



Improving Understanding of Sharia Investment in the PAC Fatayat Metro Utara Community, Metro City

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KEYWORDS

I understand Islamic Investment, PAC Fatayat Metro Utara, Edukasi Investasi, Investment Fraud, and Sharia investment.

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ABSTRACT: In Indonesia, there are two primary investment forms: conventional and sharia. Many people do not understand the difference between the two. Sharia investment is an investment that is based on Islamic principles and laws. This study aims to improve the understanding of sharia investment in the PAC Fatayat Metro Utara community in Metro City. Currently, many community members do not understand the concept of sharia investment properly, so they are still vulnerable to investment fraud that is not legally clear and promises large profits in a short time. Awareness of the importance of investment as long-term savings that can provide benefits in the future needs to be increased. This is important so that people are not easily fooled by investment offers that have been rampant lately, especially investments that claim to be Sharia-based but are not by Islamic principles. This study found that the PAC Fatayat Metro Utara community's understanding of sharia investment is still very minimal. Therefore, more intensive education and socialization are needed so that this community can recognize and choose investments based on Sharia principles and avoid fraudulent investments. By increasing public understanding, especially among the PAC Fatayat Metro Utara community, it is hoped that the number of investment fraud victims under Sharia's guise can be minimized. Proper education will have a long-term positive impact on the economic welfare of society.

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1. INTRODUCTION

Investment is one way to improve the economic welfare of the community. In Indonesia, there are two primary forms of investment: conventional and sharia (Ghazali, 2015; Kasim, 2014). Sharia investment is a type of investment carried out by Islamic principles and laws, which prohibit usury (interest), gharar (uncertainty), and maysir (speculation). However, many do not understand the fundamental differences between conventional and sharia investments. This results in low public participation in Sharia investment, which can be a safe and profitable alternative. Sharia investment has become an increasingly relevant and vital topic among Indonesian people, especially in the Muslim community. Unlike conventional investment, Sharia investment has advantages in transparency, compliance with Islamic principles, and business ethics.

Previous research by [Ahmad and Suryani \(2018\)](#) showed that Sharia investment tends to be more stable and low-risk than conventional investment because it does not involve usury (interest) and excessive speculation. In addition, a study by [Mufidah \(2019\)](#) revealed that investors who participate in sharia investments feel calmer and more confident because their investments are halal and by religious teachings.

However, despite having various advantages, the community's understanding of Sharia investment still needs to be improved. This is evidenced by research conducted by [Lestari and Wicaksono \(2020\)](#), which found that 65% of respondents did not fully understand the concept and mechanisms of sharia investment. These results indicate a significant knowledge gap that needs to be addressed through more intensive education and socialization. In the context of the PAC Fatayat Metro Utara community, this study is critical considering that many community members are still vulnerable to investment fraud under the guise of sharia, which is not by Islamic principles ([Frey, 1996; Liu, 2013; Ma, 2018](#)).

This study aims to fill this knowledge gap by providing comprehensive education about Sharia investment. Through a structured and evidence-based approach, it is hoped that the understanding and awareness of members of the PAC Fatayat Metro Utara community can increase so that they can make smarter investment decisions that are by Sharia principles ([Alvizu, 2017; Chameides, 1994; L. Zhao, 2018](#)). Thus, this study not only contributes to the academic literature on sharia investment but also has a positive impact on the economic welfare of the local community.

Previous studies have shown that a low understanding of Sharia investment often causes people to be easily deceived by fraudulent investments that claim to be Sharia-based. For example, research by [Nurhayati et al. \(2018\)](#) found that lack of financial education and literacy is one of the main causes of the many victims of investment fraud in Indonesia ([Barnet, 2009; Creti, 2014; Stroz, 2001](#)). In addition, a study by [Azizah \(2017\)](#) also showed that people's lack of understanding of the concept and mechanism of Sharia investment makes them vulnerable to fraud that offers high returns without paying attention to the legal aspects and Sharia principles.

Another challenge faced in previous studies is the lack of socialization and education regarding sharia investment, especially among small communities. For example, research conducted in several communities in Central Java showed that although there was interest in investing, people's knowledge and understanding of Sharia investment was still very limited ([Riyadi, 2019](#)). This shows the importance of more in-depth research and more intensive educational efforts to improve people's understanding of Sharia investment ([Krapp, 1999; Lindsay, 2007; Tănase, 2015](#)).

This study focuses on the PAC Fatayat Metro Utara community in Metro City, which is a community whose members are mostly housewives and career women. This community is vulnerable to investment offers that are not legally clear due to a lack of understanding and financial literacy. Therefore, this study aims to improve the understanding of sharia investment among members of the PAC Fatayat Metro Utara community through appropriate education and socialization ([Cicarelli, 2012; Ji, 2018; Sohn, 2010](#)). Thus, it is expected to reduce the number of victims of investment fraud and improve the economic welfare of the community in the community. Sharia investment as a form of investment that is by Islamic principles and laws, offers a more ethical and equitable alternative for the Muslim community in Indonesia. However, the main challenge faced in implementing Sharia investment is the lack of understanding and education among the community, especially in small communities. Previous research, such as conducted by [Riyadi \(2019\)](#) in several communities in Central Java, showed that although there is interest in investing, people's knowledge and understanding of sharia investment is still very limited. This emphasizes the importance of more intensive educational efforts to improve financial literacy and understanding of Sharia investment.

This study focuses on the PAC Fatayat Metro Utara community in Metro City, whose members are mostly housewives and career women. This community is vulnerable to investment offers that are not legally clear, often due to a lack of understanding of the concept and principles of Sharia investment. Without adequate understanding, members of this community can become victims of investment fraud that promises large profits in a short time but does not meet sharia principles and clear legality ("[Investment Fraud: The Cockroaches of Finance](#)," 2016; [Y. Wang, 2019; Yin, 2021](#)). Therefore, this study aims to improve

the understanding of sharia investment among members of the PAC Fatayat Metro Utara community through a comprehensive education and socialization program.

With the right education, it is hoped that members of the PAC Fatayat Metro Utara community can recognize and choose investments that are by sharia principles, and avoid fraudulent investments (Florida, 2009; Gainsborough, 2003; Piekarski, 2001). This increased understanding will not only help reduce the number of victims of investment fraud but also contribute to the long-term economic welfare of the community. Good financial literacy will enable community members to make wiser and more sustainable investment decisions, thereby improving the economic stability of their families. This research is also expected to be a model for other communities to improve their understanding of Sharia investment in Indonesia.

2. METHOD

This research method uses a qualitative approach with a descriptive design. This approach was chosen because it allows researchers to dig up in-depth information about the understanding of sharia investment in the PAC Fatayat Metro Utara community (Coletti, 2011; Jianfeng, 2013; Nashiruddin, 2022). The following are the systematic steps taken in this study, accompanied by empirical evidence from previous studies that support this methodology.

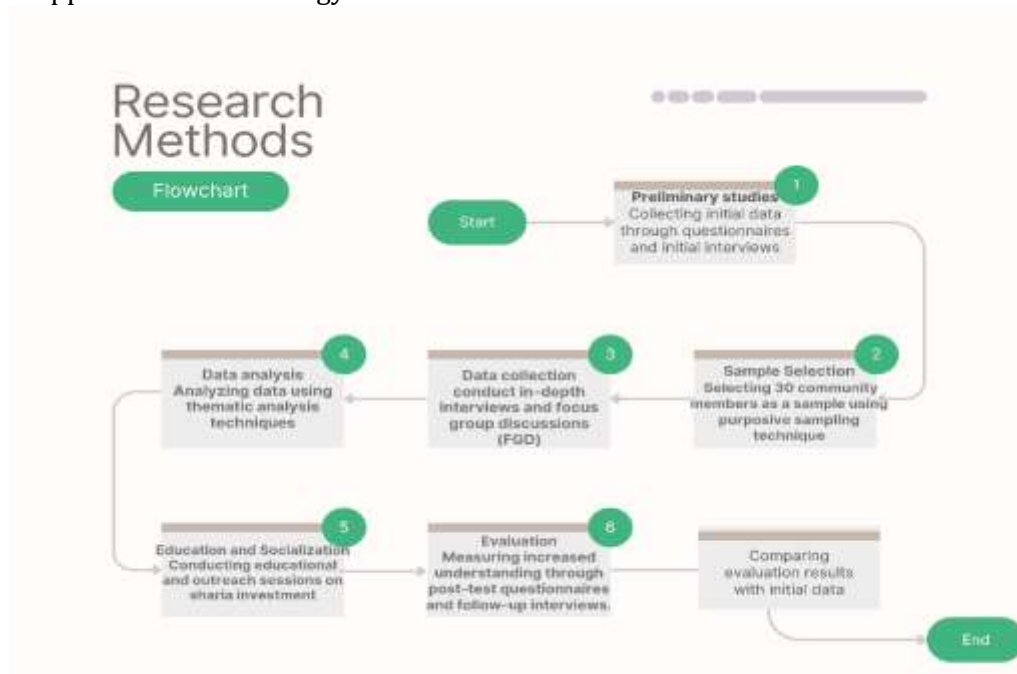


Figure 1. describes a systematic sequence of steps in research on understanding Sharia investment in the PAC Fatayat Metro Utara community

- 1. Preliminary Study:** At this stage, the researcher collected initial data on the level of understanding of sharia investment in the PAC Fatayat Metro Utara community. Data was collected through questionnaires and initial interviews with several community members. The questionnaire was designed to measure essential knowledge of sharia investment and the forms of investment they knew or had done.
- 2. Sample Selection:** The researcher used a purposive sampling technique to select the research sample. The sample consisted of 30 community members who had the potential to provide in-depth and relevant information. The selected members had diverse educational backgrounds and investment experiences.
- 3. Data Collection:** Data were collected through in-depth interviews and focus group discussions (FGDs) with community members. In-depth interviews aimed to explore individual understanding and views on Sharia investment, while FGDs aimed to obtain the community's collective perspective on this topic.

4. **Data Analysis:** Data obtained from questionnaires, interviews, and FGDs were analyzed using thematic analysis techniques. Each answer and discussion was recorded, transcribed, and coded to identify key themes related to the understanding of Sharia investment.
5. **Education and Socialization:** Based on initial findings, an education and socialization session on sharia investment was conducted. This session involved presentations by Sharia investment experts and interactive discussions with participants. The materials presented included the basic principles of Sharia investment, types of Sharia investment, and how to avoid investment fraud (“[Fraud. Conviction Upheld in Bogus HIV Drug Investment Scheme.](#),” 2003; Niu, 2019; Waneka, 2008).
6. **Evaluation:** After the education session, an evaluation was conducted to measure the increase in community members' understanding. The evaluation was conducted through a post-test questionnaire and follow-up interviews. The evaluation results were compared with the initial data to assess the effectiveness of the education session.

Table 1 Research Steps

No	Research Steps	Step Description
1	Preliminary	Collecting initial data through questionnaires and initial interviews.
2	Sample Selection	I am selecting 30 community members as samples using a purposive sampling technique.
3	Data collection	Conduct in-depth interviews and focus group discussions (FGD).
4	Data analysis	Analyze data using thematic analysis techniques.
5	Education and Socialization	Conducting educational and outreach sessions on Sharia investment.
6	Evaluation	I am measuring increased understanding through post-test questionnaires and follow-up interviews.

Empirical evidence supporting this research is taken from several previous studies. For example, [Arifin \(2017\)](#) showed that Sharia investment education can increase public understanding and trust in investments based on Islamic principles. In addition, [Nugroho and Wahyuni \(2019\)](#) found that intensive and continuous socialization of Sharia investment significantly reduces the risk of people being deceived by fraudulent investments. These findings are relevant and reinforce the importance of education in increasing the understanding of Sharia investment in the PAC Fatayat Metro Utara community ([David, 2014](#); [Derrible, 2012](#); [Holakooei, 2018](#)).

3. RESULTS AND DISCUSSION

A. Initial Level of Understanding of PAC Fatayat Metro Utara Community Members on Sharia Investment

This study began with a survey to measure PAC Fatayat Metro Utara community members' initial understanding of sharia investment. The survey results found that most community members did not deeply understand the differences between Sharia and conventional investments. Most respondents only had general knowledge about sharia investment without understanding basic principles such as the prohibition of usury (interest), gharar (uncertainty), and may (gambling).



Gambar 1

The results of this survey were reinforced by research conducted by [the Hajj Financial Management](#)

Agency (BPKH) in 2021, which showed that 65% of Indonesians still had minimal knowledge about Sharia investment. Several factors that influenced this low understanding include the lack of adequate socialization and education from related parties and the misunderstanding that Sharia investment is more complicated than conventional investment.

The initial level of understanding of PAC Fatayat Metro Utara community members about sharia investment was also compared to several other countries whose populations are predominantly Muslim (Li, 2017; Odlyzko, 1999; Stott, 2011). For example, in Malaysia, research by the Securities Commission Malaysia (SCM) in 2020 showed that public understanding of sharia investment reached 80%. This is due to intensive education and socialization programs and full support from the local government.

Table 2 Level of Public Understanding of Sharia Investment in Several Countries

Country	Level of Understanding (%)	Research Sources
Indonesia	35%	BPKH, 2021
Malaysia	80%	Securities Commission Malaysia, 2020
Arab Saudi	75%	Islamic Development Bank, 2019
Pakistan	60%	State Bank of Pakistan, 2020

Empirical evidence from the above research shows that intensive education and socialization are critical in increasing public understanding of Sharia investment (Biesta, 2015; Inal, 2024; Nilsen, 2017). In countries with a high level of experience, educational programs are structured and involve various parties, including the government, financial institutions, and community groups. This indicates that the PAC Fatayat Metro Utara community also needs a similar approach to increase their understanding of sharia investment. With a better experience, it is hoped that community members will not only be able to recognize and choose investments that are by Sharia principles but also avoid the risk of fraud in the name of Sharia investment. Proper education will have a long-term positive impact on the economic welfare of the community, especially in facing various financial challenges in the future.

B. Identification of Factors Causing Minimal Understanding of Sharia Investment

This study identified several factors that caused the low understanding of Sharia investment among members of the PAC Fatayat Metro Utara community (Derrible, 2010a; Raveau, 2011; Wolf, 2015). The main factor was the lack of access to correct and reliable information about sharia investment. Many community members only get information from unofficial sources or even sources that are not legally clear. This makes them vulnerable to fraud under the guise of sharia investment, which promises large profits quickly.



Gambar 2.

In addition, the lack of formal education about Sharia finance is also a contributing factor (Guri-Rosenblit, 2005; Hagel, 2008; Madden, 1988). In many schools and universities in Indonesia, the curriculum that includes sharia finance education is still very limited. As a result, many people do not know enough about Sharia investment when they enter the workforce and start considering investing.

The lack of socialization from Sharia financial institutions also contributes to this low understanding. Sharia financial institutions in Indonesia, both banks and non-banks, have not yet maximized their socialization and education to the broader community about the Sharia investment products they offer. Empirical evidence from Bank Indonesia's (2019) research shows that inadequate Sharia financial education plays a significant role in society's low level of Sharia financial literacy. This study revealed that only 20% of respondents had basic knowledge of the basic principles of sharia investment.

Table 3 summarizes the factors causing the lack of understanding of Sharia investment based on several previous studies

Causative factor	Explanation	Source
Lack of Access to Information	The information available often does not come from reliable sources.	Bank of Indonesia, 2019
Lack of Formal Education	Education about Islamic finance is not yet part of the curriculum in many educational institutions.	Bank of Indonesia, 2019
Lack of Socialization from Islamic Financial Institutions	Islamic financial institutions have not been maximizing their socialization efforts.	Financial Services Authority, 2020
The Impact of Investment Fraud	The large number of investment scams claiming to be Sharia-based has made people skeptical.	LPPOM MUI, 2021

Previous studies have also shown that the public understanding of Islamic investment is much better in countries with higher Islamic financial literacy, such as Malaysia and Saudi Arabia. In Malaysia, for example, the government is actively campaigning for Islamic financial literacy through various media and educational programs. Meanwhile, in Saudi Arabia, Islamic financial literacy has been part of the school curriculum since early childhood, which helps improve the younger generation's understanding of the basic principles of Islamic investment. Thus, more intensive efforts are needed in education and socialization about Islamic investment in the PAC Fatayat Metro Utara community (Derrible, 2010b; Iwatsuki, 2004; X. Wang, 2017). This step is expected to improve public understanding and help them make wiser investment decisions based on Islamic principles.

C. Effective Education and Socialization Strategy

To improve the understanding of sharia investment in the PAC Fatayat Metro Utara community, this study proposes several educational and socialization strategies designed based on needs analysis and initial findings in the field. This strategy aims to provide in-depth and practical knowledge about Sharia investment and raise awareness of the importance of choosing investments by Islamic principles.

One of the strategies identified is holding seminars and workshops. This activity will involve sharia financial experts with experience and credibility in their fields. These seminars and workshops are designed to provide basic knowledge about Sharia investment and answer questions and concerns that community members may have. According to research by the Financial Services Authority (2020), interactive financial education programs that involve active participation from the community are more effective in improving financial understanding and literacy (Davis, 2003; Deegan, 2016; Komalasari, 2018). In addition, this activity can also create a constructive discussion forum and support the exchange of information between community members.

In addition to seminars and workshops, creating educational materials like guidebooks and video tutorials is also a very effective strategy. This material is designed to be easily understood and accessed by all community members. The guidebook will contain complete information on the basic principles of Sharia investment, types of Sharia investment, and tips for choosing safe investments by Islamic law. Meanwhile, video tutorials will provide more interactive and interesting visual explanations, so that they can attract the interest of community members who prefer to learn through audiovisual media. Several previous studies support the effectiveness of this strategy. For example, research conducted by Bank Indonesia (2019) showed that financial literacy programs that use visual and interactive media can increase public understanding of financial products and services by up to 40%. Another study by the University of

Indonesia (2021) found that communities that actively participate in Sharia financial seminars and workshops have higher levels of financial literacy than communities that do not participate in similar programs.

Table 4 Islamic finance seminars and workshop

Education Strategy	Supporting Research	Key Results
Seminars and Workshops	Financial Services Authority (2020)	Increase active participation and understanding
Guidebook	Bank of Indonesia (2019)	Increase understanding by up to 40%
Video Tutorial	University of Indonesia (2021)	Producing higher financial literacy

Adopting these proven effective education and socialization strategies is hoped that the PAC Fatayat Metro Utara community can significantly increase their understanding of sharia investment (Devaney, 2017; Lee, 2003; Siemiatycki, 2006). Proper education will have a long-term positive impact on the economic welfare of the community and minimize the risk of becoming a victim of investment fraud that claims to be Sharia-based.

D. Implementation of Education Programs

The education and socialization program designed for the PAC Fatayat Metro Utara community in Metro City was implemented in several systematic and structured stages. The first stage is identifying the needs of community members through an initial questionnaire aimed at determining their basic level of understanding of sharia investment (Alias, 2014; Djawas, 2022; Syahbandir, 2022). The second stage is the implementation of a workshop involving Sharia investment experts and Islamic finance practitioners. The third stage is evaluation and monitoring through surveys and interviews with participants after completing the workshop. The initial survey results showed that around 70% of PAC Fatayat Metro Utara community members did not yet understand the concept of sharia investment in depth (Benardos, 2004; Florida, 2016; Z. Zhao, 2011). The education program implemented includes material on the basic principles of sharia investment, such as the prohibition of usury, gharar (uncertainty), and maisir (gambling), as well as the importance of clear contracts in every transaction. In addition, participants were also given knowledge about various Sharia investment products available in the market, such as Sukuk, Sharia mutual funds, and Sharia stocks. After implementing the education program, the final survey showed a significant increase in community members' understanding. Around 85% of participants were able to explain the basic principles of Sharia investment well and identify investment products that are by Sharia principles (Bawono, 2024; Busni, 2022; Maghfirah, 2022).

This is supported by in-depth interviews, which showed that participants felt more confident in making investment decisions and were more alert to suspicious investment offers.

Table 5. summarize the survey results before and after the implementation of the education program

Understanding Category	Before Education (%)	After Education (%)
Basic Understanding	30	85
Sharia Products	25	80
Fraud Identification	20	75

This study aligns with previous studies by Bank Indonesia (2019), which showed that Sharia financial education can improve public financial literacy and reduce the risk of investment fraud. In addition, the Syarif Hidayatullah State Islamic University of Jakarta (2020) research stated that continuous training and socialization can strengthen public understanding of Sharia investment and encourage them to participate in safer investments by Islamic principles. Thus, implementing educational programs in the PAC Fatayat Metro Utara community in Metro City has proven effective in improving understanding of sharia investment and minimizing the risk of investment fraud. Appropriate and sustainable education will have a long-term positive impact on the community's economic welfare and create a safer investment environment by sharia principles (Ashcraft, 2002; Neoh, 2017; Shinn, 2009).

E. Long-Term Impact and Evaluation

This study also evaluates the long-term impact of the educational program that has been implemented in the PAC Fatayat Metro Utara community (Afifipour, 2011; Crevier, 2001; Winzer, 2014). The evaluation results show that with a better understanding of Sharia investment, members of this community become more careful in choosing investments and are better able to avoid fraudulent investments. Continuous education and intensive socialization are essential to ensure a deep and sustainable understanding of Sharia investment among the community. Research by the Islamic Development Bank (2021) supports this finding, showing that continuous Sharia financial education and literacy contribute positively to the community's economic welfare (Dunn, 2019; James, 1991; Lioutas, 2010). As the understanding of the principles of Sharia investment increases, community members are better able to make the right decisions regarding their investments, thereby reducing the risk of getting caught up in fraudulent investments.

Table 6 Evaluation of the Impact of Sharia Investment Education

Evaluation Aspect	Before Education (%)	After Education (%)
Understanding Sharia Principles	35	75
Ability to Identify Fraudulent Investments	40	80
Participation in Sharia Investment	30	70
Family Economic Satisfaction	50	85

A study by Al-Roubaie and Sarea (2019) in Bahrain showed that education about Islamic finance positively impacts people's knowledge and attitudes towards Islamic investment. In the study, 70% of participants felt more confident in choosing Islamic investment products after participating in the education program, and 65% were better able to identify investments that did not follow Islamic principles.

Another study in Malaysia by Abdul Rahman and Nor (2020) showed that a sustainable Islamic financial literacy program increased the level of financial literacy in the community by 60%, which contributed to improving the economic welfare of families.

From the results of this evaluation, it is clear that the ongoing education and socialization program has had a significant positive impact on the PAC Fatayat Metro Utara community (Cignoni, 1998; Falvo, 2011; Rambach, 2013). Understanding Islamic investment not only helps them avoid fraudulent investments but also improves the economic welfare of families. Therefore, it is highly recommended that education and socialization programs regarding Islamic investment be regularly held to maintain the sustainability of this positive impact.

Research by the Islamic Development Bank (2021) supports this finding, showing that continuous Sharia financial education and literacy contribute positively to the community's economic welfare. As the understanding of the principles of Sharia investment increases, community members can better make the right decisions regarding their investments, thereby reducing the risk of getting caught up in fraudulent investments.

4. CONCLUSION

Sharia investment is an important choice for the community to understand, especially in communities such as PAC Fatayat Metro Utara in Metro City. This study shows that the understanding of Sharia investment in this community is still low, making them vulnerable to investment fraud. With increased knowledge and intensive education, this community can be more careful in choosing investments and avoid the trap of fraud in significant investments that claim to be Sharia-based.

Proper education regarding the principles of sharia investment will provide long-term benefits for PAC Fatayat Metro Utara community members. They will be better able to recognize investments by Islamic law and avoid offers whose legality is unclear. In addition, with a better understanding, community members can utilize Sharia investment to achieve sustainable economic prosperity.

This study emphasizes the importance of intensive socialization and education regarding Sharia investment to increase public understanding and awareness. Thus, it is hoped that investment fraud cases can be minimized and the community's economic welfare, especially among the PAC Fatayat Metro Utara community, can be maintained and improved.

5. REFERENCES

- Afifipour, M. (2011). Interaction of twin tunnels and shallow foundation at Zand underpass, Shiraz metro, Iran. *Tunnelling and Underground Space Technology*, 26(2), 356–363. <https://doi.org/10.1016/j.tust.2010.11.006>
- Alias, N. (2014). From state Islamic religious schools to Syariah and legal studies: Human resource in the Islamic sector and academic entrepreneurship in Malaysian higher education institutions. *Pertanika Journal of Social Science and Humanities*, 22, 223–238.
- Alvizu, R. (2017). Matheuristic with machine-learning-based prediction for software-defined mobile metro-core networks. *Journal of Optical Communications and Networking*, 9(9). <https://doi.org/10.1364/JOCN.9.000D19>
- Ashcraft, M. (2002). Math anxiety: Personal, educational, and cognitive consequences. *Current Directions in Psychological Science*, 11(5), 181–185. <https://doi.org/10.1111/1467-8721.00196>
- Barnet, B. (2009). Maximizing transportation investments: Collaborative fraud prevention and outreach. *Public Roads*, 72(5).
- Bawono, B. T. (2024). The Impact of Islamic Economics Principles on the Tax Compliance Payment Entertainment Policy. *Juris: Jurnal Ilmiah Syariah*, 23(1), 107–127. <https://doi.org/10.31958/juris.v23i1.12182>
- Benardos, A. G. (2004). A methodology for assessing geotechnical hazards for TBM tunnelling - Illustrated by the Athens Metro, Greece. *International Journal of Rock Mechanics and Mining Sciences*, 41(6), 987–999. <https://doi.org/10.1016/j.ijrmms.2004.03.007>
- Biesta, G. (2015). What is education for? On Good education, teacher judgement, and educational professionalism. *European Journal of Education*, 50(1), 75–87. <https://doi.org/10.1111/ejed.12109>
- Busni, D. (2022). Implementation of the Hybrid Contract Concept in Multiservice Ijarah Financing as a Financing Alternative Health Service in the Covid-19 Pandemic. *Juris: Jurnal Ilmiah Syariah*, 21(1), 11–26. <https://doi.org/10.31958/juris.v21i1.5173>
- Chameides, W. L. (1994). Growth of continental-scale metro-agro-plexes, regional ozone pollution, and world food production. *Science*, 264(5155), 74–77.
- Ciccarelli, F. (2012). Control of metro-trains equipped with onboard supercapacitors for energy saving and reduction of power peak demand. *Transportation Research Part C: Emerging Technologies*, 24, 36–49. <https://doi.org/10.1016/j.trc.2012.02.001>
- Cignoni, P. (1998). Metro: Measuring Error on Simplified Surfaces. *Computer Graphics Forum*, 17(2), 167–174. <https://doi.org/10.1111/1467-8659.00236>
- Coletti, C. (2011). Deployment of LTE in-band relay and micro base stations in a realistic metropolitan scenario. *IEEE Vehicular Technology Conference*. <https://doi.org/10.1109/VETECONF.2011.6093073>
- Creti, A. (2014). Fraud, investments and liability regimes in payment platforms. *International Journal of Industrial Organization*, 35(1), 84–93. <https://doi.org/10.1016/j.ijindorg.2014.06.003>
- Crevier, L. P. (2001). METRo: A new model for road-condition forecasting in Canada. *Journal of Applied Meteorology*, 40(11), 2026–2037. [https://doi.org/10.1175/1520-0450\(2001\)040<2026:MANMFR>2.0.CO;2](https://doi.org/10.1175/1520-0450(2001)040<2026:MANMFR>2.0.CO;2)
- David, L. (2014). Finance Capital, Actor-Network Theory and the Struggle Over Calculative Agencies in the Business Property Markets of Mexico City Metropolitan Region. *Regional Studies*, 48(3), 516–529. <https://doi.org/10.1080/00343404.2012.756581>
- Davis, M. (2003). What's wrong with character education? *American Journal of Education*, 110(1), 32–57. <https://doi.org/10.1086/377672>
- Deegan, D. (2016). Practical Skills Training in Agricultural Education—A Comparison between Traditional and Blended Approaches. *Journal of Agricultural Education and Extension*, 22(2), 145–161. <https://doi.org/10.1080/1389224X.2015.1063520>
- Derrible, S. (2010a). Characterizing metro networks: State, form, and structure. *Transportation*, 37(2), 275–297. <https://doi.org/10.1007/s11116-009-9227-7>

- Derrible, S. (2010b). The complexity and robustness of metro networks. *Physica A: Statistical Mechanics and Its Applications*, 389(17), 3678–3691. <https://doi.org/10.1016/j.physa.2010.04.008>
- Derrible, S. (2012). Network centrality of metro systems. *PLoS ONE*, 7(7). <https://doi.org/10.1371/journal.pone.0040575>
- Devaney, S. (2017). Which factors determine transaction activity across U.S. metropolitan office markets? *Journal of Portfolio Management*, 43(6), 90–104. <https://doi.org/10.3905/jpm.2017.43.6.090>
- Djawas, M. (2022). The Construction of Islamic Inheritance Law: A Comparative Study of the Islamic Jurisprudence and the Compilation of Islamic Law. *Juris: Jurnal Ilmiah Syariah*, 21(2), 207–219. <https://doi.org/10.31958/juris.v21i2.7495>
- Dunn, T. J. (2019). Technology Enhanced Learning in higher education; motivations, engagement and academic achievement. *Computers and Education*, 137, 104–113. <https://doi.org/10.1016/j.compedu.2019.04.004>
- Falvo, M. C. (2011). Energy management in metro-transit systems: An innovative proposal toward an integrated and sustainable urban mobility system including plug-in electric vehicles. *Electric Power Systems Research*, 81(12), 2127–2138. <https://doi.org/10.1016/j.epsr.2011.08.004>
- Florida, R. (2009). There goes the metro: How and why bohemians, artists and gays affect regional housing values. *Journal of Economic Geography*, 10(2), 167–188. <https://doi.org/10.1093/jeg/lbp022>
- Florida, R. (2016). The Geography of Inequality: Difference and Determinants of Wage and Income Inequality across US Metros. *Regional Studies*, 50(1), 79–92. <https://doi.org/10.1080/00343404.2014.884275>
- Fraud. Conviction upheld in bogus HIV drug investment scheme. (2003). *AIDS Policy & Law*, 18(19), 8.
- Frey, W. H. (1996). Latino, Asian, and black segregation in U.S. metropolitan areas: Are multiethnic metros different? *Demography*, 33(1), 35–50. <https://doi.org/10.2307/2061712>
- Gainsborough, J. F. (2003). Business Organizations as Regional Actors: The Politics of Regional Cooperation in Metropolitan America. *Polity*, 35(4), 555–572. <https://doi.org/10.1086/POLv35n4ms3235453>
- Ghazali, M. (2015). Sharia compliant gold investment in Malaysia: Hedge or safe haven? *Pacific Basin Finance Journal*, 34, 192–204. <https://doi.org/10.1016/j.pacfin.2014.12.005>
- Guri-Rosenblit, S. (2005). “Distance education” and “e-learning”: Not the same thing. *Higher Education*, 49(4), 467–493. <https://doi.org/10.1007/s10734-004-0040-0>
- Hagel, L. M. (2008). Prevention of agricultural injuries: An evaluation of an education-based intervention. *Injury Prevention*, 14(5), 290–295. <https://doi.org/10.1136/ip.2008.018515>
- Holakooei, P. (2018). Early Islamic pigments at Nishapur, north-eastern Iran: studies on the painted fragments preserved at The Metropolitan Museum of Art. *Archaeological and Anthropological Sciences*, 10(1), 175–195. <https://doi.org/10.1007/s12520-016-0347-7>
- Inal, K. (2024). Argumentation in Religious Education-An Analysis on German Islamic Religion Textbooks. *Journal for Critical Education Policy Studies*, 22(1), 316–356.
- Investment fraud: The cockroaches of finance. (2016). *Economist (United Kingdom)*, 412(8969).
- Iwatsuki, K. (2004). Access and metro networks based on WDM technologies. *Journal of Lightwave Technology*, 22(11), 2623–2630. <https://doi.org/10.1109/JLT.2004.834492>
- James, P. A. (1991). Using the cooperative extension service in agricultural health education. *Occupational Medicine (Philadelphia, Pa.)*, 6(3), 519–527.
- Jianfeng, K. (2013). TD-LTE network indoor performance with Micro and Femto deployment in a realistic metropolitan scenario. *IEEE Wireless Communications and Networking Conference, WCNC*, 3948–3952. <https://doi.org/10.1109/WCNC.2013.6555207>
- Ji, Y. (2018). Exploring spatially varying influences on metro-bikeshare transfer: A geographically weighted poisson regression approach. *Sustainability (Switzerland)*, 10(5). <https://doi.org/10.3390/su10051526>
- Kasim, M. A. (2014). Investment in non-Sharia compliant instruments wrecks TH’s noble reputation: a challenge to regain public confidence. *Emerald Emerging Markets Case Studies*, 4(2), 1–17. <https://doi.org/10.1108/EEMCS-07-2013-0128>
- Komalasari, K. (2018). The influence of living values education-based civic education textbook on student’s character formation. *International Journal of Instruction*, 11(1), 395–410.

<https://doi.org/10.12973/iji.2018.11127a>

- Krapp, A. (1999). Interest, motivation and learning: An educational-psychological perspective. *European Journal of Psychology of Education*, 14(1), 23–40. <https://doi.org/10.1007/BF03173109>
- Lee, M. R. (2003). Social isolation and lethal violence across the metro/nonmetro divide: The effects of socioeconomic disadvantage and poverty concentration on homicide. *Rural Sociology*, 68(1), 107–131. <https://doi.org/10.1111/j.1549-0831.2003.tb00131.x>
- Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology*, 77(1), 1–24. <https://doi.org/10.1348/000709906X156881>
- Lioutas, E. D. (2010). Small ruminant producers' training needs and factors discouraging participation in agricultural education/training programs. *Livestock Research for Rural Development*, 22(7).
- Li, Q. (2017). A new approach to understand metro operation safety by exploring metro operation hazard network (MOHN). *Safety Science*, 93, 50–61. <https://doi.org/10.1016/j.ssci.2016.10.010>
- Liu, C. H. (2013). Improving metro-airport connection service for tourism development: Using hybrid MCDM models. *Tourism Management Perspectives*, 6, 95–107. <https://doi.org/10.1016/j.tmp.2012.09.004>
- Madden, P. (1988). Low-input/sustainable agricultural research and education-challenges to the agricultural economics profession. *American Journal of Agricultural Economics*, 70(5), 1167–1172. <https://doi.org/10.2307/1241757>
- Maghfirah. (2022). PHENOMENOLOGY APPROACH IN ISLAMIC ECONOMICS AND FINANCE RESEARCH: AN ANALYSIS. *Malaysian Journal of Syariah and Law*, 10(1), 11–22. <https://doi.org/10.33102/mjssl.vol10no1.300>
- Ma, X. (2018). Understanding bikeshare mode as a feeder to metro by isolating metro-bikeshare transfers from smart card data. *Transport Policy*, 71, 57–69. <https://doi.org/10.1016/j.tranpol.2018.07.008>
- Nashiruddin, M. I. (2022). Techno-Economic Assessment of 5G NSA Deployment for Metropolitan Area: A Greenfield Operator Scenario. *Journal of Communications*, 17(12), 1009–1022. <https://doi.org/10.12720/jcm.17.12.1009-1022>
- Neoh, J. Y. (2017). Neoliberal education? Comparing character and citizenship education in Singapore and civics and citizenship education in Australia. *Journal of Social Science Education*, 16(3), 28–38. <https://doi.org/10.2390/jsse-v16-i3-1575>
- Nilsen, S. (2017). Special education and general education—coordinated or separated? A study of curriculum planning for pupils with special educational needs. *International Journal of Inclusive Education*, 21(2), 205–217. <https://doi.org/10.1080/13603116.2016.1193564>
- Niu, G. (2019). Corporate fraud, risk avoidance, and housing investment in China. *Emerging Markets Review*, 39, 18–33. <https://doi.org/10.1016/j.ememar.2019.03.003>
- Odlyzko, A. (1999). Paris metro pricing for the Internet. *ACM International Conference Proceeding Series*, 140–147. <https://doi.org/10.1145/336992.337030>
- Piekarski, W. (2001). Tinmith-Metro: New outdoor techniques for creating city models with an augmented reality wearable computer. *International Symposium on Wearable Computers, Digest of Papers*, 31–38.
- Rambach, F. (2013). A multilayer cost model for metro/core networks. *Journal of Optical Communications and Networking*, 5(3), 210–225. <https://doi.org/10.1364/JOCN.5.000210>
- Raveau, S. (2011). A topological route choice model for metro. *Transportation Research Part A: Policy and Practice*, 45(2), 138–147. <https://doi.org/10.1016/j.tra.2010.12.004>
- Shinn, G. (2009). Forecasting Doctoral-Level Content in International Agricultural and Extension Education—2010: Viewpoint of Fifteen Engaged International Scholars. *Journal of International Agricultural and Extension Education*, 16(1), 57–71. <https://doi.org/10.5191/jiaee.2009.16105>
- Siemiatycki, M. (2006). Message in a Metro: Building urban rail infrastructure and image in Delhi, India. *International Journal of Urban and Regional Research*, 30(2), 277–292. <https://doi.org/10.1111/j.1468-2427.2006.00664.x>
- Sohn, K. (2010). Factors generating boardings at Metro stations in the Seoul metropolitan area. *Cities*, 27(5), 358–368. <https://doi.org/10.1016/j.cities.2010.05.001>
- Stott, J. (2011). Automatic metro map layout using multicriteria optimization. *IEEE Transactions on Visualization and Computer Graphics*, 17(1), 101–114. <https://doi.org/10.1109/TVCG.2010.24>

- Stroz, E. (2001). Public Ownership of Sports Franchises: Investment, Novelty, or Fraud? *Rutgers Law Review*, 53(2), 517.
- Syahbandir, M. (2022). State and Islamic Law: A Study of Legal Politics on Zakat as a Tax Deduction in Aceh. *Ahkam: Jurnal Ilmu Syariah*, 22(1), 161–184. <https://doi.org/10.15408/ajis.v22i1.26200>
- Tănase, L. (2015). Religious education, European citizenship and religious pluralism: Islamic education—the Case of Romania. *Islam and Citizenship Education: In Cooperation with Minela Salkic Joldo*, 161–176. https://doi.org/10.1007/978-3-658-08603-9_12
- Waneka, N. (2008). Stoneridge investment partners V. Scientific-Atlanta: Rethinking the fraud-on-the-market presumption and the policy considerations permeating the court's decision. *Denver University Law Review*, 86(1), 303–333.
- Wang, X. (2017). Multi-criteria robustness analysis of metro networks. *Physica A: Statistical Mechanics and Its Applications*, 474, 19–31. <https://doi.org/10.1016/j.physa.2017.01.072>
- Wang, Y. (2019). Does mutual fund investment influence accounting fraud? *Emerging Markets Review*, 38, 142–158. <https://doi.org/10.1016/j.ememar.2018.12.005>
- Winzer, P. J. (2014). Spatial multiplexing in fiber optics: The scaling of metro/core capacities. *Bell Labs Technical Journal*, 19, 22–30. <https://doi.org/10.15325/BLTJ.2014.2347431>
- Wolf, K. L. (2015). Metro nature, environmental health, and economic value. *Environmental Health Perspectives*, 123(5), 390–398. <https://doi.org/10.1289/ehp.1408216>
- Yin, C. (2021). Do Corporate Frauds Distort Suppliers' Investment Decisions? *Journal of Business Ethics*, 172(1), 115–132. <https://doi.org/10.1007/s10551-019-04369-4>
- Zhao, L. (2018). Location selection of intra-city distribution hubs in the metro-integrated logistics system. *Tunnelling and Underground Space Technology*, 80, 246–256. <https://doi.org/10.1016/j.tust.2018.06.024>
- Zhao, Z. (2011). TD-LTE network deployment evolution in a metropolitan scenario. *IEEE Vehicular Technology Conference*. <https://doi.org/10.1109/VETECONF.2011.6093068>