

# THE NET PROFIT EVOLUTION OF MEDIUM TAXPAYER ENTITIES IN COVASNA COUNTY BETWEEN 2011 - 2013

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**Abstract:** The accounting policies applied entities have major influences on the financial statements, so establishing the accounting policy that the entity consistently uses is an important activity. The income statement reports on a company's income, expenses, and profits over a period of time. We mention that the profit value is the most important information for the majority of the shareholders. The study contains an analysis of the net profit evaluation realized by the medium taxpayers entities in Covasna county, in relation with the net turnover, operating revenues, total revenues, operating results, respectively employees and with the field of activity.

**Key words:** *net profit, net turnover, operating revenues, total revenues, operating results*

**JEL classification:** M41, C20

## Introduction

Profit or loss is defined as “the total of income less expenses, excluding the components of other comprehensive income” (IAS 1 – Presentation of Financial Statements [IAS 1.7]).

Net income is the bottom line of the income statement. It is what is left over from revenues after all costs and expenses are subtracted. Revenue – cost of goods sold (for manufacturing businesses, or cost of services for service businesses), operating expenses, taxes, interest, one-time charges, non-cash expenses such as depreciation and amortization, and any other costs not included in operating profit leaves the net profit. Net profit, net income, and net earnings all mean the same thing (Net income, Net profit, Net earnings – Business Literacy Institute).

In accounting, net profit is equal to the gross profit minus overheads minus interest payable for a given time period, usually the accounting period is one year (Net profit).

## Material and Methods

The main objective of this empirical study is to analyze the relation between net turnover, operating revenues, total revenues and operating results with net profit especially to study whether there exists statistically significant difference between net turnover, operating revenues, total revenues and operating results regarding net profit value.

In this empirical study the information from annual financial statements of the medium taxpayers entities from Covasna county for the years 2011 – 2013 has been processed. The analysis is based on 113 entities' financial statements.

### *General hypothesis*

$H_1$  Between net turnover, operating revenues, total revenues and operating results regarding net profit value there exists statistically significant difference.

### Statistical hypotheses

$H_0^1$  : Between net turnover, operating revenues, total revenues and operating results regarding net profit value no more than two financial indicators show statistically significant differences.

$H_1^1$ : Between net turnover, operating revenues, total revenues and operating results regarding net profit value more than two financial indicators show statistically significant differences.

To validate the hypotheses we used during the empirical research Kruskal – Wallis H test, which is the nonparametric equivalent of the One – Way ANOVA test. This test follows comparing several independent samples. Because the Kruskal – Wallis H test does not show between which groups exists statistically significant difference (group I. vs. group II., group I. vs. group III. and group I. vs. group IV.) for each financial indicator, we had to use the Mann-Whitney U test, to compare the pairs: group I. vs. group II., group I. vs. group III. and group I. vs. group IV.

Furthermore, we made the descriptive analysis of the financial statements by calculating the average of net turnover, operating revenues, total revenues and operating results, respectively the average number of employees.

### Results and discussions

Verification of the hypothesis is based on the analysis of financial statements of the 113 medium taxpayers entities in Covasna county included in the sample.

We test, whether there exists statistically significant difference between net turnover, operating revenues, total revenues and operating results regarding net profit value, using Kruskal-Wallis H test. We made four groups for each financial indicator, based on the financial information in the annual financial statements, for the years 2011 – 2013:

- Net Turnover: below 10.000.000 lei, between 10.000.001 – 20.000.000 lei, between 20.000.001 – 30.000.000 lei and over 30.000.000 lei
- Operating Revenues: below 10.000.000 lei, between 10.000.001 – 20.000.000 lei, between 20.000.001 – 30.000.000 lei and over 30.000.000 lei
- Total Revenues: below 10.000.000 lei, between 10.000.001 – 20.000.000 lei, between 20.000.001 – 30.000.000 lei and over 30.000.000 lei
- Operating Results: below 500.000 lei, between 500.001 – 1.000.000 lei, between 1.000.001 – 2.000.000 lei and over 2.000.000 lei

First we test, if there exists statistically significant difference between the financial indicators regarding net profit value in 2011.

Table No. 1 Ranks

	Groups	Net Turnover 2011	N	Mean Rank
Net Profit 2011	I.	below 10.000.000	68	47.68
	II.	between 10.000.001 - 20.000.000	24	62.17
	III.	between 20.000.001 - 30.000.000	12	80.67
	IV.	over 30.000.000	9	82.11
		Total		113

Ranks Table No. 1 shows the number of subjects and the average rank. From this table we can conclude that entities which have greater (group IV.) net turnover do have higher average rank than others entities with lower net turnover (group I.).

Table No. 2 Test Statistics(a,b)

	Net Profit 2011
Chi-Square	17.651
df	3
Asymp. Sig.	.001

a Kruskal Wallis Test

b Grouping Variable: Net Turnover 2011

Test Statistics Table No. 2 shows the value of Chi-Square and the associated limit of signification / significance level. From this table we can conclude that between net turnover and net profit value there exists statistically significant difference. We analyze with the Mann-Whitney U test if statistically significant difference exists regarding the net profit between of the following pairs: first group vs. second group, first group vs. third group and first group vs. fourth group.

The Mann-Whitney U test shows that, between the four groups of net turnover exists statistically significant difference regarding the net profit. For example we present below two applications of the Mann-Whitney U test for Net Turnover 2011 (Table No. 3, Table No. 4, Table No. 5, Table No. 6).

### Mann-Whitney Test

Table No. 3 Ranks

	Net Turnover 2011	N	Mean Rank	Sum of Ranks
Net Profit 2011	below 10.000.000	68	43.18	2936.00
	between 10.000.001 - 20.000.000	24	55.92	1342.00
	Total	92		

Table No. 4 Test Statistics(a)

	Net Profit 2011
Mann-Whitney U	590.000
Wilcoxon W	2936.000
Z	-2.010
Asymp. Sig. (2-tailed)	.044

a Grouping Variable: Net Turnover 2011

### Mann-Whitney Test

Table No. 5 Ranks

	Net Turnover 2011	N	Mean Rank	Sum of Ranks
Net Profit 2011	below 10.000.000	68	36.35	2472.00
	over 30.000.000	9	59.00	531.00
	Total	77		

Table No. 6 Test Statistics(a)

	Net Profit 2011
Mann-Whitney U	126.000
Wilcoxon W	2472.000
Z	-2.854
Asymp. Sig. (2-tailed)	.004

a Grouping Variable: Net Turnover 2011

Furthermore, using Kruskal-Wallis H test for the other financial indicators (operating revenues, total revenues and operating results regarding net profit value) the result is that between the three indicators regarding net profit value statistically significant difference exists. The Mann-Whitney U test shows that, between the four groups (group I. vs. group II., group I. vs. group III. and group I. vs. group IV.) of operating revenues, of total revenues and operating results there exists statistically significant difference regarding the net profit.

In Table No. 7 there are presented the average values of the net turnover, operating revenues, total revenues and operating results, the net profit ratio regarding the net turnover, operating revenues, total revenues and operating results. The highest differences of the net profit ratio are between the smallest medium taxpayer entities in Covasna county and between the largest medium taxpayer entities.

Table No. 7 The average of the four financial indicators and the average of the net profit in 2011 regarding the four financial indicators

	2011			
	<i>Below 10.000.000</i>	<i>Between 10.000.001 □ 20.000.000</i>	<i>Between 20.000.001 □ 30.000.000</i>	<i>Over 30.000.000</i>
Net Turnover	6.493.064,81	15.196.604,71	24.650.849,25	34.523.341,89
Net Profit	187.676,56	474.840,50	888.341,58	2.761.069,00
<b>Ratio</b>	<b>2,89</b>	<b>3,12</b>	<b>3,60</b>	<b>8,00</b>
Operating Revenues	6.612.898,09	14.729.639,52	25.098.235,18	35.876.001,50
Net Profit	191.297,85	436.636,48	895.320,36	2.566.119,60
<b>Ratio</b>	<b>2,89</b>	<b>2,96</b>	<b>3,57</b>	<b>7,15</b>
Total Revenues	6.640.329,42	14.772.521,39	25.248.565,90	36.074.557,55
Net Profit	189.299,33	430.107,89	904.923,40	2.405.498,73
<b>Ratio</b>	<b>2,85</b>	<b>2,91</b>	<b>3,58</b>	<b>6,67</b>
	<i>Below 500.000</i>	<i>Between 500.001 □ 1.000.000</i>	<i>Between 1.000.001 □ 2.000.000</i>	<i>Over 2.000.000</i>
Operating Results	254.565,72	696.508,50	1.335.357,85	4.597.637,17
Net Profit	158.052,72	404.668,50	947.088,15	3.729.781,33
<b>Ratio</b>	<b>62,09</b>	<b>58,10</b>	<b>70,92</b>	<b>81,12</b>

We mention, in the first group of the fourth indicator were included just the entities which registered operating profit (53 of 66). The total average of this group is 17.272,89 lei operating results and -95.520,17 lei net profit (net loss), the ratio in this case is -553,01%.

Furthermore using Kruskal-Wallis H test for the financial indicators (net turnover, operating revenues, total revenues and operating results regarding net profit value) from 2012, the results show also that between the four indicators regarding net profit value there exists statistically significant difference (Table No. 8 and No. 9).

Table No. 8 Ranks

	Groups	Net Turnover 2012	N	Mean Rank
Net Profit 2012	I.	below 10.000.000	62	45.29
	II.	between 10.000.001 - 20.000.000	32	66.09
	III.	between 20.000.001 - 30.000.000	9	71.44
	IV.	over 30.000.000	10	87.50
		Total		113

Table No. 9 Test Statistics(a,b)

	Net Profit 2012
Chi-Square	20.799
df	3
Asymp. Sig.	.000

a Kruskal Wallis Test

b Grouping Variable: Net Turnover 2012

The Mann-Whitney U test shows that, between the four groups of net turnover, operating revenues, total revenues and operating results exists statistically significant difference regarding the net profit, less than: net turnover group I. vs. group III., operating revenues group I. vs. group III., total revenues group I. vs. group III.

In Table No. 10 there are presented the average values of the net turnover, operating revenues, total revenues and operating results, the net profit ratio regarding the net turnover, operating revenues, total revenues and operating results. The highest differences of the net profit ratio are between the smallest medium taxpayer entities in Covasna county and between the largest medium taxpayer entities.

Table No. 10 The average of the four financial indicators and the average of the net profit in 2012 regarding the four financial indicators

	2012			
	<i>Below 10.000.000</i>	<i>Between 10.000.001 □ 20.000.000</i>	<i>Between 20.000.001 □ 30.000.000</i>	<i>Over 30.000.000</i>
Net Turnover	5.985.617,73	13.807.184,22	25.273.708,22	37.976.422,70
Net Profit	49.247,19	228.575,84	1.465.490,00	3.011.251,50
<b>Ratio</b>	<b>0,82</b>	<b>1,66</b>	<b>5,80</b>	<b>7,93</b>
Operating Revenues	6.289.458,90	14.056.812,29	25.197.564,91	38.460.672,27
Net Profit	51.390,84	231.770,07	810.377,36	3.184.394,73
<b>Ratio</b>	<b>0,82</b>	<b>1,65</b>	<b>3,22</b>	<b>8,28</b>
Total Revenues	6.318.665,21	13.883.389,39	24.263.988,60	37.904.453,00
Net Profit	39.189,98	244.583,50	906.480,50	2.717.442,77
<b>Ratio</b>	<b>0,62</b>	<b>1,76</b>	<b>3,74</b>	<b>7,17</b>
	<i>Below 500.000</i>	<i>Between 500.001 □ 1.000.000</i>	<i>Between 1.000.001 □ 2.000.000</i>	<i>Over 2.000.000</i>
Operating Results	225.479,06	686.049,43	1.389.008,21	4.963.186,55
Net Profit	108.019,62	446.127,30	839.794,79	4.216.831,09
<b>Ratio</b>	<b>47,91</b>	<b>65,03</b>	<b>60,46</b>	<b>84,96</b>

We mention, in the first group of the fourth indicator were included just the entities which registered operating profit, respectively registered net profit.

Likewise the use of Kruskal-Wallis H test for the financial indicators (net turnover, operating revenues, total revenues and operating results regarding net profit value) from 2013, the results show also that between the four indicators regarding net profit value there exists statistically significant difference (Table No. 11 and No. 12).

Table No. 11 Ranks

	Groups	Net Turnover 2013	N	Mean Rank
Net Profit 2013	I.	below 10.000.000	65	49.60
	II.	between 10.000.001 - 20.000.000	28	58.50
	III.	between 20.000.001 - 30.000.000	7	51.14
	IV.	over 30.000.000	13	93.92
		Total		113

Table No. 12 Test Statistics(a,b)

	Net Profit 2013
Chi-Square	20.108
df	3
Asymp. Sig.	.000

a Kruskal Wallis Test

b Grouping Variable: Net Turnover 2013

The Mann-Whitney U test shows that, between the four groups of net turnover, operating revenues, total revenues and operating results exists statistically significant difference regarding the net profit, as presented below: there exists statistically significant difference between group I. vs. group IV. In the case of net turnover, operating revenues and total revenues, respectively exists statistically significant difference regarding the net profit between the four groups of operating results (group I. vs. group II., group I. vs. group III., group I. vs. group IV.)

The average values of the net turnover, operating revenues, total revenues and operating results, the net profit ratio regarding the net turnover, operating revenues, total revenues and operating results are also presented in Table No. 13. We can notice that the highest differences of the net profit ratio are between the smallest medium taxpayer entities in Covasna county and between the largest medium taxpayer entities.

Table No. 13 The average of the four financial indicators and the average of the net profit in 2013 regarding the four financial indicators

	2013			
	<i>Below 10.000.000</i>	<i>Between 10.000.001 □ 20.000.000</i>	<i>Between 20.000.001 □ 30.000.000</i>	<i>Over 30.000.000</i>
Net Turnover	5.788.407,82	13.638.071,18	24.577.979,57	40.549.317,23
Net Profit	61.099,26	65.860,39	628.046,29	2.986.725,08
<b>Ratio</b>	<b>1,06</b>	<b>0,48</b>	<b>2,56</b>	<b>7,37</b>
Operating Revenues	6.067.579,35	13.987.524,33	24.421.829,83	41.498.254,50
Net Profit	58.267,89	72.957,85	903.943,50	2.700.006,36
<b>Ratio</b>	<b>0,96</b>	<b>0,52</b>	<b>3,70</b>	<b>6,51</b>
Total Revenues	6.091.543,00	14.097.770,79	24.874.318,83	42.345.831,21
Net Profit	49.475,63	92.843,82	903.943,50	2.700.006,36
<b>Ratio</b>	<b>0,81</b>	<b>0,66</b>	<b>3,63</b>	<b>6,38</b>
	<i>Below 500.000</i>	<i>Between 500.001 □ 1.000.000</i>	<i>Between 1.000.001 □ 2.000.000</i>	<i>Over 2.000.000</i>
Operating Results	199.626,33	776.444,21	1.405.500,15	5.264.496,00
Net Profit	102.529,38	469.287,43	1.097.204,77	4.237.125,18
<b>Ratio</b>	<b>51,36</b>	<b>60,44</b>	<b>78,07</b>	<b>80,48</b>

We mention, in the first group of the fourth indicator were included just the entities which registered operating profit. The total average of this group is -107.003,08 lei operating results and -245.370,27 lei net profit (net loss).

In the following lines we analyze the three most profitable entities from each group, in relation with the net turnover, the field of activity and the employees. The groups are determined by the net turnover: group I. – below 10.000.000 lei, group II. – between 10.000.001 – 20.000.000 lei, group III. – between 20.000.001 – 30.000.000 lei and the group IV. – over 30.000.000 lei.

In Table No. 14, Table No. 15 and Table No. 16 there are presented the net turnover values of the three entities from each group, which registered the biggest net profit in 2011, 2012 and 2013, also there are presented the field of activity and the number of employees. Regarding the smallest medium taxpayer entities (based on net turnover), we found that, the entities which registered the biggest net profit in the 2011 – 2013 period, the average number of the employees is less than the average number of the 1st group: selected entities 2011 → 20,33 person, group I. 2011 → 53,57 person; selected entities 2012 → 18,67 person, group I. 2012 → 42,95 person; selected entities 2013 → 20,00 person, group I. 2013 → 43,00 person.

As well as regarding the largest medium taxpayer entities, we found that, the entities which registered the biggest net profit in the 2011 – 2013 period, the average number of the employees is greater than the average number of the IVth group: selected entities 2011 → 493,67 person, group IV. 2011 → 285,78 person; selected entities 2012 → 433,00 person, group IV. 2012 → 212,60 person; selected entities 2013 → 408,00 person, group IV. 2013 → 304,46 person.

*Table No. 14 The most profitable entities in 2011*

Net Turnover		Net Profit	Field of activity	Employees
<i>Below</i> <i>10.000.000</i>	5.155.016	1.184.263	Information technology service activities	18
	7.426.039	1.181.740	Wholesale of consumption goods	14
	6.437.710	1.117.303	Manufacture of metal structures	29
<i>Between</i> <i>10.000.001</i> □ <i>20.000.000</i>	14.472.686	3.277.751	Manufacture of games and toys	93
	11.607.174	1.831.124	Forestry and logging	129
	18.720.655	1.813.200	Manufacture of machinery and equipment for general use	92
<i>Between</i> <i>20.000.001</i> □ <i>30.000.000</i>	23.209.145	4.393.320	Manufacture of wearing apparel	534
	23.638.669	3.299.462	Manufacture of parts and accessories for motor vehicles	1.030
	25.254.794	3.097.657	Manufacture of other fabricated metal products	160
<i>Over</i> <i>30.000.000</i>	32.157.662	11.046.119	Finishing of textiles	175
	40.446.948	5.848.662	Finishing of textiles	876
	33.215.784	3.538.773	Manufacture of wearing apparel	430

In 2011 the biggest net profits were recorded in the following fields of activity (group I. – group IV.): Information technology service activities, Manufacture of games and toys, Manufacture of wearing apparel and Finishing of textiles.

*Table No. 15 The most profitable entities in 2012*

Net Turnover		Net Profit	Field of activity	Employees
<i>Below</i> <i>10.000.000</i>	8.684.978	1.222.258	Freight transport by road and removal services	21
	7.764.853	1.041.018	Wholesale of household goods	16
	7.012.970	890.780	Retail sale of other goods in specialized stores - pharmacy	19
<i>Between</i> <i>10.000.001</i> □ <i>20.000.000</i>	13.333.616	2.204.754	Manufacture of games and toys	89
	14.189.833	1.836.121	Construction of residential buildings and non-residential buildings	94
	12.393.183	1.704.751	Manufacture of metal structures	26

<i>Between</i> 20.000.001 □ 30.000.000	26.339.217	4.915.827	Manufacture of bakery	169
	25.609.766	3.834.668	Manufacture of parts and accessories for motor vehicles	1.072
	25.375.873	3.582.188	Manufacture of other fabricated metal products	166
<i>Over</i> 30.000.000	36.606.486	13.440.129	Finishing of textiles	175
	39.016.751	5.610.475	Manufacture of wearing apparel	831
	47.212.713	5.537.183	Manufacture of wearing apparel	293

In 2012 the most profitable entities in the group IV. activates in finishing of textiles and production of wearing apparel. In the case of the first ranked entity, this reached to a profit rate of 36,71% on net turnover.

*Table No. 16 The most profitable entities in 2013*

Net Turnover		Net Profit	Field of activity	Employees
<i>Below</i> 10.000.000	6.506.212	1.123.028	Manufacture of metal structures	24
	8.373.225	1.089.589	Wholesale of household goods	15
	8.375.549	951.872	Freight transport by road and removal services	21
<i>Between</i> 10.000.001 □ 20.000.000	16.648.918	2.951.457	Non-specialized wholesale	41
	14.485.533	2.353.657	Manufacture of games and toys	90
	18.546.530	1.454.721	Freight transport by road and removal services	47
<i>Between</i> 20.000.001 □ 30.000.000	24.755.729	3.686.898	Manufacture of other fabricated metal products	154
	21.955.591	2.107.137	Collection, purification and distribution of water	361
	27.040.521	1.469.480	Finishing of textiles	402
<i>Over</i> 30.000.000	41.269.281	12.291.128	Finishing of textiles	175
	32.043.002	7.420.557	Manufacture of bakery	185
	43.116.893	5.669.757	Manufacture of wearing apparel	864

In 2013, among the greatest profitable entities (group IV.) reached also an entity which has the field of activity: Manufacture of bakery.

### **Conclusions**

According to the research results alternative hypothesis is validated. Between net turnover, operating revenues, total revenues and operating results regarding net profit value more than two financial indicators show statistically significant differences, all of four financial indicators (net turnover, operating revenues, total revenues and operating results) show statistically significant differences.

This means that in majority of the cases with the increase of the four financial indicators the net profit of the entities also increases. This differences are most noticeable between I. group vs. IV. group, especially in the case of net turnover and operating results. For example the entities with net turnover over 30.000.000 lei (2011) have net profit ratio based on net turnover of 8% and the smallest medium taxpayer entities 2,89%. So we can conclude that entities with greater net turnover are profitable than entities with lower net turnover.



Furthermore, based on the empirical research made, we can conclude that the most profitable entities among the medium taxpayers entities in Covasna county works in the following areas: information technology service activities, manufacture of games and toys, manufacture of wearing apparel, finishing of textiles, manufacture of games and toys, freight transport by road and removal services, manufacture of bakery, manufacture of metal structures, non-specialized wholesale and manufacture of other fabricated metal products.

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