-audit services and audit quality: Evidence from private firms. *European Accounting Review*, 22(2), 337-366. <https://doi.org/10.1080/09638180.2012.706398>
48. Tan, H. P., Plowman, D., & Hancock, P. (2007). Intellectual capital and financial returns of companies. *Journal of Intellectual Capital*, 8(1), 76-95. <https://doi.org/10.1108/14691930710715079>
49. Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40-49. <https://doi.org/10.1016/j.lrp.2017.06.007>
50. The International Integrated Reporting Council (IIRC). (2015). *Creating value: The value of human capital reporting*. Retrieved from <https://integratedreporting.org/resource/creating-value-the-value-of-human-capital-reporting/>
51. Titman, S., Keown, A. J., & Martin, J. D. (2013). *Financial management: Principles and applications* (12th ed.). Boston, MA: Prentice Hall.
52. Veltri, S., & Silvestri, A. (2017). Investing in human capital: An analysis of the mismatch between theoretical claim and managerial behaviour. *International Journal of Knowledge-Based Development (IJKBD)*, 8(1), 5-23. <https://doi.org/10.1504/IJKBD.2017.082432>
53. Vitolla, F., Raimo, N., & Rubino, M. (2019). Intellectual capital disclosure and firm performance: An empirical analysis through integrated reporting. Paper presented at the *7th International OFEL Conference on Governance, Management and Entrepreneurship: Embracing Diversity in Organisations*. A Retrieved from <https://www.econstor.eu/bitstream/10419/196084/1/ofel-2019-p245-255.pdf>