ANALYSIS OF THE FLYPAPER EFFECT AND ITS INFLUENCE ON DISTRICT/CITY REGIONAL EXPENDITURES IN ACEH PROVINCE 2016-2021

Rahmatillah\textsuperscript{1}, Marzuki\textsuperscript{2}, Ghazali Syamni\textsuperscript{3}, Nurlela\textsuperscript{4}
Universitas Malikussaleh / Program Studi Manajemen, Lhokseumawe
E-mail: \textsuperscript{1}rahmatillah.170410137@mhs.unimal.ac.id

Abstract
This study aims to analyze the Flypaper Effect and its Effect on District/City Regional Expenditures in Aceh Province in 2016-2021. The data used in this study is panel data. The data analysis method used is panel data regression analysis with model selection techniques using the Chow test and the Hausmant test. The results of the research on General Allocation Funds and local revenue have a positive and significant effect on district/municipality regional expenditures in Aceh Province, special allocation funds and revenue-sharing funds have no effect on district/city regional expenditures in Aceh Province. Based on the results of the study, it shows that there is a flypaper effect on district/municipal expenditures in Aceh Province.

Keywords: Flypaper Effect, General Allocation Fund, Special Allocation Fund, Revenue Sharing Fund, Regional Original Income, Regional Expenditure

Introduction
Since the enactment of Law No. 22/1999 on Regional Government, broad regional autonomy has been implemented in Indonesia. Regional autonomy is the right, authority and obligation of autonomous regions to regulate and manage their own government affairs and the interests of local communities in the system of the Unitary State of the Republic of Indonesia (Law Number 23 of 2014).

Regional expenditures are used in the context of implementing government affairs which are the authority of the province or district/city which consist of mandatory affairs and optional affairs which are stipulated by statutory provisions. In the implementation of regional spending, the phenomenon of the flypaper effect can occur. According to Khusaini (2018), the flypaper effect is a phenomenon where local governments respond more to the use of aid funds from the central government (grants) in financing their expenditures.

Government transfers will result in local government dependence. One of them is the General Allocation Fund, the Special Allocation Fund and the Revenue Sharing Fund. General allocation fund (DAU) is a fund sourced from the State Revenue and Expenditure Budget (APBN) which is allocated to certain regions with the aim of equalizing financial capacity among regions to fund regional needs in the context of implementing decentralization. Special allocation funds (DAK) are funds sourced from APBN revenues that are allocated to certain regions with the aim of helping to fund special activities which are government affairs under the authority of the region.

In relation to the flexibility of local governments in using balancing funds which include DAU, DAK and DBH, regional governments must be able to carry out their functions and roles efficiently, and regional budgets must be able to accommodate and accommodate various aspirations and community initiatives. The problem that occurs today is that local governments will depend on allocations from the central government to finance regional spending and development without optimizing the potential that exists in the region (Wulansari, 2015).

Theoretical basis
Regional Shopping
According to Marsdiasmo (2016), regional expenditures are used in order to fund the implementation of government affairs which are under the authority of the province or district/city which consist of mandatory affairs, optional affairs and affairs which are handled in certain sections or fields that can be carried out jointly between the government and regional governments or between local governments determined by statutory provisions.
Flypaper Effect

Flypaper effect is a condition in which the regional spending stimulus caused by changes in central government transfers has a greater effect than the stimulus caused by changes in local income (Kang, 2012). According to Maimunah (2006), the flypaper effect phenomenon is a condition that occurs when local governments respond to spending more using balancing funds proxied by the General Allocation Fund (DAU), the Special Allocation Fund (DAK), and the Revenue Sharing Fund (DBH) for the benefit of the community, regional expenditure rather than using Regional Original Income (PAD). The results of research by Nurhayati and Wicaksono (2017) state that there is a flypaper effect on Regional Expenditures in Regency/City governments.

General Allocation Fund (DAU)

The General Allocation Fund (DAU) is a fund sourced from APBN revenues which is allocated with the aim of equitable distribution of financial capacity among regions to finance regional needs in the context of implementing decentralization. Inter-regional finance through the application of a formula that considers the needs and potential of the region. Based on research conducted by (Sasana, 2010); (Apriliawati and Handayani, 2016); and (Amalia, 2015) who obtained the results that the General Allocation Fund had a positive effect on regional spending. This means that a high DAU will cause regional spending to increase.

Special Allocation Fund (DAK)

Special Allocation Funds (DAK) are funds sourced from APBN revenues that are allocated to certain regions with the aim of helping to fund special activities which are government affairs under regional authority. Special Allocation Funds are allocated in the APBN for certain regions in the context of decentralization funding to finance special activities determined by the Central Government on the basis of national priorities and to finance special activities proposed by certain regions (Law Number 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments).

Revenue Sharing Fund (DBH)

Revenue Sharing Funds (DBH) are funds sourced from certain APBN revenues that are allocated to producing regions based on certain percentage figures with the aim of reducing the gap in financial capacity between the central and regional governments. DBH is used as an instrument to reduce vertical fiscal inequality, which aims to balance, equitable distribution of income and the level of public services between regions with varying economic capacities (Bird and Tarasov in Soemiarsono, 2018).

Regional Original Income (PAD)

Regional Original Revenue (PAD) are sources of revenue for regions that can be extracted and used independently according to their respective potentials. PAD is a component of regional income that must be maximized by local governments. The aim is for the region to be independent in administering its government and providing public services. PAD consists of regional taxes, regional levies, the results of separated regional wealth management.

Research related to the flypaper effect phenomenon has been previously carried out by Kartika, I and Suzan, L (2015) with a case study of Banten Province from 2008 to 2012. The results show that Regional Original Income has a significant effect on regional spending and there is a flypaper effect in Banten Province.

Hypothesis

Based on the problem formulation and research objectives, the hypotheses include the correlation hypothesis and the descriptive hypothesis as follows:

- Descriptive Hypothesis
  H1 : Regional Expenditures in Regencies/Cities in Aceh Province occur Flypaper Effect

- Correlation Hypothesis
  H2 : General Allocation Fund has an effect on Regional Expenditure
  H3 : The Special Allocation Fund has an effect on Regional Expenditure
  H4 : Revenue Sharing Fund has an effect on Regional Expenditure
  H5 : Regional Original Income has an effect on Regional Expenditure
RESEARCH METHODS

Research Objects and Locations
The research objects used are General Allocation Funds, Special Allocation Funds, Revenue Sharing Funds, Regional Original Income and Regional Expenditures. This research was conducted in districts/cities in Aceh Province.

Data Types and Sources
Based on the method of obtaining it, this data is classified as secondary data. Secondary data is data taken indirectly from the source, or data obtained by other parties. This data is in the form of District/City APBD Realization Reports in Aceh Province for 2016-2021. The data used by the researcher is the APBD Realization Report data from 2016-2021, which is sourced from the Regional Asset Financial Management Office (DPKAD) of each Regency/City in Aceh Province, from the website of the Republican Financial Audit Agency, namely www.bpk.go.id or www.djpk.kemenkeu.go.id. Data were taken from 18 districts and 5 cities in Aceh province.

Data analysis method
In this study, researchers used descriptive statistical analysis and panel data analysis as data analysis methods.

Panel Data Model Selection Techniques
Furthermore, to select the research model CEM, FEM and REM.

Classic assumption test
Classical assumption test in this study consisted of Normality Test, Multicollinearity Test, Autocorrelation Test and Heteroscedasticity Test.
The variables used in this study are:

RESEARCH RESULTS AND DISCUSSION

Descriptive Statistics Results
Descriptive statistics are used to provide a description or description of a data that provides a minimum value, maximum value, average value (mean), and standard deviation. The results of descriptive statistics in this study are as follows:

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>27.028</td>
<td>25.812</td>
<td>23.705</td>
<td>25.394</td>
<td>27.798</td>
</tr>
<tr>
<td>median</td>
<td>26.960</td>
<td>25.735</td>
<td>23.460</td>
<td>25.340</td>
<td>27.795</td>
</tr>
<tr>
<td>Minimum</td>
<td>26.570</td>
<td>24.880</td>
<td>22.940</td>
<td>24.390</td>
<td>27.060</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.264</td>
<td>0.394</td>
<td>0.665</td>
<td>0.540</td>
<td>0.359</td>
</tr>
<tr>
<td>Observations</td>
<td>138</td>
<td>138</td>
<td>138</td>
<td>138</td>
<td>138</td>
</tr>
</tbody>
</table>

In the analysis of descriptive statistical tests, if the standard deviation > the mean then the mean value is a bad representation of the overall data, and vice versa if the standard deviation < the mean then a good representation of the overall data.
The average value (mean) of the General Allocation Fund (X1) obtained a mean value of 27.028 with a standard deviation value of 0.264 which means that the standard deviation value is smaller than the mean value so that the mean value is a good data representation of the entire data. Highest score of general allocation fund in this study was 27.630 while the lowest value was 26.570 in the observations made as many as 138.

The average value (mean) of the Special Allocation Fund (X2) obtained a mean value of 25.812 with a standard deviation value of 0.394 which means that the standard deviation value is smaller than the mean value so that the mean value is a good data representation of the entire data. Highest score of special allocation fund in this study was 26.820, while the lowest value was 24.880 in the observations made as many as 138.

The average value (mean) of Profit Sharing Funds (X3) obtained a mean value of 23.705 with a standard deviation value of 0.665 which means that the standard deviation value is smaller than the mean value so that the mean value is a good data representation of the entire data. Highest score of profit sharing in this study was 25,650 while the lowest value was 22,940 in the observations made as many as 138.

The average value (mean) of Regional Original Income (X4) obtained a mean value of 25.394 with a standard deviation value of 0.540 which means that the standard deviation value is smaller than the mean value so that the mean value is a good data representation of the entire data. Highest score of locally-generated revenue in this study was 26,460 while the lowest value was 25,340 in the observations made as many as 138.

The average value (mean) of regional expenditures obtained a mean value of 27.798 with a standard deviation value of 0.359 which means that the standard deviation value is smaller than the mean value so that the mean value is a good data representation of the entire data. Highest score of regional shopping in this study was 28,660 while the lowest value was 27,060 in the observations made as many as 138.

Classic Assumption Test Results

Normality test

This test is intended to determine whether in the regression model the confounding or residual variables have a normal distribution. The results of the normality test using the Eviews program can be seen in the following figure:

Source: Results of Eviews, processed data (2021)

Figure 2

Normality test

From the picture above, it can be seen that the histogram graph can form a symmetrical distribution pattern, thus it is stated that the residuals are not normally distributed.
Multicollinearity Test

The multicollinearity test aims to test a model whether in the regression model there is a correlation between independent variables or independent variables. Multicollinearity test results can be seen in Table 2 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>----</td>
<td>17.050</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>X2</td>
<td>0.825</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td></td>
<td>17.050</td>
<td>0.000</td>
</tr>
<tr>
<td>X3</td>
<td>0.456</td>
<td>0.328</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.052</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>X4</td>
<td>0.856</td>
<td>0.681</td>
<td>0.504</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>19.360</td>
<td>10.847</td>
<td>6.815</td>
<td></td>
</tr>
</tbody>
</table>

Source: Eviews results, 2022

Based on Table 2 above, it can be concluded that the results of this study indicate that there is no correlation between variables in the study or there is no multicollinearity in this study, this is evidenced by the correlation value of each variable below 0.9.

Autocorrelation Test

The autocorrelation test aims to test in a model whether or not there is a correlation between the confounding error in period t and the error in period t-1. Based on the results of the autocorrelation test using the Eviesw program are as follows:

| Durbin Watson | 1.719 |

Source: Processed data (2022)

Based on the results of the output shows that if the Durbin Watson value is between -2 to +2, it can be concluded that this study does not occur autocorrelation.

Model selection technique

The first test to be carried out is the Chow Test. The Chow test is a test that compares the CEM model and the FEM model. The chow test table in this study is as follows:

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistics</th>
<th>df</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>12.065</td>
<td>(22,111)</td>
<td>0.000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>168,527</td>
<td>22</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source :Processed Data (2022)
Based on Table 4 above, it can be seen that the probability value of the Chi Square line is 0.000. This value is below 0.05. If the probability value of chi square is less than 0.05, then the best model is the fixed effect model. Based on the Chow test, the best model in this study is the Fixed Effect Model (FEM) so it is necessary to test to see between the Fixed Effect Model (FEM) and the Random Effect Model. The test that can be done to compare the Fixed Effect Model (FEM) and the Random Effect Model is the Hausman test. The results of the Hausman test in this study are as follows:

**Table 5**

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistics</th>
<th>Chi-Sq. df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>32,305</td>
<td>4</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Processed Data (2022)

Based on Table 5 above, it can be seen that the probability value is 0.000. This value is above the error rate value of 0.05. Based on the Hausman test, the best model in this research is the Fixed Effect Model.

**Panel Data Estimation**

Based on the Hausman test, the selected model is the fixed effect model where the significant value is below 0.05. The results of the fixed Effect Model panel data regression are as follows:

**Table 6**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-6.410</td>
<td>1.619</td>
<td>-3.958</td>
<td>0.000</td>
</tr>
<tr>
<td>X1</td>
<td>1.143</td>
<td>0.090</td>
<td>12.679</td>
<td>0.000</td>
</tr>
<tr>
<td>X2</td>
<td>0.045</td>
<td>0.031</td>
<td>1.438</td>
<td>0.152</td>
</tr>
<tr>
<td>X3</td>
<td>-0.032</td>
<td>0.022</td>
<td>-1.414</td>
<td>0.159</td>
</tr>
<tr>
<td>X4</td>
<td>0.114</td>
<td>0.040</td>
<td>2.799</td>
<td>0.005</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.811</td>
<td>Mean dependent var</td>
<td>8.756</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.806</td>
<td>SD dependent var</td>
<td>0.134</td>
<td></td>
</tr>
<tr>
<td>SE of regression</td>
<td>0.059</td>
<td>Sum squared resid</td>
<td>0.468</td>
<td></td>
</tr>
<tr>
<td>F-statistics</td>
<td>143.370</td>
<td>Durbin-Watson stat</td>
<td>1.173</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processed, (2022)

Based on Table 6 above, it can be interpreted that the regression model equation is as follows:

\[ Y = -6.410 + 1.143 \times X1 + 0.045 \times X2 - 0.032 \times X3 + 0.114 \times X4 \]

From the above model formulation shows that:
1. The constant value is -6.410 and has a negative relationship which means that if the independent variable is considered constant then regional expenditure has a constant value of -6.410.
2. The coefficient value of the general allocation fund is positive, which is 1.143 and has a positive relationship, which means that if the general allocation fund has an increase of 1%, regional spending will increase by 1.143%.
3. The coefficient value of the special allocation fund is positive, which is 0.045 and has a positive relationship, which means that if the special allocation fund has an increase of 1%, regional spending will increase by 0.045%.
4. The coefficient value of the profit-sharing fund is negative, which is 0.032 and has a negative relationship, which means that if the profit-sharing fund has increased by 1%, regional spending will decrease by 0.032%.

The value of the coefficient of regional original income is positive, namely 0.114 and has a positive relationship, which means that if the regional original income increases by 1%, then the regional expenditure will increase by 0.114%.

**Hypothesis test**

**Partial Test (t Test)**

The t-test was conducted to see the effect of the independent variable on the dependent variable partially. The results of the t test are as follows:

1. The General Allocation Fund has a t-count value of 12.679, therefore the t-count > ttable or 12.679 > 1.656 accepts H2, which means that the general allocation fund variable has a positive and significant effect on regional spending in districts and cities in Aceh Province. This can be seen from the probability (P-value) of 0.000 < 0.05.

2. The Special Allocation Fund has a t-count value of 1.438, therefore the t-count value < t table or 1.438 < 1.656 rejects H3 which means that the special allocation fund variable has no effect on regional spending in districts and cities in Aceh Province. This can be seen from the probability (P-value) of 0.15 > 0.05.

3. The Revenue Sharing Fund has a t value of -0.414, therefore the value of tcount < t table or 0.414 < 1.656 rejects H4 which means that the variable of profit-sharing funds has no effect on regional spending in districts and cities in Aceh Province. This can be seen from the probability (P-value) of 0.15 > 0.05.

4. Regional Original Income has a t-count value of 2.779, therefore the value of tcount > t table or 2.779 > 1.656 accepts H5, which means that the regional original income variable has a positive and significant impact on regional spending in districts and cities in Aceh Province. This can be seen from the probability (P-value) of 0.00 < 0.05.

**Coefficient of Determination (R2)**

Based on Table 6 above, the results of the coefficient of determination R2 with multiple linear regression, then what is seen from the R Square is 0.811 or 81.1%. This result means that DAU, DAK, DBH and PAD are able to influence local government spending by 81.1%. While the rest is influenced by other factors outside the DAU, DAK, DBH and PAD.

**Discussion**

- **The Occurrence of the Flypaper Effect on District/City Governments in Aceh Province**

  Based on the results of the study, it shows that the DAU coefficient value is 1.143 with a significant level of 0.000. While the PAD coefficient value is 0.114 with a significant level of 0.005. These results indicate that the flypaper effect occurs in district and city governments in Aceh Province, *Flypaper effect* is a condition in which the regional spending stimulus caused by changes in central government transfers has a greater effect than the stimulus caused by changes in local revenues.

  The results of the study are in line with the research of Nurhayati and Wicaksono (2017) which states that there is a flypaper effect on Regional Expenditures in Regency/City governments.

- **The Effect of General Allocation Funds on District/City Regional Expenditures in Aceh Province**

  General allocation fund positive and significant effect on district/city government spending in Aceh Province. This shows that when increasing general allocation fund it will increase government spending.

  The results of the study are in line with research conducted by (Sasana, 2010); (Apriliawati and Handayani, 2016); and (Amalia, 2015) who obtained the results that the General Allocation Fund had a positive effect on regional spending. This means that a high DAU will cause regional spending to increase.
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- **The Effect of Special Allocation Funds on District/City Regional Expenditures in Aceh Province**
  Special Allocation Funds have effect on spending districts/cities in Aceh Province. This shows that increasing the special allocation fund will increase regional spending.

- **The Effect of Revenue Sharing Funds on District/City Regional Expenditures in Aceh Province**
  Revenue Sharing Funds (DBH) are funds sourced from certain APBN revenues allocated to producing regions based on certain percentage figures with the aim of reducing the gap in financial capacity between the central and regional governments. In general, the Revenue Sharing Fund (DBH) is the percentage of profit sharing on tax revenues and natural resource management given from the center to producing regions or other regions for the purpose of equitable distribution of regional finances. The tax and non-tax revenue sharing is actually a potential regional revenue which is collected through the central government so that some of it is returned to the regions in the form of profit sharing funds (Khusaini, 2007). DBH is used as an instrument to reduce vertical fiscal inequality, which aims to balance.

- **The Effect of Regional Original Income on Regency/City Regional Expenditures in Aceh Province**
  Locally-generated revenue has effect on district/municipality regional expenditures in Aceh Province. This shows that if PAD increases it will increase government spending. The results of the study are in line with Kartika, I and Suzan, L (2015) with a case study of Banten Province from 2008 to 2012. The results show that Regional Original Income has a significant effect on regional spending and there is a flypaper effect in Banten Province.

**Conclusions and recommendations**

**Conclusion**
Based on the discussion that has been described, it can be concluded as follows:
1. Based on the results of the study, it shows that there is a flypaper effect on district and city expenditures in Aceh Province.
2. The General Allocation Fund has a positive and significant impact on district and city expenditures in Aceh Province.
3. The Special Allocation has no effect on district and municipal expenditures in Aceh Province.
4. Revenue Sharing Funds have no effect on district and municipal expenditures in Aceh Province.
5. Regional Original Income has an effect on district and city expenditures in Aceh Province.

**Suggestion**

1. Further research is suggested to be able to expand the population by adding other provinces so that it will get more significant results.
2. Further research is suggested to be able to use other different proxies in measuring regional expenditure variables.
3. Further research is suggested to add other variables that may have an influence on regional spending.

**Reference**


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Nurhayati dan Wijaksono (2017)Pengaruh Pendapatan Asli Daerah (Pad) Dan Dana Alokasi Umum (Dau) Terhadap Belanja Daerah (Studi Pada Pemerintah Kabupaten/Kota Di Jawa Tengah)


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