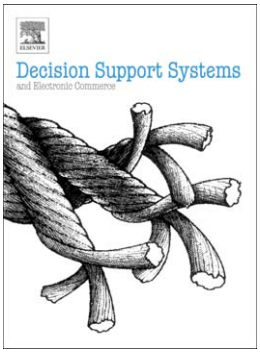
Accepted Manuscript



Predicting tax avoidance by means of social network analytics

Jasmien Lismont, Eddy Cardinaels, Liesbeth Bruynseels, Sander De Groote, Bart Baesens, Wilfried Lemahieu, Jan Vanthienen

PII: S0167-9236(18)30022-8
DOI: doi:10.1016/j.dss.2018.02.001
Reference: DECSUP 12927

To appear in: *Decision Support Systems*

Received date: 19 July 2017
Revised date: 30 January 2018
Accepted date: 1 February 2018

Please cite this article as: Jasmien Lismont, Eddy Cardinaels, Liesbeth Bruynseels, Sander De Groote, Bart Baesens, Wilfried Lemahieu, Jan Vanthienen, Predicting tax avoidance by means of social network analytics, *Decision Support Systems* (2018), doi:10.1016/j.dss.2018.02.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Predicting tax avoidance by means of social network analytics

Jasmien Lismont[a,*], Eddy Cardinaels[b,c], Liesbeth Bruynseels[b], Sander De Groote[b], Bart Baesens[a,d], Wilfried Lemahieu[a], Jan Vanthienen[a]

[a] *KU Leuven, Dept. of Decision Sciences and Information Management, Naamsestraat 69, B-3000 Leuven, Belgium*
[b] *KU Leuven, Dept. of Accountancy, Finance & Insurance, Naamsestraat 69, B-3000 Leuven, Belgium*
[c] *Tilburg University, Warandelaan 2, 5037 AB Tilburg, The Netherlands*
[d] *University of Southampton, University Road, Southampton SO17 1BJ, United Kingdom*

Abstract

This study predicts tax avoidance by means of social network analytics. We extend previous literature by being the first to build a predictive model including a larger variation of network features. We construct a network of firms connected through shared board membership. Then, we apply three analytical techniques, logistic regression, decision trees, and random forests; to create five models using either firm characteristics, network characteristics or different combinations of both. A random forest including firm characteristics, network characteristics of firms and network characteristics of board members provides the best performance with a minimal increase of 7 pp in AUC. Hence, including network effects significantly improves the predictive ability of tax avoidance models, implying that board members exhibit specific knowledge which can carry over across firms. We find that having board members with no connections to low-tax companies lowers the

*Corresponding author
Email address: Jasmien.Lismont@kuleuven.be (Jasmien Lismont)

Download English Version:

https://daneshyari.com/en/article/6948366

Download Persian Version:

https://daneshyari.com/article/6948366

Daneshyari.com