# PROFESSIONAL ACCOUNTING NETWORKS IN A GLOBALISED WORLD

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*Abstract: Networks play an increasingly important role in today's modern world. They represent channels of transfer for inter-cultural differences, facilitating dialogue. This article focuses on professional accounting networks, with the aim of identifying the factors influencing the development of such networks, such as size and geographical distribution. In addition to their main objective, which is the maximization of shareholder's value in terms of profit, professional accounting networks contribute to an increase in the national budget revenue and, at the same time, act as agents of globalization*

*Keywords: network, accounting, professional, international, performance.*

## I. INTRODUCTION

Networks play an increasingly important role in today's modern world. This article focuses on professional accounting networks, aiming to identify a number of factors influencing the development of such networks. Among these factors, the size and geographical distribution of the networks benefit of extra attention.

Professional accounting networks are composed of focal points for each country in which they are represented. The presence of a network in a country may represent an important contribution to the national budget, taking into account that the networks promote the higher standards in accounting matters, including tax declarations.

Professional accounting networks also carry a very important role in reducing tax evasion, which currently represents a complex social and economic phenomenon.

Professional accounting networks have an important role in educating their members in the social and economic fields, including in the fiscal domain. Educating members on the importance on ethics standards and on respecting legislation constitutes a strength for each country, with the result being a balanced budget.

The methodology used throughout this article is based on quantitative and qualitative elements: we will design an econometric model tested through regression analysis, which will offer the initial insights. The Accountancy Age Digital Library[1] offers a valuable source of information regarding the top international networks and alliance active in the field of accounting. For instance, their income, number of members, number of countries, number of partners, and number of professional staff.

For simplification, throughout this article we shall use the terms "network", "association" and "alliance" interchangeably. They all present similar characteristics in terms of scope, organisation and functioning.

[1] http://www.accountancyage.com/digital_assets/6839/All_int_charts_2013_v2.pdf

## II. DEFINING THE MODEL

The econometric model designed for this research has two components: on one hand the independent variables, and on the other hand the dependent variable. While selecting the dependent variable is rather straightforward – i.e. the income gained by the respecting network – , the independent variables cover more fields, for the instance number of member organisations, the number of countries, the number of partners, and the number of professional staff. We anticipate also a part of the model which will not be explainable by the chosen variables, which we call ε.

Thus, the initial proposed format of the model is:

I = f (M, C, P, S)

where:

I = network income
M = number of member organisations
C = number of countries in which a network is present
P = number of partners in the network
S = number of professional staff

The next step is to identify the coefficients of the variables. Our model, in an econometric format, can be summarized as:

$I = \alpha + \beta_1 M - \beta_2 C + \beta_3 P + \beta_4 S + \varepsilon$

where ε is the component of the results of the model which cannot be explained by the independent variables.

Below is the data collected by Accountancy Age (2013)[2] regarding the five selected variables:

*Table 1. Top accounting networks in the world*

| INTERNATIONAL ORGANISATION | INCOME | NR OF FIRMS | NR OF COUNTRIES | NR OF PARTNERS | NR OF PROFESSIONAL STAFF |
|---|---|---|---|---|---|
| AGN International | 1603 | 199 | 92 | 1292 | 7419 |
| Alliott Group | 601 | 179 | 73 | 794 | 4440 |
| Baker Tilly International | 3300 | 156 | 131 | 2650 | 25667 |
| BDO | 6016 | 102 | 138 | 4778 | 41979 |
| BKR International | 1330 | 149 | 79 | 1403 | 8769 |
| CPA | 643 | 158 | 65 | 870 | 5414 |
| Crowe | 3078 | 143 | 114 | 3335 | 21335 |
| Deloitte | 31300 | - | 150 | 9948 | 148947 |
| DFK International | 1083 | 212 | 84 | 1188 | 7601 |
| ECOVIS International | 282 | 60 | 50 | 585 | 3400 |
| EY | 24420 | - | 151 | 9129 | 133864 |
| GGI | 4386 | 388 | 101 | 2787 | 20491 |
| GMN International | 199 | 67 | 44 | 329 | 1529 |
| Grant Thornton International | 4182 | 124 | 118 | 2839 | 26987 |
| HLB International | 1571 | 258 | 101 | 1754 | 10878 |
| IAPA | 1057 | 209 | 68 | 1115 | 4403 |

[2] http://www.accountancyage.com/digital_assets/6839/All_int_charts_2013_v2.pdf

| INTERNATIONAL ORGANISATION | INCOME | NR OF FIRMS | NR OF COUNTRIES | NR OF PARTNERS | NR OF PROFESSIONAL STAFF |
|---|---|---|---|---|---|
| IECnet | 115 | 66 | 50 | 219 | 977 |
| INAA | 586 | 67 | 50 | 697 | 3323 |
| INPACT Group | 306 | 154 | 73 | 571 | 2976 |
| Integra International | 313 | 127 | 73 | 433 | 3041 |
| JHI Association | 377 | 104 | 53 | 511 | 2706 |
| Kingston Sorel International | 324 | 76 | 62 | 394 | 3279 |
| KPMG International | 23030 | - | 156 | 8624 | 117190 |
| Kreston International | 1965 | 218 | 110 | 1448 | 16303 |
| Leading Edge Alliance | 2769 | 190 | 102 | 2175 | 18854 |
| MGI | 483 | 161 | 83 | 764 | 2988 |
| Moore Stephens International | 2283 | 299 | 101 | 2312 | 15273 |
| Morison International | 723 | 96 | 67 | 820 | 6319 |
| MSI Global Alliance | 1420 | 243 | 100 | 1910 | 6671 |
| Nexia International | 2827 | 200 | 103 | 2600 | 15261 |
| PKF International | 2683 | 300 | 125 | 2276 | 16681 |
| Praxity Global Alliance | 3721 | 60 | 109 | 2768 | 21702 |
| PrimeGlobal | 2029 | 350 | 90 | 2189 | 13738 |
| PwC | 31510 | - | 158 | 9359 | 139723 |
| RSM International | 3987 | 108 | 102 | 3126 | 23947 |
| Russell Bedford International | 382 | 91 | 101 | 549 | 3751 |
| The TAG Alliances | 3025 | 259 | 94 | - | 10000 |
| UHY International | 622 | 138 | 86 | 768 | 5210 |

The Big 4 networks (PwC, EY, KPMG, Deloitte) do not disclose the total number of firms, therefore we place in the model a general estimate. Also, the TAG Alliances do not disclose the total number of partners, for which we also place a general estimate.

Based on the data collected by Accountancy Age, we run a regression analysis with the aim of identifying the values of the coefficients. The value of a variable's coefficient will give us significant signals on the impact on that variable on the results of the model.

Here are the results of the regression analysis:

*Table 2. Regression analysis*

SUMMARY
OUTPUT

| *Regression Statistics* | |
|---|---|
| Multiple R | 0,995968 |
| R Square | 0,991953 |
| **Adjusted R Square** | **0,961831** |
| Standard Error | 881,3018 |
| Observations | 38 |

ANOVA

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| Regression | 4 | 3,26E+09 | 8,14E+08 | 1047,774 | 2,96E-34 |
| Residual | 34 | 26407559 | 776692,9 | | |
| Total | 38 | 3,28E+09 | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95,0%* | *Upper 95,0%* |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Nr of firms | 3,168753 | 1,494273 | 2,120598 | 0,04133 | 0,132025 | 6,205482 | 0,132025 | 6,205482 |
| Nr of countries | -8,7196 | 5,026096 | -1,73486 | 0,091823 | -18,9339 | 1,494659 | -18,9339 | 1,494659 |
| Nr of partners | -0,21007 | 0,359944 | -0,58362 | 0,563328 | -0,94156 | 0,521423 | -0,94156 | 0,521423 |
| Nr of professional staff | 0,205346 | 0,023927 | 8,582357 | 5,02E-10 | 0,156722 | 0,253971 | 0,156722 | 0,253971 |

Our model can now be completed with the values of the coefficients:

**I = 3.16*M – 8.7*C – 0,21*P + 0,2*S + 0,38**

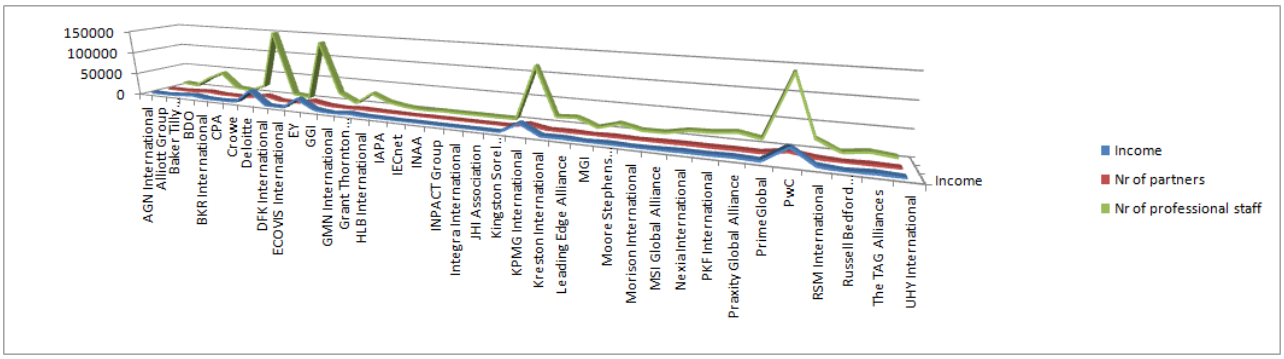
The adjusted $R^2$, which shows how good was the selection of the variables, has a value of 0,961831, which is close to the maximum of 1 and indicates a precise selection of variables and a good configuration of the econometric model. Which also mean that less than 4% of the model cannot be explained, generating the need for further research, in order to fine-tune the results.

## III. ANALYSIS OF RESULTS

With the model well calibrated, as shown by the high record of the adjusted $R^2$, we now look at the values of the coefficients for the four independent variables:

- A positive value for the M coefficient means that there a direct influence of the number of member organizations on the performance of a network;
- The high negative value for the coefficient of C means that networks perform better when they are more concentrated in a smaller number of countries, as opposed to the situation where they are scattered across many countries;
- The small but negative value for the coefficient of P shows that the increase in the number of partners has a slightly opposite effect on income;
- The small positive coefficient for the S coefficient demonstrates the direct relation between income and the number of professional staff

*Figure 1. Correlation between income, number of partners and number of professional staff*




## IV. CONCLUSION

The study of network finds a fertile ground in the case of the professional accounting networks. They are widely distributed at global level and have similar characteristics in nature, facilitating the analysis, which can then be extrapolated to other types of networks as well.

These networks are continuously updated on the latest legislative changes and their members actively participate in the development of fiscal policy proposals. The exchange of socio-economic information is an advantage for each country in which the networks are represented: the phases towards a modern, stable economy become shorter.

Further research is needed, especially into analysing the impact of the age of the network on the network performance.

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