

CONTRIBUTION OF THE TOURISM SECTOR TO REGIONAL ORIGINAL INCOME (PAD) META ANALYSIS

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LEMBAR PENGESAHAN

Kontribusi Sektor Pariwisata Terhadap Pendapatan Asli Daerah (Pad) : Analisis Meta

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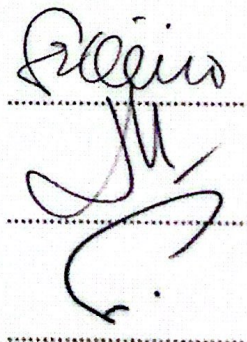
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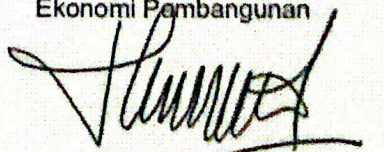
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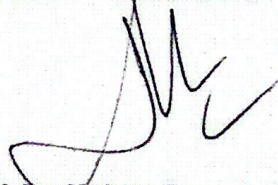
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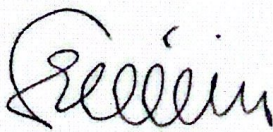


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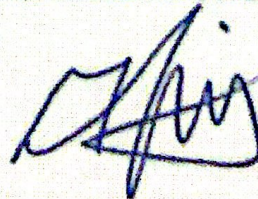
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Abstrak

Penelitian ini menggunakan meta-analisis, dengan tujuan menyelidiki pengaruh sektor pariwisata (tingkat hunian hotel) terhadap Pendapatan Asli Daerah (PAD). Penelitian ini menggunakan Systematic Literature Review (SLR) dengan Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. Selama delapan tahun terakhir, penelitian literatur dilakukan melalui platform GARUDA dan scholar dengan kata kunci "pariwisata" dan "PAD". Dari identifikasi diperoleh 140 artikel, kemudian dilakukan proses kriteria inklusi dan eksklusi untuk memilih 19 artikel yang memenuhi syarat untuk analisis lebih lanjut. Tingkat hunian hotel memiliki pengaruh positif dan signifikan terhadap PAD, seperti yang ditunjukkan oleh nilai efek gabungan 0,333 dengan interval kepercayaan 95% 0,068–0,597 dan nilai p-value 0,0139, menurut hasil meta-analisis. Dengan menggunakan model random effects dengan metode Restricted Maximum Likelihood. Hasil uji heterogenitas menunjukkan nilai I^2 sebesar 98,67%, yang menunjukkan variasi yang signifikan dalam hasil penelitian antara studi. Sementara hasil meta-regresi dengan variabel moderator tahun, sampel, panel, dan jurnal menunjukkan bahwa variabel moderator tersebut tidak memiliki pengaruh yang signifikan terhadap variasi ukuran pengaruh, analisis subgroup menunjukkan bahwa ada perbedaan ukuran pengaruh antar kelompok penelitian. Secara keseluruhan, penelitian ini menemukan bahwa pariwisata, melalui tingkat hunian hotel, memiliki kontribusi positif terhadap peningkatan PAD, meskipun terdapat variasi hasil penelitian yang dipengaruhi oleh perbedaan karakteristik studi

Kata Kunci: Pariwisata; Tingkat hunian hotel; Pendapatan asli daerah; Meta analisis;

Abstrak

This study employs a meta-analysis approach to examine the influence of the tourism sector, particularly hotel occupancy rates, on Regional Original Income (PAD). The research applies a Systematic Literature Review (SLR) using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. Literature searches were conducted through the GARUDA and Google Scholar platforms using the keywords “tourism” and “PAD” within the last eight years. A total of 140 articles were initially identified, followed by an inclusion and exclusion screening process that resulted in 19 eligible studies for analysis. The meta-analysis findings indicate that hotel occupancy rates have a positive and significant effect on PAD, with a combined effect size of 0.333, a 95% confidence interval ranging from 0.068 to 0.597, and a p-value of 0.0139. The analysis used a random effects model with the Restricted Maximum Likelihood (REML) method. Heterogeneity testing showed an I^2 value of 98.67%, indicating substantial variation among studies. Meta-regression analysis using moderator variables such as year, sample, panel, and journal revealed no significant moderating effects. However, subgroup analysis indicated differences in effect sizes across study groups. Overall, tourism contributes positively to increasing PAD.

Keywords: Tourism; Hotel occupancy rate; Original regional revenue; Meta-analysis;

Contribution of the Tourism Sector to Regional Original Income (PAD) Meta Analysis

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ABSTRACT

This study employs a meta-analysis approach to examine the influence of the tourism sector, particularly hotel occupancy rates, on Regional Original Income (PAD). The research applies a Systematic Literature Review (SLR) using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. Literature searches were conducted through the GARUDA and Google Scholar platforms using the keywords "tourism" and "PAD" within the last eight years. A total of 140 articles were initially identified, followed by an inclusion and exclusion screening process that resulted in 19 eligible studies for analysis. The meta-analysis findings indicate that hotel occupancy rates have a positive and significant effect on PAD, with a combined effect size of 0.333, a 95% confidence interval ranging from 0.068 to 0.597, and a p-value of 0.0139. The analysis used a random effects model with the Restricted Maximum Likelihood (REML) method. Heterogeneity testing showed an I^2 value of 98.67%, indicating substantial variation among studies. Meta-regression analysis using moderator variables such as year, sample, panel, and journal revealed no significant moderating effects. However, subgroup analysis indicated differences in effect sizes across study groups. Overall, tourism contributes positively to increasing PAD.

INTRODUCTION

The tourism sector has long been recognized as one of the strategic and leading sectors (Tourism et al., 2022) that has great potential in encouraging local income (Lubis, 2012). The development of tourism not only reflects the increase in the attractiveness of a destination, but also acts as a locomotive driving the economy that is able to create a high multiplier effect (Mukaffi & Haryanto, 2022).

Tourism's contribution to local original income is realized through various channels, in line with theoretical frameworks such as the Tourism-Led Growth Hypothesis (TLGH). Macro-wise, this sector is an important source of state foreign exchange and Regional Original Revenue (PAD), mainly through revenues from hotel, restaurant, and tourism levies (Bireuen et al., 2021). Meanwhile, at the micro level, tourism development directly stimulates local economic activities, such as the emergence of new business opportunities, increased trade activities, and most crucially, labor absorption and reduction of unemployment and poverty rates around tourist destinations (Mumu et al., 2020). To ensure the accuracy of this contribution measurement, international standard methods such as Tourism Satellite Accounts (TSA) are used to calculate Tourism Direct Gross Domestic Product (TDGDP) as an alternative to accelerating economic growth (Case & Riau, 2021).

More than just macroeconomic growth, the tourism sector is now being encouraged to realize Inclusive Economic Growth, especially at the community level (Desa & Dalam, 2022). Challenges in optimizing tourism contributions also arise, such as poor tourism management problems, unattractive physical conditions of tourist attractions, or suboptimal tourism revenue. This shows how important integrated efforts are, such as the implementation of service standards, human resource development, and mutual awareness between the government and the community, to develop tourism potential in a sustainable manner (Setyawan et al., 2026).

Table 1. Indonesia's revenue structure

Sector Economy	Role in GDP
Processing Industry	19-20%
Agriculture, Forestry and Fisheries	13-14%
Large and retail trade	12-13%
Construction	10-11%
Mining and Quarrying	7-9%
Transportation and Warehousing	5-6%
Tourism	4-5%

Source : BPS Indonesia, 2025

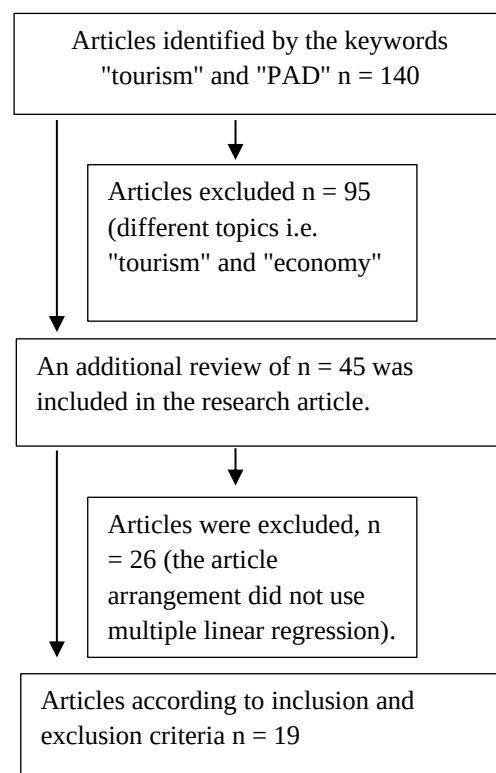
Meta-analyses were used to summarize the results and examine how strong the relationship between tourism and local native income is with mathematical comprehension abilities (Ustunel et al., n.d.). These results will support an ideal economy in the future. Meta-analysis is considered a popular method for combining findings from many early studies, comparing different approaches, summarizing and providing further explanations. The meta-analysis method ignores the subjective interpretation of various research reviews on the same topic. It provides cumulative evidence by reducing the distorting impact of the initial study, which reduces disagreement of results and aids the understanding and development of theories by finding relationships between study characteristics (Devine & Nosek, 2017).

METHODS

To identify, review, and evaluate various studies related to the topic studied, this scientific article uses the Systematic Literature Review (SLR) method, a research approach that is conducted in a systematic, structured, and thorough manner (Priharsari et al., 2022). This method aims to collect, categorize, and synthesize empirical and conceptual findings from previous studies so that a deep and comprehensive understanding of certain problems is obtained (In et al., 2025).

The SLR process is carried out through clear stages, starting from the formulation of research questions, the determination of inclusion and exclusion criteria, the search of literature on various scientific sources, the selection of appropriate articles, to the analysis and synthesis of research results (Sauer & Seuring, 2023). With this approach, researchers can identify patterns, trends, and research gaps, and clarify the focus of the study based on existing scientific evidence, so that the results of the study become more objective, valid, and academically accountable (citation). To find relevant articles, this article uses the GARUDA (Garda Digital Reference Agency) digital platform and Google Scholar. For this scientific article, a systematic literature review was conducted using the Preferential Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) method, and the research time span is 8 years from the current (Gricar, 2023).

Figure 1. Step of the PRISMA method



Using the PRISMA method and using GARUDA (digital reference garda) and Google Scholar to search for articles relevant to the keywords "tourism (hotel occupancy rate)" and "PAD", 140 articles were produced. Furthermore, articles that did not use the experimental method were excluded, resulting in 95 articles. The article was removed because it had an incomplete arrangement with experimental

elements. This resulted in 26 journals that will be reviewed through literature reviews. These articles are selected based on the criteria used for inclusion and inclusion.

Table 2. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
1. Accessible scientific articles at the national or international level related to SLR models	1. List of scientific articles that are not accessible in their entirety
2. Scientific articles that use multiple linear regression	2. Scientific articles do not use experimental methods

To be taken as a research sample, each object must meet the inclusion and exclusion criteria. Exclusion criteria define objects that cannot be used in research. This study uses multiple linear regression as a data meta-analysis method:

Rumus : $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots$

Explanation :

1. **Y** = dependent variable (bound variable)
2. **α (alfa)** = konstanta / intercept
3. **$\beta_1, \beta_2, \dots$** = the regression coefficient of each independent variable
4. **$X_1, X_2, \dots$** = independent variable (independent variable)

RESULTS AND DISCUSSION

Based on the results of the article sorting, GARUDA and Google Scholar were used to search for relevant articles with relevant data and meet the inclusion and exclusion criteria.

After 19 research articles were examined using the multiple linear regression method, the data results from each journal that had been selected.

Results and Discussion 1

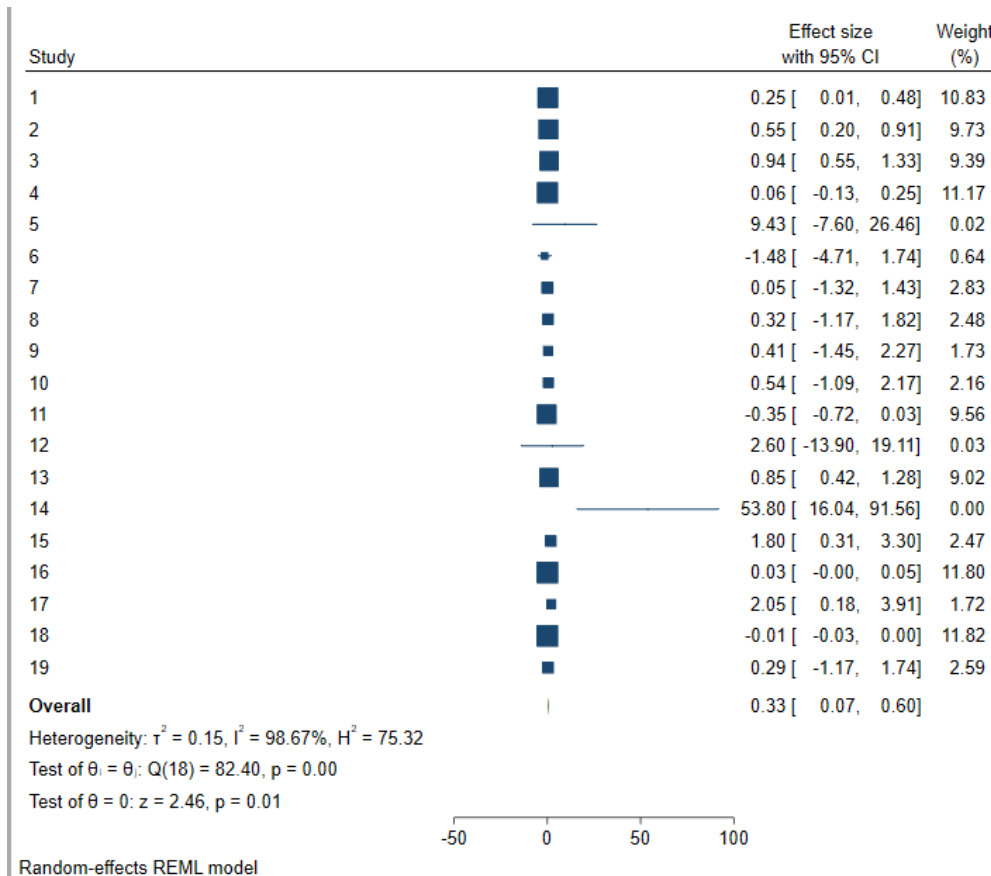
Table 3. Results of the REML method

Method: REML		tau2 = 0.1545		
		I2 (%) = 98.67		
		H2 = 75.32		
Study	Effect size	[95% conf. interval]		% weight
1	0.247	0.014	0.480	10.83
2	0.553	0.196	0.910	9.73
3	0.942	0.550	1.334	9.39
4	0.059	-0.127	0.245	11.17
5	9.429	-7.597	26.455	0.02
6	-1.483	-4.709	1.743	0.64
7	0.055	-1.317	1.427	2.83
8	0.321	-1.174	1.816	2.48
9	0.412	-1.446	2.270	1.73
10	0.542	-1.089	2.173	2.16
11	-0.348	-0.722	0.026	9.56
12	2.603	-13.900	19.106	0.03
13	0.852	0.423	1.281	9.02
14	53.800	16.039	91.561	0.00
15	1.805	0.308	3.302	2.47
16	0.026	-0.001	0.053	11.80
17	2.049	0.183	3.915	1.72
18	-0.013	-0.027	0.001	11.82
19	0.288	-1.166	1.742	2.59
theta	0.333	0.068	0.597	
Test of theta = 0: z = 2.46		Prob > z = 0.0139		
Test of homogeneity: Q = chi2(18) = 82.40		Prob > Q = 0.0000		

The results of the meta-analysis conducted using a random effects model using the REML method on Stata showed that the combined effect value (theta) was 0.333 from 19 studies, with a 95% confidence interval of 0.068 to 0.597, and the effect size was considered statistically significant with a z-value of 2.46 and a p-value of 0.0139 ($p < 0.05$). It shows the positive and significant influence of independent variables on dependent variables. In addition, the results of the heterogeneity test showed a value of $Q = 82.40$ with $p = 0.000$, which shows that the results of each study have significant differences. The I^2 value of 98.67% indicates that the heterogeneity between studies is very high. According to (1,2,3,4, 2025) Concepts of Inferential Statistics, Hypotheses and Hypothesis Testing, Significance Level"Explains that if the p-value < 0.05 then H_0 is rejected and the result is considered statistically significant

Results and Discussion 2

Table 4. Forest plot results



Based on the results of the forest plot meta-analysis using the Random Effects (REML) model in the first image, it can be seen that the overall effect value is 0.33 with a 95% confidence interval of 0.07 to 0.60. A positive effect size value indicates that the independent variable studied has a positive influence on the dependent variable. In addition, because the confidence interval did not exceed zero, the influence was considered statistically significant. Therefore, the results of the overall meta-analysis show that the variables studied have a significant positive correlation with the variables affected in the various studies studied. (Botella & Sánchez-meca, 2024) explains that confidence intervals are used to assess the uncertainty of effect size, and if the interval does not include zero then the effect is considered statistically significant.

The results of the analysis also showed a very high level of heterogeneity between studies. This is indicated by the value of I^2 of 98.67%, τ^2 of 0.15, and H^2 of 75.32. A value of I^2 that is close to 100% indicates that most of the variation in the results of the study results comes from differences in characteristics between studies, such as differences in research locations, research periods, analysis methods, and control variables used. This high heterogeneity shows that the results collected in the

meta-analysis have considerable variation so that the use of the random effects model is appropriate to accommodate these differences, the results of Cochran's Q heterogeneity test show a value of $Q(18) = 82.40$ with a p-value = 0.00 which means that there is a significant difference between the results of the analyzed research. This reinforces the indication that the results of the study are not homogeneous

When viewed from each study, most studies show a positive effect size, although there are some studies that show negative or insignificant effects. In addition, the weight (%) measures in each study varied, indicating the contribution of each study to the meta-analysis results.

Overall, the results of this meta-analysis show that the variables studied generally have a significant positive influence, but there are considerable differences in results between studies, which is reflected in the high level of heterogeneity. This indicates that contextual factors such as regional conditions, the research period used in each study can affect the magnitude of the influence found.

Results and Discussion 3

Table 5. Subgroup analysis results

Study	Effect size	[95% conf. interval]		% weight
Group: 0				
13	0.852	0.423	1.281	9.02
theta	0.852	0.423	1.281	
Group: 1				
1	0.247	0.014	0.480	10.83
2	0.553	0.196	0.910	9.73
3	0.942	0.550	1.334	9.39
4	0.059	-0.127	0.245	11.17
5	9.429	-7.597	26.455	0.02
6	-1.483	-4.709	1.743	0.64
7	0.055	-1.317	1.427	2.83
8	0.321	-1.174	1.816	2.48
9	0.412	-1.446	2.270	1.73
10	0.542	-1.089	2.173	2.16
11	-0.348	-0.722	0.026	9.56
12	2.603	-13.900	19.106	0.03
14	53.800	16.039	91.561	0.00
15	1.805	0.308	3.302	2.47
16	0.026	-0.001	0.053	11.80
17	2.049	0.183	3.915	1.72
18	-0.013	-0.027	0.001	11.82
19	0.288	-1.166	1.742	2.59
theta	0.271	0.010	0.531	
Overall				
theta	0.333	0.068	0.597	

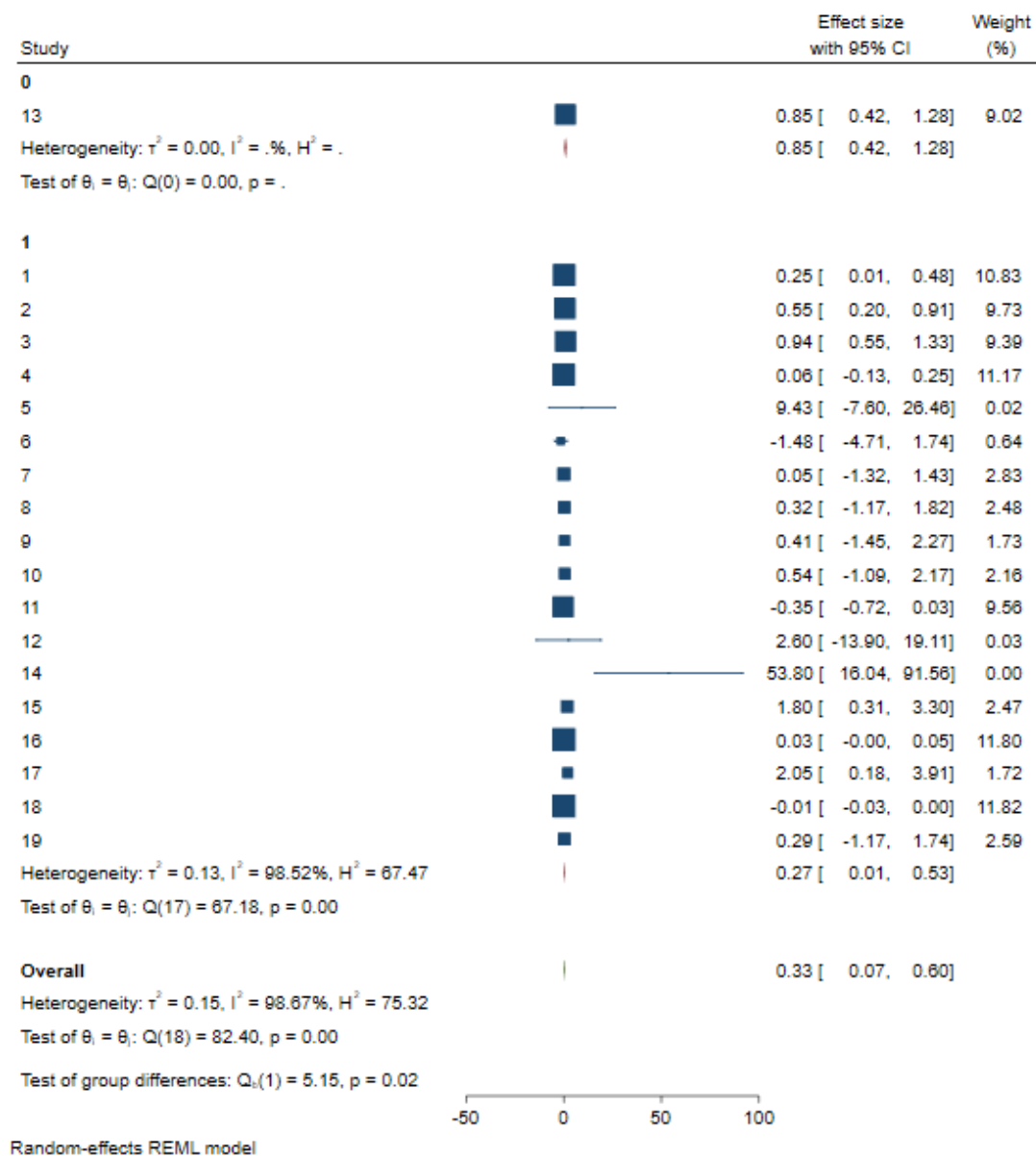
Heterogeneity summary						
Group	df	Q	P > Q	tau2	% I2	H2
0	0	0.00	.	0.000	.	.
1	17	67.18	0.000	0.131	98.52	67.47
Overall	18	82.40	0.000	0.155	98.67	75.32
Test of group differences: $Q_b = \chi^2(1) = 5.15$ Prob > $Q_b = 0.023$						

The results of the subgroup analysis showed that the study was divided into two groups. In Group 0, which consisted of one study, an effect size of 0.852 was obtained with a confidence interval of 0.423 to 1.281, which showed a positive and significant effect because the confidence interval did not pass zero. Meanwhile, in Group 1 consisting of 18 studies, an effect size of 0.271 was obtained with a confidence interval of 0.010 to 0.531, which also showed a positive and significant effect although with a smaller size than the first group. Overall, a meta-analysis of the entire study resulted in a combined effect size of 0.333, which shows that in general, independent variables have a positive impact on dependent variables. The difference in effect size between groups indicates the possibility of moderator factors that affect the results of the study.

The results of the heterogeneity summary showed that in Group 1 a Q value of 67.18 with a p-value of 0.000 was obtained, which indicates significant heterogeneity between the studies in the group. An I^2 value of 98.52% indicates that the level of heterogeneity between studies is very high. Meanwhile, in the overall analysis, a Q value of 82.40 was obtained with a p-value of 0.000 and I^2 of 98.67%, which also shows that the variation between studies is very large. In addition, the results of the test of group differences showed a Q_b value of 5.15 with a p-value of 0.023, which means that there was a significant difference in effect size between the two study groups. This suggests that clustering variables have the potential to be a factor influencing the variation in research results in meta-analysis. As described by (Cordero & Dans, 2021) that high I^2 values and small *p-values* in the Q statistic indicate heterogeneity between studies.

Results and Discussion 4

Table 6. Forest plot results (subgroup analysis)



The results of the forest plot meta-analysis with group analysis (subgroup analysis), it was seen that the study was divided into several groups to see the difference in effects between study groups. In the first group consisting of only one study, an effect size of 0.85 was obtained with a 95% confidence interval between 0.42 and 1.28. These results show that the study has a fairly strong and significant positive influence on the variables analyzed, in another research group consisting of several studies, it can be seen that the effect size value varies from one study to another. This variation shows that there is a difference in the strength of the relationship between variables in the various studies analyzed. The results of the heterogeneity analysis in this group showed a τ^2 value of 0.13, I^2 of 98.52%, and H^2 of 67.47, which indicates that there is a very high heterogeneity between the studies in the group. This means that most of the variation in research results is due to differences in study characteristics, not just

by sampling errors.

The results of Cochran's Q heterogeneity test in the group showed a value of $Q(17) = 67.18$ with a p-value = 0.00, which means that there is a significant difference between the studies analyzed in the group and are not homogeneous.

Overall, the results of the meta-analysis showed that the overall effect size was 0.33 with a 95% confidence interval ranging from 0.07 to 0.60. This suggests that, in most cases, independent variables have a positive and significant impact on dependent variables. In addition, the results of the test of group differences showed a value of $Qb(1) = 5.15$ with a p-value = 0.02, which indicates that there was a significant difference in the influence between the study groups. These findings suggest that the characteristics of the study groups may influence the magnitude of the effects found in the meta-analysis.

Results and Discussion 5

Table 7. Meta-regression results with panel moderator variables

```
. meta regress panel
```

```
Effect-size label: Effect size
Effect size: effect
Std. err.: se
```

```
Random-effects meta-regression
Method: REML
```

```
Number of obs =      19
Residual heterogeneity:
    tau2 =      .131
    I2 (%) =    98.52
    H2 =      67.47
    R-squared (%) = 15.19
Wald chi2(1) =      1.72
Prob > chi2 =     0.1900
```

_meta_es	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
panel	-.5812157	.4434764	-1.31	0.190	-1.450413	.287982
_cons	.852	.4230853	2.01	0.044	.0227681	1.681232

```
Test of residual homogeneity: Q_res = chi2(17) = 67.18 Prob > Q_res = 0.0000
```

The results of the meta-regression with the moderator panel variable showed that the variable had a coefficient of -0.581 with a p-value of 0.190, so it did not have a significant effect on the effect size. An R^2 value of 15.19% indicates that the panel variable was only able to explain about 15.19% of the effect size variation between studies. In addition, an I^2 value of 98.52% indicates that the heterogeneity between studies is still very high. The model significance test yielded a Wald χ^2 value of 1.72 with a p-value of 0.190, indicating that the meta-regression model was not significant overall. Thus, it can be concluded that the panel variables have not been able to explain the difference in the results of the research in this meta-analysis.

Results and Discussion 6

Table 8. Meta-regression with the variables of moderator year, sample, panel, and journal

```
. meta regress year sample panel journal
note: journal omitted because of collinearity.
```

```
Effect-size label: Effect size
Effect size: effect
Std. err.: se
```

```
Random-effects meta-regression
Method: REML
```

```
Number of obs =      19
Residual heterogeneity:
    tau2 =    .1277
    I2 (%) =   79.02
    H2 =       4.77
    R-squared (%) = 17.32
Wald chi2(3) =     3.22
Prob > chi2 =    0.3587
```

_meta_es	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
year	.071852	.0676438	1.06	0.288	-.0607275	.2044315
sample	-.0164579	.0261262	-0.63	0.529	-.0676644	.0347485
panel	-.499822	.5330243	-0.94	0.348	-1.54453	.5448865
journal	0 (omitted)					
_cons	-144.3356	136.9555	-1.05	0.292	-412.7635	124.0922

```
Test of residual homogeneity: Q_res = chi2(15) = 46.45 Prob > Q_res = 0.0000
```

The results of meta-regression with several moderator variables, namely year, sample, panel, and journal, showed that journal variables were not included in the model because multicollinearity with other variables occurred. The estimation results showed that the year variable had a coefficient of 0.071852 ($p = 0.288$), the sample variable had a coefficient of -0.0164579 ($p = 0.529$), and the panel variable had a coefficient of -0.499822 ($p = 0.348$). The three variables are insignificant, because the p -value is no greater than 0.05 for the effect size. The R^2 value of 17.32% indicates that the moderator variable was only able to explain a small part of the effect size variation between studies. In addition, the results of the model test showed a Wald χ^2 value of 3.22 with a p -value of 0.3587, so the meta-regression model was not significant overall. However, the I^2 value of 79.02% indicates that heterogeneity between studies is still relatively high and there may be other factors that affect the variation in research results. The goal of meta-regression is to identify moderators who can explain heterogeneity. However, if the results of the moderator test are not significant, then the moderator variable is considered not to be able to explain the difference in effect size between studies (Sa, 2024).

This study conducted a meta-analysis based on the findings of previous research to determine the influence of independent variables on dependent variables. Data processing was carried out using the random effects model method with the Restricted Maximum Likelihood (REML) approach. The random effects model is used because the research analyzed comes from various sources with different

characteristics, thus allowing for variation in results between studies. This analysis looked at 19 studies that met the research inclusion criteria.

Based on the results of the meta-analysis, the overall value of the combined effect (θ) is 0.333, with a 95% confidence interval of 0.068 to 0.597. In general, this value indicates that the independent variable has a positive impact on the dependent variable. The amount of influence is statistically significant at a significance level of 5%, as shown by a z-value of 2.46 and a p-value of 0.0139. The results of the meta analysis showed a Q value of 82.40 with a p-value of 0.000. This value shows that there are significant differences in research results between the studies analyzed. In addition, the I^2 value of 98.67% indicates that the level of heterogeneity between studies is very high. A high I^2 value indicates that most of the variation in research results is due to differences in research characteristics, such as differences in research locations, research periods, analysis methods, sample sizes, and variables used in each study. With this very high level of heterogeneity, the use of random effects models in this meta analysis is considered appropriate because this model is able to accommodate variations between the studies analyzed.

Subgroup analysis was carried out to find out more about the possible factors that affect the difference in research results, the results of the analysis showed that the research was divided into two groups based on certain characteristics. In the first group (Group 0) consisting of one study, an effect size of 0.852 was obtained with a confidence interval of 0.423 to 1.281. According to this value, independent variables have a significant and positive influence on dependent variables. Meanwhile, in the second group (Group 1) consisting of 18 studies, an effect size of 0.271 was obtained with a confidence interval of 0.010 to 0.531. These results also showed a positive and significant effect, although the magnitude of the effect was relatively small compared to the first group.

The heterogeneity analysis in each group also showed that there was a variation in the research results. In the second group, a Q value of 67.18 was obtained with a p-value of 0.000, which indicates that there is significant heterogeneity between studies in the group. In addition, an I^2 value of 98.52% indicates that the level of heterogeneity within the group is very high. These results show that the analyzed studies have a considerable difference in results, so further analysis is needed to find out the factors that can explain the difference. The results of the test of group differences showed a Qb value of 5.15 with a p-value of 0.023, which means that there was a significant difference in effect size between the two study groups.

CONCLUSION

Meta-regression analysis was carried out by including several moderator variables to find out the factors that can explain the variation in effect size between studies, the first analysis was carried out using the panel moderator variable with results showing that the panel variable had a coefficient of -0.581 with a p-value of 0.190, so that the variable did not have a significant effect on the effect size. The R^2 value of 15.19% indicates that the panel variable was only able to explain about 15.19% of the effect size variation between studies, while the rest was influenced by other factors not included in the model. In addition, an I^2 value of 98.52% indicates that heterogeneity between studies is still very high even though the moderator variable has been incorporated into the model.

Meta-regression analysis by adding several other moderator variables, namely year, sample, panel, and journal. However, the results of the estimation show that the journal variable cannot be included in the model because there is multicollinearity with other variables. The results showed that the moderator variable did not affect the effect size significantly, the year variable had a coefficient of 0.071852 with a p value of 0.288, the sample variable had a coefficient of -0.0164579 with a p value of

0.529, and the panel variable had a coefficient of -0.499822 with a p value of 0.348. All three variables have a p-value of more than 0.05.

Overall, the results of the meta-analysis show that the results of the study show that independent variables have a positive and significant impact on dependent variables. However, the level of heterogeneity between studies is very high, which shows that there is considerable variation in research results. As the meta-regression analysis shows, the moderator variables used in this study have not been able to significantly explain the difference in effect size that occurred between the various studies. Therefore, it is suggested that further research consider additional moderator variables to explain the results of the study more comprehensively.

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