

THE IMPACT OF EMBARGO POLICIES ON ACCESS AND SATISFACTION LEVELS OF USERS OF THE DIGITAL LIBRARY COLLECTION AT UIN SUNAN AMPEL SURABAYA

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Abstract

This study aims to analyse the effect of embargo policies on access and satisfaction levels among users of the digital library collection at the UIN Sunan Ampel Surabaya Library. Referring to the rector's decree number 1308, the embargo was implemented in order to maintain originality for the purposes of publication and patent rights. This study uses a quantitative method with a survey approach, with a research population of 500 people and a sample of 84 people. Data collection was carried out through questionnaires distributed to library users involved. Data analysis was carried out using simple linear regression analysis techniques to determine the extent to which the embargo policy affects the level of access and use of digital collections in the library. The results of the study show that (1) the embargo policy implemented at the UIN Sunan Ampel Surabaya Library has a significant impact on access to digital collections. This means that the better users' perceptions of the embargo policy, the higher their access to available digital collections. (2) The embargo policy also affects the level of user satisfaction in accessing digital collections; the implementation of a clear and transparent embargo policy increases user satisfaction. (3) The impact of the embargo policy is felt by all academic community users, including students, lecturers, and the general public.

Keywords: Embargo, Digital Library, Open Access

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh kebijakan embargo terhadap akses dan tingkat kepuasan pengguna koleksi digital library di Perpustakaan UIN Sunan Ampel Surabaya. Mengacu pada surat keputusan rektor nomor 1308, embargo dilakukan dalam rangka menjaga originalitas untuk kepentingan publikasi dan hak paten. Penelitian ini menggunakan metode kuantitatif dengan pendekatan survei, populasi penelitian berjumlah 500 orang dan sampel yang diambil sebanyak 84 orang. Pengumpulan data dilakukan melalui kuesioner yang disebarikan kepada pengguna perpustakaan yang terlibat. Analisis data dilakukan dengan menggunakan teknik analisis regresi linear sederhana untuk mengetahui sejauh mana kebijakan embargo memengaruhi tingkat akses dan penggunaan koleksi digital di perpustakaan tersebut. Hasil penelitian menunjukkan bahwa (1) Kebijakan embargo yang diterapkan di Perpustakaan UIN Sunan Ampel Surabaya memberikan dampak signifikan terhadap akses koleksi digital, Hal ini berarti bahwa semakin baik persepsi pengguna terhadap kebijakan embargo, semakin tinggi pula akses mereka terhadap koleksi digital yang tersedia. (2) Kebijakan embargo juga memengaruhi tingkat kepuasan pengguna dalam mengakses koleksi digital, penerapan kebijakan embargo yang jelas dan transparan meningkatkan kepuasan pengguna. (3) Dampak kebijakan embargo dirasakan oleh seluruh pengguna civitas akademika, baik mahasiswa, dosen, maupun masyarakat umum.

Kata kunci : Embargo, Perpustakaan Digital, Open Access

INTRODUCTION

The development of digital libraries is based on these regulations, which have increased the number of library collections in print and digital form, thereby requiring effective and efficient library management, including embargo policies on access to digital library collections. Research by Rushton et al. (2025) states that Binghamton University decided to store its pre-1978 dissertation research database digitally and make it available in its institutional repository, which can be interpreted as meaning that library digitisation has been implemented globally on an international scale.¹ Strategic embargo policies can have a significant impact on access to digital collections in libraries, both for users and library managers themselves. Embargoes cause delays in accessing certain articles or digital publications. Users, whether students, researchers, or the general public, may have to wait some time before they can access the material freely or for free.²

Library embargo policies refer to the delay of access to certain publications or written works for a certain period of time. Generally, embargoes are imposed on access to national and international academic research journals. Embargoes in libraries are measures taken to balance the rights of publishers, authors, and information users while still supporting access to scientific knowledge. Research by Putri (2021) states that Brawijaya University implements embargoes on scientific works at the request of authors because they will be used for patent applications. Embargoes are implemented for a maximum of two years.³ Putri also explained that the embargo does not completely close access to the entire digital collection; some parts are allowed to be accessed by the public, such as research at the undergraduate level, but research at the master's and doctoral levels is not yet allowed to be accessed by the public. Only some abstracts and introductions are allowed to be accessed by the public. Libraries at the higher education level are required to meet national library standards. Law No. 43 of 2007, article 24, stipulates that every higher education institution is required to operate a library in accordance with national higher education standards, namely: having a collection with a complete number of copies to support the implementation of education, research and community service, Paragraphs (3) and (4) stipulate that libraries are required to develop information and communication technology-based library services and allocate funds for library development in accordance with applicable regulations.⁴

The embargo aims to improve library management in order to manage the collection and balance open access for the public with access to certain collections that are subject to copyright.⁵ Most of us have encountered library collections that can only be read on site and cannot be borrowed. This is also a form of embargo, which indirectly protects the copyright of written works and benefits libraries in maintaining the quality of their collections, especially in the case of ancient manuscripts that must be preserved in their original form.⁶ On the other hand, the implementation of the embargo could certainly hamper research or learning efforts that require up-to-date information, namely students, lecturers and researchers who need the latest data to compile relevant research data.⁷ For researchers or students who

¹ Erin Rushton, Caitlin Holton, and Jamey McDermott, "Digitizing Pre-1978 Dissertations at Binghamton University Libraries," *Library Resources and Technical Services* 69, no. 02 (April 2025), <https://doi.org/10.5860/LRTS.69N2.8441>.

² Behrooz Rasuli et al., "Access and Impact Barriers to Academic Publications: A Global Study of Thesis and Dissertation Embargo Policies," *Online Information Review* 47, no. 6 (October 2023): 1208–22, <https://doi.org/10.1108/OIR-09-2022-0497/FULL/XML>.

³ Viendi Amelia Putri, *Pengelolaan Sistem Keamanan Informasi Terhadap Kebijakan Hak Cipta Pada Institutional Repository Di Perpustakaan Perguruan Tinggi (Studi Kasus Di Perpustakaan Universitas Brawijaya)*, December 2021.

⁴ Muhammad Anwar and Fitriani Jabbar, *Manajemen Perpustakaan Transformasi Perpustakaan Menuju Pelayanan Berbasis Digital* (Prenadamedia Group, 2024), https://www.google.co.id/books/edition/Manajemen_Perpustakaan/AmcUEQAAQBAJ?hl=en&gbpv=0.

⁵ Rasuli et al., "Access and Impact Barriers to Academic Publications: A Global Study of Thesis and Dissertation Embargo Policies."

⁶ Tom Grady, Elaine Sykes, and Martin Paul Eve, "How Can We Achieve Sustainable Funding for Open Access Books?," *Insights: The UKSG Journal* 38 (January 2025), <https://doi.org/10.1629/UKSG.673>.

⁷ Moumita Koley and Kanchan Lala, "Are Journal Archiving and Embargo Policies Impeding the Success of India's Open Access Policy?," *Learned Publishing* 35, no. 2 (April 2022): 175–86, <https://doi.org/10.1002/LEAP.1441>.

need the latest data and literature, embargoes can slow down their research progress. They may be forced to rely on older sources or have to pay for full access to the journals and articles they need.⁸

The UIN Sunan Ampel Surabaya Library has imposed an embargo on scientific papers in the form of student final projects (theses, dissertations and dissertations). This implementation refers to the UINSA Rector's Decree Number 1308 of 2023 - Mandatory Submission of Scientific Papers by the Academic Community. The fourth point of paragraph 5 instructs the Sunan Ampel State Islamic University Library in Surabaya to impose a three-year embargo on the entire context of scientific papers in order to maintain originality for the purposes of publication and patent rights.⁹ During the embargo period, the documents accessible to the public in the repository shall only consist of the cover, a statement of authenticity, the supervisor's approval form, the examination committee's approval form, the publication approval form, the abstract, the table of contents, and the bibliography Click or tap here to enter text.. Based on data from the digital library (Digilib) The UIN Sunan Ampel Surabaya Library states that the implementation of the embargo has reduced the number of scientific publications accessible to users (the general public, students, lecturers and researchers). The number of scientific papers in 2023 was 4,236, in 2024 it was 3,483, and in 2025 it was 763.¹⁰

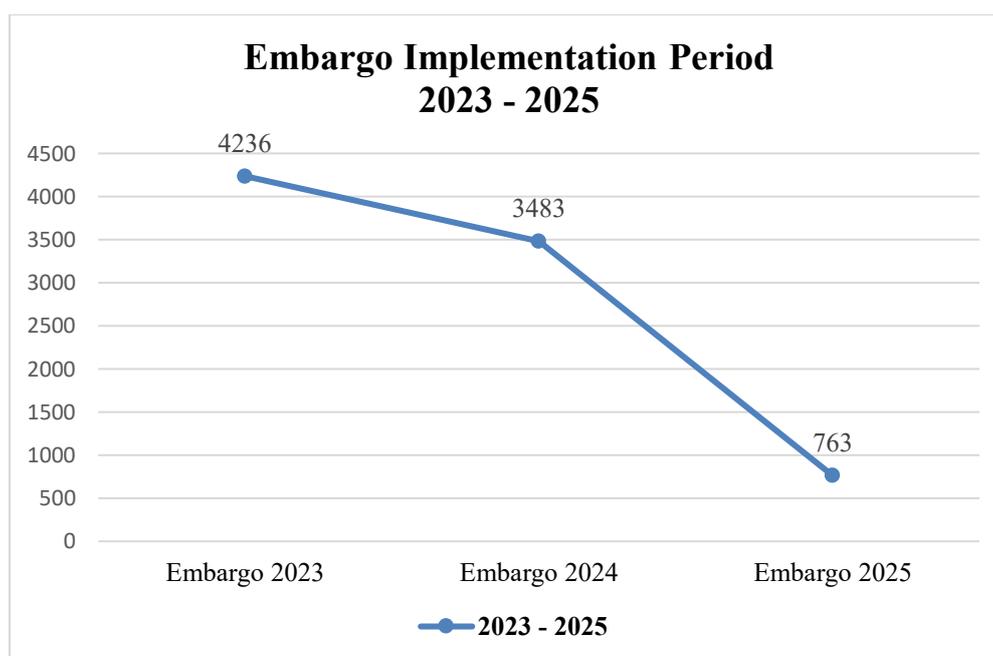


Figure 1 Embargo Policy Implementation Period

The implementation of embargoes may encourage libraries to subscribe to more paid digital content, thereby placing a strain on library budgets. Although some materials become freely accessible after the embargo period, the cost of long-term subscriptions remains a burden. Conversely, embargo policies also open up opportunities for open access initiatives. Once the embargo period ends, articles and research become freely accessible to all, enabling wider and fairer dissemination of knowledge. This

⁸ Shaun Yon Seng Khoo and Belinda Po Pyn Lay, "A Very Long Embargo: Journal Choice Reveals Active Non-Compliance with Funder Open Access Policies by Australian and Canadian Neuroscientists," *LIBER Quarterly: The Journal of the Association of European Research Libraries* 28, no. 1 (November 2018): 1–19, <https://doi.org/10.18352/LQ.10252>.

⁹ "SK Rektor UINSA Nomor 1308 Tahun 2023 - Wajib Serah Simpan Karya Ilmiah Civitas Akademika [Http://Digilib.Uinsa.Ac.Id/2756/165/SK%20Wajib%20Serah%20Simpan%20Karya%20Ilmiah%20Sivitas%20Akademika_Perpus%202023.Pdf](http://Digilib.Uinsa.Ac.Id/2756/165/SK%20Wajib%20Serah%20Simpan%20Karya%20Ilmiah%20Sivitas%20Akademika_Perpus%202023.Pdf)," http://digilib.uinsa.ac.id/2756/165/SK%20Wajib%20Serah%20Simpan%20Karya%20Ilmiah%20Sivitas%20Akademika_Perpus%202023.pdf, 2023.

¹⁰ "Embargo Publications Where Year Is 2025 - Digilib UIN Sunan Ampel Surabaya," n.d., <http://digilib.uinsa.ac.id/view/year/2025.html>.

can also encourage greater collaboration within the scientific community.¹¹ Strategic embargo policies can create challenges in terms of access and distribution of information, but they also open up opportunities for more inclusive open access models. As a result, libraries need to balance the interests of various parties (authors, publishers, users) in formulating their digital collection management policies. Based on the above statements and data presentation, the researcher intends to conduct this study to analyse the impact of the embargo policy by the UINSA Library on access and the level of satisfaction of digital library users at UIN Sunan Ampel Surabaya.¹²

Users expect digital libraries to be easy to use, useful, and reliable. When their expectations are well met by digital libraries, users may feel satisfied with digital libraries. Previous research has revealed the impact of these factors on user satisfaction. Perceived usefulness and ease of use have been shown to influence digital library user satisfaction. Referring to research by Fang Xu & Jia Tina (2018), several factors that can be used as indicators of digital library user satisfaction are:¹³

1. Perceived of use; Perception of ease of access to digital libraries for users to find written works needed for their research data requirements
2. Perceived usefulness; perception of the use or intended purpose of digital libraries as random reading material for scientific works to increase users' knowledge, or specifically as a reference source for users in compiling scientific papers, or other purposes.
3. Digital library affinity; user interest in accessing the digital library. This can be used as a benchmark to determine whether users of the digital library at UIN Sunan Ampel Surabaya are aware of this digital library service, which can be used digitally, thereby making it easier for users to access the information and data they need for their final studies.

An embargo is generally a policy that aims to restrict, delay or prohibit something for a specific purpose. 'An embargo is "a period between the date of publication and the date when the material may become available as open access",' according to Rasuli (2023), who defines an embargo as the period between the time a publication is made available for public access.¹⁴ In the world of education, particularly in education, embargo policy has meaning, a policy implemented by libraries to restrict, delay or prohibit certain library collections, both digital and printed, with the aim of benefiting the library.¹⁵ The purpose of implementing this embargo policy is one of the library's efforts to: a) protect copyright, regulate the use of collections, c) maintain library security and confidentiality, d) respect agreements with publishers, e) regulate resource management, f) protect collections from damage so that they remain intact by improving the care of collections that are prone to damage to their originality, g) monetise content.¹⁶

According to Rasuli et al. (2023), embargo implementation indicators can be reviewed from the following perspectives: Protect intellectual property in the case of a patent application process; Maintain confidentiality agreements protecting third-party proprietary information; Protect individuals at risk of identity exposure. Protecting intellectual property in the case of a patent application process; Maintaining confidentiality agreements protecting third-party proprietary information; Protecting individuals at risk of identity exposure. Open Access (OA) Digital Collection refers to a collection of digital materials, such as scientific journals, books, articles, theses, research reports, and other academic resources, which can

¹¹ Christian Fuchs and Marisol Sandoval, "The Diamond Model of Open Access Publishing: Why Policy Makers, Scholars, Universities, Libraries, Labour Unions and the Publishing World Need to Take Non-Commercial, Non-Profit Open Access Serious," *TripleC* 11, no. 2 (2013): 428–43, <https://doi.org/10.31269/VOL11ISS2PP428-443>.

¹² Putri, *Pengelolaan Sistem Keamanan Informasi Terhadap Kebijakan Hak Cipta Pada Institutional Repository Di Perpustakaan Perguruan Tinggi (Studi Kasus Di Perpustakaan Universitas Branwijaya)*.

¹³ Fang Xu and Jia Tina Du, "Factors Influencing Users' Satisfaction and Loyalty to Digital Libraries in Chinese Universities," *Computers in Human Behavior* 83 (June 2018): 64–72, <https://doi.org/10.1016/J.CHB.2018.01.029>.

¹⁴ Rasuli et al., "Access and Impact Barriers to Academic Publications: A Global Study of Thesis and Dissertation Embargo Policies."

¹⁵ Noreen Kirkman and Gaby Haddow, "Publisher Embargoes and Institutional Repositories: A Case Study of Journal Articles Subject to an Australian Funder Mandate," *Information Research: An International Electronic Journal* 26, no. 3 (September 2021), <https://doi.org/10.47989/IRPAPER907>.

¹⁶ Putri, *Pengelolaan Sistem Keamanan Informasi Terhadap Kebijakan Hak Cipta Pada Institutional Repository Di Perpustakaan Perguruan Tinggi (Studi Kasus Di Perpustakaan Universitas Branwijaya)*.

be accessed freely without fees or subscriptions. This means that anyone with an internet connection can access, read, and download these materials without restrictions, which greatly supports the widespread and fair dissemination of knowledge.¹⁷ Quoting Chang et al. (2023), open access indicators can be reviewed from a) easy to print & display, which refers to the openness of access to digital collections for printing or display on digital platforms so that they can be easily accessed anytime, anywhere, b) free features, where some digital collections can be downloaded, making it easy for users to save databases offline. Open Access Digital Collections are a major step towards the democratisation of knowledge, allowing anyone to gain access to scientific information that was previously limited to those who could afford access or subscriptions. This supports the development of more inclusive and transparent science.¹⁸

RESEARCH METHOD

This study uses a quantitative approach with a survey method, which aims to examine the relationship between embargo policies and access to digital collections in libraries.¹⁹ Creswell explains that quantitative methods are suitable when research focuses on measuring variables and analysing relationships between variables based on numerical data. Therefore, this study will use questionnaires as instruments to collect quantitative data that can be analysed statistically.²⁰

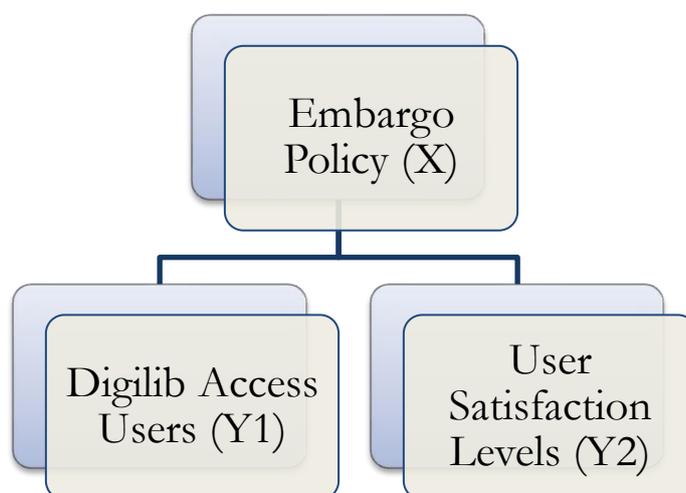


Figure 2 Conceptual Framework

Within the conceptual framework above, it can be hypothesised (H1) that the embargo policy as variable X or the independent variable has a significant effect on user access to the digital library collection as variable Y1 and the level of user satisfaction with the digital library collection as variable Y2. (H0) Embargo policies (X) do not significantly affect user access and (Y) in the environment of UIN Sunan Ampel Surabaya. The population in this study is 500 users of the UIN Sunan Ampel Surabaya digital library. The research sample will be selected using the proportionate stratified random sampling technique, as explained by Sugiyono, who states that this technique is used if the population consists of several groups with different characteristics. In this study, the sample will be taken based on user categories, such as students, lecturers, and librarians, to obtain more representative results.²¹ Based on

¹⁷ Chia Ling Chang et al., "From Digital Collection to Open Access: A Preliminary Study on the Use of Digital Models of Local Culture," *Education Sciences* 2023, Vol. 13, Page 205 13, no. 2 (February 2023): 205, <https://doi.org/10.3390/EDUCSCI13020205>.

¹⁸ Daniel Gelaw Alemneh, *Handbook of Research on Global View of Open Access and Scholarly Communications* (IGI Global, Information Science Reference (an imprint of IGI Global), 2022).

¹⁹ W.L. Neuman, *Social Research Methods: Qualitative and Quantitative Approaches*, 7th ed. (Pearson Education Limited, 2014).

²⁰ John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (California: SAGE Publications, 2014).

²¹ Ines Indiana, *Pengaruh Intensitas Penggunaan Media Sosial Terhadap Perilaku Keagamaan Siswa Kelas VIII Di SMP N 23 Semarang*, 2023.

these calculations, 83.333, rounded up to 84 respondents, will be selected proportionally from various categories of library users, such as students, lecturers, and librarians. This research will be conducted at the UIN Sunan Ampel Surabaya Library over a period of seven months, from May 2025 to November 2025.

FINDINGS AND DISCUSSION

FINDINGS

The testing process begins with validity, reliability, normality, multicollinearity, correlation and multiple regression tests.

Tabel 1 Results of Multiple Linear Regression Test on Embargo against Digital Library Access

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3298,994	1	3298,994	67,935	,000 ^b
	Residual	3981,994	82	48,561		
	Total	7280,988	83			

a. Dependent Variable: Digital Access Library

b. Predictors: (Constant), Embargo Policy

Based on Table 1 Multiple Linear Regression Test of Embargo on Digital Library Access, for the Digital Library Access ~ Embargo Policy model shows that the model is statistically valid, with $F(1,82) = 67.935$; $p < 0.001$, so the null hypothesis ($\beta_1 = 0$) is rejected. The variance explained by the predictor reaches $R^2 = 3298.994 / 7280.988 \approx 0.453$ (Adjusted $R^2 \approx 0.446$), meaning that approximately 45.3% of the variation in access is explained by the embargo policy, while the mean square error (MSE = 48.561) implies an SE of estimate ≈ 6.97 . Cohen's f^2 effect size = $R^2 / (1 - R^2) \approx 0.83$ is large, indicating a substantive contribution of the embargo policy to access. Consistent with the previous coefficient (intercept 19.723; $B = 0.708$), each 1-unit increase in positive perception of the embargo policy is projected to increase the access score by approximately 0.708 units; in practical terms, strengthening the embargo policy design has a real opportunity to improve the ease/smoothness of access to digital library services.

Tabel 2 Results of Multiple Linear Regression Test of Embargo on User Satisfaction Levels with Digital Library Collections

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3761,783	1	3761,783	112,619	,000 ^b
	Residual	2739,027	82	33,403		
	Total	6500,810	83			

a. Dependent Variable: User Satisfaction Levels

b. Predictors: (Constant), Embargo Policy

Based on Table 2. Multiple Linear Regression Test of Embargo on Digital Library Collection User Satisfaction Levels, the Satisfaction Level ~ Embargo Policy model is strongly significant, $F(1,82) = 112.619$; $p < 0.001$, with $R^2 = 0.579$ (Adjusted $R^2 \approx 0.574$), meaning that approximately 57.9% of the variation in satisfaction is explained by the perception of the embargo policy; mean square error MSE = 33.403 (SE of estimate ≈ 5.78). This is consistent with the previous coefficient ($B = 0.756$; $\beta = 0.761$; $t = 10.612$), so that $t^2 \approx F$ confirms the robustness of the findings. Cohen's $f^2 \approx 1.37$ is a large effect size,

indicating a substantive contribution of embargo policy to increased satisfaction; practically, each 1-unit increase in embargo policy score predicts an increase of ≈ 0.76 units in digital collection user satisfaction score.

DISCUSSION

The Impact of Embargo Policies on Access and Availability of the Digital Library Collection at UIN Sunan Ampel Surabaya

Empirically, the results of simple linear regression show that Embargo Policy \rightarrow Digital Library Access has a positive and highly significant effect ($B = 0.708$; $SE = 0.086$; $\beta = 0.673$; $t(82) = 8.242$; $p < 0.001$). The model is feasible overall ($F(1,82) = 67.935$; $p < 0.001$) and explains $R^2 \approx 0.453$ of the variation in access, with SE of estimate ≈ 6.97 . The Pearson correlation $r = 0.673$ reinforces the direction and magnitude of the relationship. The Kolmogorov–Smirnov normality test (with Lilliefors correction) also supports the assumption of normality in the three constructs (Asymp. Sig. $0.087\text{--}0.097 > 0.05$), so that the application of parametric techniques is operationally appropriate. Substantively, the positive coefficient ($B = 0.708$) indicates that the better the perception of the design/implementation of the embargo policy, the higher the perception of access to digital collections. At first glance, this finding appears ‘counterintuitive’, given that an embargo by definition restricts or delays access.²²

However, in the practice of institutional repositories that implement partial open access (e.g. abstracts, tables of contents, metadata) during the embargo period as outlined in the UINSA policy (Rector's Decree No. 1308/2023, 3-year embargo, with limited open content), users often experience more organised, transparent, and predictable access. Putri (2021) also reported a similar pattern at Brawijaya University, namely the partial opening of manuscript components during the embargo period.²³ From a collection management and service perspective, a ‘smart embargo’ can actually improve perceived access because it: (a) clarifies what can be accessed, when, and how; (b) encourages metadata enrichment and retrieval; (c) provides a legitimate request-a-copy mechanism during the copyright/patent quarantine period. The literature on OA positions embargoes as a realistic compromise between rights protection (author/publisher) and access needs.²⁴

The magnitude of the effect can be understood practically: a 1 SD increase in the perception of the embargo policy ($SD_X = 8.90$) projects an increase of ≈ 6.30 points in the access score (0.708×8.90). At the midpoint of the sample, the model prediction is highly consistent with the empirical mean: $\hat{H}_{\text{Access}} = 19.723 + 0.708 \times 61.31 \approx 63.13$ (observed mean = 63.15). The 95% confidence interval for the slope is also narrow (0.537 to 0.879), indicating good estimation precision. Theoretically, these results are consistent with the OA Embargo framework: embargoes are not synonymous with ‘total closure’, but rather a delay in full access while maintaining partial access (limited/selected openness) to keep scholarly communication moving.²⁵ In the context of UINSA, which opens the cover page, abstract, table of contents, and bibliography during the ‘access’ embargo period, the user experience can be improved due to the certainty of procedures and the availability of minimum information sufficient to assess the relevance of the document.²⁶ It should be noted that $R^2 \approx 0.453$ implies room for improvement: approximately 54.7% of access variation is influenced by other factors (interface quality, information literacy, network speed, link resolver integration, and document service policies). However, the absence of multicollinearity (Tolerance = 1.000; VIF = 1.000) ensures that the coefficients are not distorted by other predictors in the current model.

²² Rasuli et al., “Access and Impact Barriers to Academic Publications: A Global Study of Thesis and Dissertation Embargo Policies.”

²³ Putri, *Pengelolaan Sistem Keamanan Informasi Terhadap Kebijakan Hak Cipta Pada Institutional Repository Di Perpustakaan Perguruan Tinggi (Studi Kasus Di Perpustakaan Universitas Brawijaya)*.

²⁴ Fuchs and Sandoval, “The Diamond Model of Open Access Publishing: Why Policy Makers, Scholars, Universities, Libraries, Labour Unions and the Publishing World Need to Take Non-Commercial, Non-Profit Open Access Serious.”

²⁵ William C. Wellburn, Janice Wellbrun, and Beth McNeil, *Advocacy, Outreach, and the Nation's Academic Libraries A Call for Action* (Association of College and Research Libraries, 2010).

²⁶ Karin Wikoff, *Electronic Resources Management in the Academic Library - Google Books* (Libraries Unlimited, 2012), https://www.google.co.id/books/edition/Electronic_Resources_Management_in_the_A/BnnDEAAAQBAJ?hl=en&gbpv=1&dq=digital+library+embargo+management&pg=PA3&printsec=frontcover.

Further testing (e.g., heteroscedasticity, residual tests, influential cases) is recommended to establish internal validity. From a policy perspective, these results indicate the added value of strengthening the embargo design: transparency of the period, countdown notifications, rich metadata standards, copy request options for legitimate academic needs, and licence explanations. This approach is in line with evidence that weighs the need for protection (patents/publications) without sacrificing retrieval services and user orientation.²⁷ In short, in the context of UINSA, a well-designed embargo policy does not merely withhold access, but orchestrates access—creating clear content governance, strong discovery pathways, and a relatively stable user experience. This explains the positive and strong relationship between Embargo and Access in this research data.

The quantitative data above is supported by statements from informant W, a seventh-semester student in the economics and business programme at UINSA, who believes that the embargo has had a significant impact on access and collections, with only certain account users able to access these references. Another statement by informant F, a fifth-semester student in the Islamic Education Management programme, argues that the embargo on certain collections has benefits, such as maintaining the quality of scientific papers, and that it is necessary to maintain infrastructure so that the quality of the library is not affected. This is reinforced by the statement from informant T, a seventh-semester student in the Aqidah and Islamic Philosophy programme, who believes that the embargo policy actually improves the quality of reading materials at the UINSA library.

The Effect of Embargo Policy on User Satisfaction in Accessing the Digital Library Collection of UIN Sunan Ampel Surabaya

The results of simple linear regression show a stronger effect of the embargo policy on the Satisfaction Level ($B = 0.756$; $SE = 0.071$; $\beta = 0.761$; $t(82) = 10.612$; $p < 0.001$), with $R^2 \approx 0.579$ ($F(1,82) = 112.619$; $p < 0.001$). This means that $\approx 57.9\%$ of the variation in satisfaction can be explained by perceptions of the embargo policy—a large effect category (Cohen's $f^2 \approx 1.37$). The normality test supports the assumption ($p > 0.05$), so parametric inference is relevant. Conceptually, digital library user satisfaction is closely related to the dimensions of perceived usefulness, perceived ease of use, and affinity.²⁸ Clear, fair, and transparent embargo policies can increase users' sense of control, service certainty, and trust in the institution. When users understand the reasons (patent/publication protection), duration, what remains accessible, and how to submit requests during the embargo period, expectations and experiences tend to align, promoting satisfaction. In practical terms, a 1 SD increase in the perception of embargo policy (8.90) is projected to increase the satisfaction score by ≈ 6.73 points (0.756×8.90). The model prediction is also calibrated with the observation mean: $\hat{H}_{\text{Satisfaction}} = 14.741 + 0.756 \times 61.31 \approx 61.09$ (empirical mean = 61.12). The 95% confidence interval for the slope (0.615 to 0.897) confirms the reliability of the estimate.

The strongest Access–Satisfaction correlation ($r = 0.773$; $p < 0.001$) implies that some of the impact of the embargo policy on satisfaction is likely mediated by Access: Embargo \rightarrow Access \rightarrow Satisfaction. Although causal mediation has not been formally tested here (5,000 bootstrap replications are recommended, as you plan), this pattern is consistent with TAM theory—easy and useful access increases satisfaction. The literature on the reasons for embargoes protecting intellectual property rights, maintaining confidentiality, and ensuring quality can bring psychological value to users: perceptions of the credibility and reliability of the repository.²⁹ When users perceive that institutions manage scientific assets professionally (e.g., UINSA's 3-year embargo with partial openness), satisfaction stems not only

²⁷ Rasuli et al., “Access and Impact Barriers to Academic Publications: A Global Study of Thesis and Dissertation Embargo Policies.”

²⁸ Misbah Jabeen et al., “Usability Study of Digital Libraries: An Analysis of User Perception, Satisfaction, Challenges, and Opportunities at University Libraries of Nanjing, China,” *Library Collections, Acquisitions, & Technical Services* 40, nos. 1–2 (2017): 58–69, <https://doi.org/10.1080/14649055.2017.1331654>.

²⁹ Xu and Du, “Factors Influencing Users' Satisfaction and Loyalty to Digital Libraries in Chinese Universities.”

from ‘access’ but also from trust in the integrity of the collection. On the other hand, overly strict embargoes have the potential to reduce satisfaction if they hinder urgent research needs.³⁰

However, the large positive slope found in this data indicates that the current implementation with partial access, rich metadata, and more service procedures creates more benefits (certainty/trust) than costs (delay in full access). This is consistent with the idea of OA as a spectrum of access, rather than an ‘open–closed’ dichotomy.³¹ To maximise satisfaction, recommended practices include: explanation of rights and licences on item pages, countdown timers for remaining embargo periods, automated copy request buttons, SLA response times, and discovery integration (OPAC, link resolver, journal portal). These efforts directly target satisfaction variables in the TAM model (usefulness & ease). Finally, despite a high R^2 , evaluating further assumptions (homoscedasticity, residual independence, influential cases) remains important to ensure the robustness of inferences. Simultaneous model analysis (Satisfaction ~ Embargo + Access) and mediation tests will enrich our understanding of the influence of embargo policies on satisfaction within the UINSA environment.

The quantitative data above is supported by statements from informant W, a seventh-semester student in the economics and business programme at UINSA, who believes that the embargo policy is very appropriate. This student is pleased with the policy, which has greatly affected access to collections, especially scientific papers that are often accessed through the digital library. Access to some collections from certain years of publication is restricted, but some can still be accessed by logging in with a student account. Another statement by informant F, a fifth-semester student in the Islamic Education Management study programme, argues that the embargo policy is mostly applied to online collections, so that offline library collections can still be easily accessed as long as the requirements for borrowing/reading books are met. This was reinforced by the statement of informant T, a seventh-semester student in the Aqidah and Islamic Philosophy study programme, who said that the embargo policy was implemented by the university to maintain the quality of the university library's collections. The implementation of the embargo was indeed aimed at restricting the general public from accessing several collections of written works online or offline.

The Impact of Embargo Policies on Access for Members of the Academic Community at UIN Sunan Ampel Surabaya

Aggregate data shows a strong positive pattern between variables: Embargo–Access $r = 0.673$, Embargo–Satisfaction $r = 0.761$, and Access–Satisfaction $r = 0.773$ (all $p < 0.001$). Although data separation by user category (students/researchers/community) is not available, the strength of these associations suggests that the impact of the policy is felt across segments. Normality tests support the validity of general inferences on the sample ($N = 84$). Students (especially undergraduate students) generally still benefit from partial access (abstracts, tables of contents, bibliographies) to assess relevance and develop initial theoretical foundations. In line with Putri's (2021) report, the pattern of opening certain sections during the embargo allows students to maintain adequate access while preserving the integrity of the manuscript for patent/publication purposes.³² Thus, for this segment, a transparent and guided embargo design can improve perceptions of access.

Researchers/lecturers who require full and up-to-date access may be the segment most sensitive to embargoes. The literature confirms the trade-off between IPR protection and the need for immediate access.³³ However, if the repository provides compensation mechanisms (interlibrary loan, request-a-copy, links to institutional subscriptions, or campus IP-based access), short-term barriers can be

³⁰ Khoo and Lay, “A Very Long Embargo: Journal Choice Reveals Active Non-Compliance with Funder Open Access Policies by Australian and Canadian Neuroscientists.”

³¹ Fuchs and Sandoval, “The Diamond Model of Open Access Publishing: Why Policy Makers, Scholars, Universities, Libraries, Labour Unions and the Publishing World Need to Take Non-Commercial, Non-Profit Open Access Serious.”

³² Putri, *Pengelolaan Sistem Keamanan Informasi Terhadap Kebijakan Hak Cipta Pada Institutional Repository Di Perpustakaan Perguruan Tinggi (Studi Kasus Di Perpustakaan Universitas Bramijaya)*.

³³ Khoo and Lay, “A Very Long Embargo: Journal Choice Reveals Active Non-Compliance with Funder Open Access Policies by Australian and Canadian Neuroscientists.”

minimised in line with the regression findings that well-managed embargoes actually increase access and satisfaction. For the general public, the value of embargoes lies in institutional accountability and credibility: minimum information (abstracts/metadata) remains accessible for knowledge orientation, while full content is opened post-embargo (UINSA: 3 years).

The OA perspective (Fuchs & Sandoval, 2013) views the post-embargo phase as a moment of knowledge redistribution that expands socially relevant benefits for citizens, practitioners, and non-academic stakeholders. Since Access–Satisfaction is the strongest relationship ($r = 0.773$), any policy that increases perceived access, even if not yet full access, will improve satisfaction in all three segments. Recommended practices: clear labelling of embargo status per item, release timers, citation guidelines, CTA requests for copies, and legal alternative routes (links to pre-print manuscripts permitted by publishers, if available). This is in line with dark deposit practices in repositories, which still allow limited sharing in accordance with copyright policies.

UINSA's policy of opening non-core components (cover, statement of authenticity, approval, abstract, table of contents, bibliography) during the embargo serves as an 'information bridge'. Rasuli et al. (2023) emphasise the legitimacy of embargoes (intellectual property rights/confidentiality/security), while Putri (2021) points to information security and orderly access as supporting factors. The synergy between the two explains why, in the data, a positive perception of embargoes implies higher access and satisfaction. From a differential policy perspective, libraries can consider different levels of service: campus IP/SSO-based access for the academic community, curated document delivery for researchers, and an information literacy portal for the public.³⁴ This strategy is consistent with the idea of smart embargoes that maintain protection while maximising utility per user segment. For further verification, follow-up studies with multigroup analysis (moderated by user status) or bootstrap-based mediation models (Embargo → Access → Satisfaction) will be important. However, based on current evidence, it can be concluded that the impact of the embargo policy is positive and substantive on access and satisfaction at the user population level, and is likely to be beneficial in all three segments through channels of varying intensity³⁵.

The quantitative data above is supported by statements from informant 3, a seventh-semester student in the economics and business study programme at UINSA. This student expressed the opinion that in the short term, some library users may be disappointed because some references are inaccessible, but in the long term, this decision will actually help library users to sort research based on publication year and other specific classifications. Another statement by informant F, a fifth-semester student in the Islamic Education Management study programme, argued that some references could still be easily accessed offline. This was reinforced by a statement from informant T, a seventh-semester student in the Aqidah and Islamic Philosophy study programme, that the embargo was implemented on the library's collection, and that the embargo only applied to publications from certain years.

CONCLUSION

The embargo policy implemented at the UIN Sunan Ampel Surabaya Library has a significant impact on access to digital collections. Regression analysis results show that the embargo policy has a positive effect on ease of access to digital collections, with a regression coefficient of 0.708. This means that the better users' perception of the embargo policy, the higher their access to available digital collections. The embargo policy also affects the level of user satisfaction in accessing digital collections. Based on multiple linear regression testing, it was found that the embargo policy contributes significantly to user satisfaction, with a regression coefficient of 0.756. This shows that the implementation of a clear and transparent embargo policy increases user satisfaction, which correlates positively with their experience in accessing the library's digital collections. The impact of embargo policies is felt by all

³⁴ Putri, *Pengelolaan Sistem Keamanan Informasi Terhadap Kebijakan Hak Cipta Pada Institutional Repository Di Perpustakaan Perguruan Tinggi (Studi Kasus Di Perpustakaan Universitas Bramijaya)*.

³⁵ Kirkman and Haddow, "Publisher Embargoes and Institutional Repositories: A Case Study of Journal Articles Subject to an Australian Funder Mandate."

academic community users, including students, lecturers, and the general public. Although embargoes restrict full access to certain collections, partial access mechanisms such as opening abstracts, tables of contents, and metadata allow users to still obtain the information they need, increasing their convenience and satisfaction.

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