

Factors driving tax compliance costs of small businesses in the South African construction industry



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Dates:

Received: 04 July 2018
Accepted: 28 Mar. 2019
Published: 18 June 2019

How to cite this article:
Matarirano, O., Chiloane-Tsoka, G.E. & Makina, D.M., 2019, 'Factors driving tax compliance costs of small businesses in the South African construction industry', *Acta Commercii* 19(1), a687. <https://doi.org/10.4102/ac.v19i1.687>

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Orientation: Tax compliance costs are regressive in nature and impose a heavy burden on performance and sustainability of small businesses.

Research purpose: The aim of this article was to identify endogenous factors that drive tax compliance costs of small businesses in the construction industry of South Africa.

Motivation for the study: Small businesses in the construction industry face many challenges that result in low-profit margins, poor performance and eventually failure. Tax compliance costs are one of the factors behind poor performance and failure, as often cited by small businesses, and as such warranted an investigation into the factors that drive the costs.

Research design, approach and method: Data were collected using self-administered questionnaires that were emailed to contractors in classes 3 and 4 of the Construction Industry Development Board's register. A total of 83 usable questionnaires were returned and analysed using the structural equation modelling function of STATA data analysis and statistical software.

Main findings: Statistical tests performed revealed that business size, age, method of settling tax obligations and qualifications of the tax preparer drive tax compliance costs of small businesses in the construction industry.

Practical/managerial implications: Empowerment of employees and owners engaged in tax tasks, through formal education and tailor-made training, reduces the tax compliance burden and improves the performance of small construction businesses.

Contribution/value-add: The results of the study could assist business owners and managers in the construction industry in identifying efficient tax approaches that could minimise the tax compliance costs burden. They also assist with better planning by government departments in terms of the kind of tax support required by small businesses in the construction industry.

Keywords: tax compliance costs; small businesses; endogenous factors; construction industry; corporate income tax; employees' tax; value-added tax.

Introduction

Small businesses are universally recognised as key drivers of growth and innovation, making substantial contributions to value created within economies (OECD 2016:34). In developing countries, small businesses are believed to be the major drivers of economic growth (Calza & Goedhuys 2017:2) and creators of employment for semi-skilled and unskilled labour force, who would otherwise be unemployed (Makina et al. 2015:1; Rankin, Darroll & Corrigan 2013:8). In South Africa, up to 73% of the unskilled labour force is employed in business enterprises that have fewer than 50 employees (Amra, Hlatshwayo & McMillan 2013:9). In addition to employment creation, small businesses play a critical role in redressing historical imbalances by increasing the participation of black people in the mainstream economy. This creates potential for black people to own economic resources, thereby improving their quality of life.

Regardless of the above fundamental economic contributions, the performance and sustainability of small businesses in South Africa has been poor (Fatoki 2014:922; Van Scheers 2018:167). One of the factors cited for poor performance and, eventually, failure of small businesses, is tax (Herrington & Kew 2016:48), which is associated with high tax compliance costs. Tax compliance costs are:

costs incurred by taxpayers in meeting the requirements laid on them by the tax law and revenue authorities over and above the actual payment of tax; costs which would disappear if the tax was abolished (Sandford 1995 cited in Coolidge 2012:251).

Complying with tax regulations consistently appears in reports as a constraint on small businesses' performance because of the costs associated with becoming and remaining compliant (Battisti, Deakins & Perry 2011:18; Herrington & Kew 2016:49; Schwab 2016:324; Warfield & Stark-Jones 2012:14). Being tax compliant leads to the incurrence of additional non-production time and effort required for understanding the taxation procedures, completing and submitting tax returns, compilation of receipts and recording information and payments to personnel responsible for tax tasks. Other tax compliance costs include payment of external service providers by small businesses that are unable to complete the tasks on their own and the time spent with tax officials during inspections and audits. The time and money spent on these activities represent an opportunity cost that distracts small businesses from the more important task of running the venture (Steele 2009:91).

It is against this backdrop that this article attempted to identify the factors that have an effect on the tax compliance costs incurred by small businesses. Identification of such factors would enhance the quality of tax-related decisions made by small businesses. Decisions would include (1) whether to outsource tax tasks, undertake them in-house or partially outsource some tasks, and (2) if some tasks are undertaken in-house and some are outsourced, which tasks would that be. Understanding the factors would also assist the government with efficient resource allocation and formulation of appropriate support programmes. The construction industry was selected and used as a unit of analysis. Studies carried out by Pope and Abdul-Jabbar (2008), Coolidge (2012), Hansford and Hasseldine (2012), Lignier and Evans (2012) and Smulders et al. (2016) attempted to determine factors driving tax compliance costs, but did not differentiate between sectors of the economy. There was an implied assumption that small businesses in different sectors have similar levels of ability to deal with tax issues and that they incur tax compliance costs similarly across the board. Because of differences in economic sectors, Rogerson (2008:54) suggested that research should be streamlined so as to complement the generic ones.

Unlike industries such as manufacturing and retailing, products (construction projects) within construction industry normally extend to several months or years. As a result, invoices are issued before completion of the final product. In addition, construction projects are complex and their completion involves a combination of several activities – such as drawing up of plans, surveying, preparation for construction and project management – all of which are usually carried out by different contractors. The issuance of invoices before project completion and the involvement of several parties in a single project have tax implications that are specific to the construction industry. Whilst the taxes incurred are similar to other industries, the way taxes such as income tax and value-added tax (VAT) are administered in the construction industry is different and that, in turn, affects tax compliance costs.

The construction industry was selected as the unit of analysis because it has a high proportion of small businesses and is labour-intensive. It is reported that small businesses makeup the bulk of all businesses in the construction sector (Wentzel, Smallwood & Emuze 2016:1477). In addition, the construction industry has a crucial role in supporting other economic sectors such as manufacturing, mining, transportation, real estate and business services through infrastructure development (Construction Industry Development Board [CIDB] 2017). Despite these contributions, small businesses in the construction industry have high failure rates (Wentzel et al. 2016: 1479) making them an ideal unit of analysis. The International Monetary Fund (IMF) (2007) identified small businesses in the construction industry as one of the categories posing compliance problems, further compelling the need to research this sector.

The remainder of this article includes delimitations of the study, research methods employed, empirical results and discussions, implications and recommendations and, lastly, conclusions.

Delimitations

The study considered tax compliance costs resulting from corporate income tax, employees' tax and VAT. For this article, a small business was considered to be a small business if that was registered in class 3 or 4 of the Construction Industry Development Board (CIDB) contractor's register, employed between 5 and 50 employees, had a turnover of not more than R14m, operated for at least 2 years and was registered for corporate income tax, employees' tax and VAT.

Literature review

Construction industry in South Africa

The construction industry is defined as anything involving clearing, dredging, excavating and grading of land and other activities associated with buildings, structures or other types of real property such as bridges, dams and roads (SARMA 2013). Most of the players in the construction industry of South Africa are registered with the CIDB. There are 20 categories of construction works in the CIDB register, but civil engineering and general building are, by far, the most common businesses in terms of numbers, comprising more than 70% of all registered construction businesses combined. The majority of small businesses are found in the general building category, which could be a result of less technical skills required compared to other categories such as civil engineering. The high demand for houses for accommodation and industrial offices and plants may also contribute to the high numbers of general contractors. The contractors registered in the CIDB register are placed into different classes, ranging from class 1 to class 9 based on the size of contract (tender) they can bid for. More than 90% of the contractors are registered in classes 1–4, implying that the majority are small businesses (CIDB 2019).

Defining a small business in construction

In South Africa, small businesses are defined in terms of the *National Small Business Act* (NSBA) and the tax legislation. The NSBA defines a small business in the construction sector as an entity that has at most 50 full-time equivalent employees, a total annual turnover of less than R6m and gross asset value of less than R1m. There are, however, several definitions of small businesses in the tax legislation. There are definitions for income tax, capital gains tax, VAT, skills development levy (SDL) and tax amnesty purposes. The commonly used tax legislation definition is for income tax. Section 12E of the *Income Tax Act* defines a small business as a close corporation, cooperative or private company whose shareholders should be natural persons all the time during the year of assessment. In addition, the business must not exceed R14m in gross annual income (Stiglingh et al. 2012). Because of several conditions to be met, there is no single definition of a small business that is universally accepted in the literature (Evans et al. 2014). For this article, a business was considered small, if it had a total annual turnover of not more than R14m and did not have more than 50 full-time equivalent employees but had more than 5. In addition, the business should have been registered in class 3 or 4 of the CIDB contractor's register. The premise for using classes 3 and 4 was because classes 1 and 2 were considered too small and classes 5–9 were too big as argued by Ladzani (2009).

Factors influencing tax compliance costs

Several factors have been identified in the literature that are claimed to have an effect on tax compliance costs incurred by business taxpayers. These can be classified into exogenous and endogenous factors. Exogenous factors are a result of external forces and cannot be directly controlled or influenced by the individual businesses. They include number of taxes, length and frequency of tax returns, number of tax incentives (Coolidge 2012; Smulders 2013; Symons, Howlett & Alcantara 2009), tax system complexity, frequency of changes to tax law and number of taxes (Evans, Lignier & Tran-Nam 2013). Endogenous factors are business-specific factors that are a result of specific business actions and can be controlled or avoided. Endogenous factors were considered because they can be influenced by decisions undertaken by small businesses independently. Based on findings of previous research studies, a number of endogenous factors are discussed to inform the hypotheses developed.

Size of business

The size of a business, in terms of number of employees (Lignier & Evans 2012:633; Smulders et al. 2016:724) or revenue (Eichfelder & Schorn 2009:9; Smulders et al. 2016:724), was found to have a significant effect on the tax compliance costs that were incurred by business taxpayers. According to IMF (2007:5), using number of employees as a proxy for business size, an increase in size should increase the needs to withhold payroll from employees. This claim is corroborated by Guyton, Kindlon and Zhou (2004:5) who argued that the number of employees within a business

drives employment tax, thus adding to the tax compliance costs. This should make logical sense as the increase in number of employees is associated with an increase in number of tax returns to be submitted, amount of tax withheld as well as employees' record-keeping.

Smulders et al. (2016:724) and Yesegat (2009:222) found a significant positive relationship between turnover and tax compliance costs. An increase in the turnover of a business thus would lead to an increase in tax compliance costs. An increase in turnover is normally associated with an increase in transaction documents, which should be presented to tax officials as a proof. This increase in tax compliance costs because of record-keeping should be very marginal and is not expected to significantly affect tax compliance costs, contrary to the findings by Smulders et al. (2016) and Yesegat (2009). Considering these findings from previous studies, the following hypotheses in relation to business size were formulated:

Hypothesis 1: An increase in the number of employees in a firm leads to an increase in tax compliance costs incurred by small construction businesses.

Hypothesis 2: An increase in the turnover of a business leads to an increase in tax compliance costs incurred by small construction businesses.

Business age

Smulders et al. (2016) found the age of businesses to influence the number of hours small businesses spent internally complying with turnover tax and capital gains tax. Younger businesses spent more hours on tax compliance costs compared to older businesses. The possible reason provided for this result was the inexperience of younger businesses in tax tasks, which made them spend more time on learning the legislation. This line of argument suggests that an increase in the age of a business would be associated with increased experience which would, in turn, reduce the internal time spent on tax compliance tasks. It was against this backdrop that the following hypothesis was developed:

Hypothesis 3: As the age of a small business increases, the tax compliance costs incurred by small construction businesses decline.

Tax compliance strategy

The compliance strategy a taxpayer adopts and follows is also considered to be another significant factor in tax compliance costs incurred. Compliance strategy, for this article, is a combination of the methods of preparing accounts and preparing and submitting tax returns as well as settling the assessed tax obligations. It includes, among other exercises, the use of a computerised accounting system, the filing of tax returns and storage of support documents. A business enterprise can prepare and keep its books in a computer or manually on paper. On the other hand, it can decide to hand over its accounting and tax tasks to external service providers. The use of a computerised accounting system by small businesses was found to increase the tax

compliance costs incurred on VAT (Smulders et al. 2016:726). This was because of increased time spent performing VAT-related activities in-house. Electronic filing is generally believed to reduce the costs of tax compliance that would have been incurred had the manual system been used (Coolidge, Ilic & Kisunko 2009:12; Smulders 2013:105). This is because those who use computerised systems and e-filing are less likely to make errors, thus reducing the likelihood of engaging expensive external service providers. This claim is supported by Yilmaz and Coolidge (2013:3), who found e-filing to be associated with a reduction in total tax compliance costs. The use of external service providers (outsourcing) was found to have a positive relationship with tax compliance costs (Smulders et al. 2016:725). The internal tax compliance costs, instead of going down, increased as a result of using the services of external service providers. The following hypothesis was then formulated:

Hypothesis 4: The tax compliance strategy used has a significant effect on tax compliance costs incurred by small construction businesses.

Qualifications of tax preparer

The qualifications of the tax preparer were found to be a factor behind tax compliance costs that are incurred (Blaufus, Eichfelder & Hundsdoerfer 2011:16). Tax preparers with accounting qualifications have better understanding of tax system and, thus, reduce tax compliance costs. This argument, however, is disputed by Smulders et al. (2016:724) who found the knowledge of accounting to have a positive effect on tax compliance costs related to income tax. For the article, the qualification of the tax preparer was considered in terms of the level of qualification and the qualification type, either commercial or non-commercial qualification. Two hypotheses were developed to test the effect of qualifications:

Hypothesis 5: Having tax preparers with higher qualifications significantly reduces tax compliance costs incurred by small construction businesses.

Hypothesis 6: Having tax preparers with commercial qualifications significantly reduces tax compliance costs incurred by small construction businesses.

It is acknowledged that other factors such as legal form, industry and location of head offices were highlighted in some previous studies, but they were not considered for this article. This was because the article concentrated on one industry where most of the respondents were close corporations and also focussed on the factors that were frequently identified in the literature.

Research methods and design

Research design and sampling

The study was relational in nature and primarily conformed to the quantitative research design. A survey, utilising a self-administered questionnaire, which was cross-sectional in nature, was used to gather data from selected respondents. The selected respondents were contacted by emails and

requested to complete and return the questionnaire that was attached to the email. The population for the study included small business contractors registered on the CIDB's register, which was found on the CIDB website. In creating a sampling frame, contractors from classes 3 and 4 were used. According to Ladzani (2009), classes 1 and 2 are considered to be very small businesses, whilst classes 5–9 are beyond the definition of small businesses as they can handle tenders that are regarded to be for larger businesses.

The total number of construction businesses in classes 3 and 4 as of 12 April 2013 was 4186. To determine the sample size for the study, the following sample size formula, postulated for multiple regression analysis by Krejcie and Morgan (1970) cited in Rahi (2017:4), was used:

$$s = \frac{X^2 NP(1-P)}{d^2 (N-1) + X^2 P(1-P)}$$

where

n = sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = population size that was 4186

P = population proportion (assumed to be 0.50 which gives the maximum sample size)

d = the margin of error expressed as a proportion, 0.1 for the study.

The formula was applied using 95% confidence level, 10% margin of error and 50% response distribution. Substituting the variables in the above sample size formula resulted in the following output:

$$s = \frac{3.841 \times 4186 \times 0.5 (1-0.5)}{0.1^2 (4186-1) + 3.841 \times 0.5 (1-0.5)}$$

$$s = 93.89.$$

The procedure resulted in a minimum sample size of 93.89, which was rounded to 94. As the response rate of email-based surveys is very low (11%), according to Saunders, Lewis and Thornhill (2012), 470 emails were sent to randomly selected contractors. The reason for sending more than 94 emails was to generate enough responses that would enable meaningful statistical analysis. The selection procedure included attaching nominal values to contractors in classes 3 and 4, and then randomly selecting them using the random selection function of Microsoft (MS) Excel. Email addresses for the selected respondents were identified and any selected respondent without an email address was replaced randomly. A response rate of 23.34% (105 responses) was received from all selected respondents, whilst 17.66% (83 responses) of all emailed questionnaires was usable. Although low, this response rate was expected as small business respondents are typically reluctant to divulge information related to detailed tax matters (Hanefah, Ariff & Kasipillai 2002:85).

Data collection instrument

The study solicited responses from literate participants, thus making a self-administered questionnaire an appropriate measurement tool. In designing questions for the research instrument, questions used in prior studies were adapted. Adopting and adapting questions from prior questionnaires is trusted because the questions would have been used before which increases validity (Saunders et al. 2012). Questions from studies on tax compliance costs by the World Bank (2011) and Lignier and Evans (2012) were adapted for the study. Additional questions were developed to cover all objectives of the study. The questionnaire had five sections. Section A required the respondents to provide general information about themselves. This included age, gender, highest qualification and the period they have been working for the enterprise. Section B required information related to performance of the enterprise. Information solicited included year of establishment, ownership, initial capital, investment in technology, revenues, production costs, net profit and number of employees. Section C consisted of questions that enabled the estimation of tax compliance costs. Section D required information on the tax strategy used. It included questions on accounting system used, submission of tax returns, settlements of tax obligations and preparation and storage of tax records. The final section (Section E) focussed on the perceptions of respondents towards tax.

To further improve reliability, the original instrument was pre-tested with contractors who were conveniently selected. The selected contractors had characteristics similar to the targeted population. The responses obtained were used to modify the original instrument, which significantly reduced its length as well as making the language more understandable to the targeted population.

Data analysis

The data collected were coded and captured into MS Excel from where it was exported to statistical analysis software (STATA) for analysis. To reduce the chances of data entry errors, two data capturers separately entered the data and the two data sets were compared using MS Excel functions of removing duplicates. For questionnaires that were returned with few missing responses on non-fundamental questions, such missing responses were ignored and questionnaires considered for data analysis. Questionnaires with omissions on fundamental questions, such as 'is your business enterprise registered for VAT?' (22 in total), were discarded from the analysis.

Ethical considerations

An ethical clearance certificate was issued by University of South Africa (UNISA) Research Ethics Review Committee (reference number: 2014_CEMS_BM_007) to conduct this research.

Model specification and variable description

To understand the relationship between the variables in the study, a regression analysis was used. The following multiple linear regression model, which consisted of one dependent variable and eight independent variables, was used:

$$Y_{TCC} = \alpha + \beta_1 X_{employees} + \beta_2 X_{turnover} + \beta_3 X_{age} + \beta_4 X_{accounting\ system} \\ + \beta_5 X_{submission\ method} + \beta_6 X_{payment\ method} + \beta_7 X_{highest\ quali} \\ + \beta_8 X_{quali\ type} + e$$

where:

Y_{TCC}	= tax compliance cost which is the dependent variable
$X_{employees}$	= the size of the firm measured by the number of employees
$X_{turnover}$	= the size of the firm measured by the turnover generated
X_{age}	= age of the firm represented by number of years since registration
$X_{accounting\ system}$	= accounting system used by the firm to prepare documents for tax where 1 is no accounting system used, 2 is manual system or paper based, 3 is computerised system in-house, 4 is a combination of manual and computerised systems and 5 is external service providers
$X_{submission\ method}$	= method used to file tax returns where 1 is paper submission, 2 is submission via post and 3 is electronic
$X_{payment\ method}$	= settlement of the tax obligation where 1 is South African Revenue Service (SARS) branch, 2 is bank deposit, 3 is internet transfers and 4 is e-filing
$X_{highest\ quali}$	= highest qualification of the tax preparer. Where there were more than a single person involved, the highest qualification of the one doing the bulk of the tax work was used. For this variable, 1 is commercial degree, 2 is non-commercial degree, 3 is commercial diploma, 4 is non-commercial diploma, 5 is commercial higher national certificate, 6 is non-commercial higher national certificate and 7 is other qualification
$X_{quali\ type}$	= type of qualification of the tax preparer where 1 is commercial qualification, 2 is non-commercial qualification and 0 is other.

α is an intercept; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ and β_8 are parameters to be estimated; and e is an error term that captures all the other variables that are not included in the model but have an effect on Y .

The key ethical issues were addressed throughout the research, especially during the data gathering and analysis stages. All respondents were informed about the purpose of the study

and how the information generated was to be used. Confidentiality was guaranteed and highlighted in the leading email containing the research instrument. Respondents were informed of their right to privacy and refusal to participate at any point in the survey. Although data collection was contracted to a third party, the researcher ensured that no violation of ethics and confidentiality issues arose. The research methods and survey questionnaire were examined and approved by the University Research Ethics Review Committee prior to conducting the field work.

Profile of the respondents

The profile of the respondents and their respective businesses were solicited from responses to questions from Sections A and B of the questionnaire. Questions from Section A asked the respondents to indicate their age, highest degree and type of qualification. The profiles of the respondents, which were cross-tabulated using MS Excel, are presented in Table 1.

None of the respondents was younger than 22 years of age. The number of respondents increased with an increase in age range categories. This could be a result of younger employees not being the most knowledgeable persons about taxation of the enterprise and, thus, were not expected to be the respondents. The older employees or owners, because of their experience, are most likely to be the most knowledgeable, resulting in them dealing with taxation issues of their enterprises.

Qualifications were categorised into qualification type and qualification level. The types of qualifications included commercial and non-commercial qualifications. Qualification level included degree, diploma and certificate. All respondents except one had a post-matric qualification. This was expected as taxation is not an easy area that can be easily understood by many; thus, those dealing with tax were expected to have some form of post-matric qualification. About 53% of the respondents had a commercial post-matric qualification.

Section B of the questionnaire contained questions that were used to estimate performance of the small businesses as well as information relating to profiles of the represented business enterprises. These included the year in which the business enterprise was established and the number of full-time equivalent employees the business employed. The responses received are summarised in Tables 2 and 3.

The establishment years for the business enterprises were categorised into class intervals with a width of 5 years.

TABLE 1: Combined profile of the respondents.

Variables	Commercial qualification			Total	Non-commercial qualification			Total	Other	Grand total
	Age range	Degree	Diploma	Certificate	Degree	Diploma	Certificate			
22–26	8	0	0	8	0	0	0	0	0	8
26–30	17	0	0	17	0	0	0	0	0	17
30–34	3	1	0	4	23	0	0	23	0	27
Over 34	0	12	4	16	0	10	4	14	1	31
Grand total	28	13	4	45	23	5	16	44		83

The bulk of the businesses represented in the survey (84%) were established after 2004. There were only six businesses that were established before the year 2000. The high number of small businesses established after 2004 may be explained by a more conducive business environment and more opportunities that were presented after 2004. Another possible reason for this could be the death of older businesses and low survival rates as argued by Fatoki (2014).

To analyse the number of employees in the businesses as per the respondents, business enterprises were put into classes based on class width of 5. The lower class boundary of the first class was 5, whilst the upper class boundary of the final class was 50. This was dependent on the definition that was adopted for a small business, which was a business with employees ranging from 5 to 50. The number of employees provided by the respondents is presented in Table 3.

The class that had the highest frequency (modal class) was 40–44 employees. This was unexpected as it was believed that most small construction businesses would have fewer employees as portrayed in the CIDB register where the majority of contractors are in class 1. This outcome could be a result of businesses with 40 employees or more having capacity to respond to the request for participation. This class was followed by 15–19 employees and then 20–24 employees. Fourteen businesses that were represented in the survey had 14 or fewer employees. It is necessary to point out that although there were few businesses established before 2004

TABLE 2: Year established.

Year established	Frequency
1989–1993	2
1994–1998	3
1999–2003	8
2004–2008	33
2009–2013	37
Grand total	83

TABLE 3: Number of employees.

Range	Frequency
5–9	7
10–14	7
15–19	15
20–24	12
25–29	9
30–34	8
35–39	3
40–44	18
45–50	4
Grand total	83

that were represented in the survey, their average number of employees was 35 compared to 23 for those established after 2003. This, however, is not surprising as the number of employees in business enterprises is expected to increase as the business grows.

Empirical results and discussion

Hypotheses testing

Structural equation modelling (SEM) was used to run the hypotheses postulated and test the model developed. Structural equation modelling is an analytical tool that estimates coefficients in a set of linear relationships. The functional relationships are described by parameter estimates that show the magnitude as well as the direction of effect the independent variables have on the dependent variable. Structural equation modelling was used because it enables explicit accommodation of measurement errors and incorporate abstract and unobservable constructs. It also confronts theory with data and helps test multiple interrelated dependence relationships in a single model that cannot be performed by other multivariable techniques (Hair et al. 2014:546).

In interpreting the results of the tests, relationships that were statistically significant were the ones which had *p*-values of ≤ 0.05 or Z-scores of equal to or greater than +1.96 and equal to or less than -1.96 (Burns & Burns 2008:169). The coefficient in the table shows the change in the tax compliance costs as a result of one unit increase in the independent variable. The sign of the coefficient shows the direction of the relationship, positive or negative. The results of the regression tests are presented in Table 4.

Table 4 shows the number of employees, age of the business and qualification type to be statistically significantly related with tax compliance costs. This is portrayed by *p*-values that are less than 0.05. Business size and age were expected to have a positive relationship with tax compliance costs as the age of a business is likely to be positively related with the size of the business. Older businesses are likely to be bigger and would have more employees than the younger ones, and thus incur higher tax compliance costs.

There were no statistically significant relationships observed between tax compliance costs and turnover, highest qualification, accounting system and tax submission method.

TABLE 4: Regression results with structural equation modelling.

Variables	Coefficient	Observed Information Matrix Standard Error	Z	P > z	[95% Confidence Interval]
Number of employees	1881.684	354.8561	5.30	0.000	1186.179 2577.19
Turnover	-0.0019708	0.0012429	-1.59	0.113	-0.0044068 0.0004652
Age	3516.957	844.9195	4.16	0.000	1860.945 5172.969
Highest qualification	-1739.042	3510.748	-0.50	0.620	-8619.981 5141.897
Qualification type	24 697.72	9305.303	2.65	0.008	6459.657 42 935.78
Accounting system	1801.143	5403.571	0.33	0.739	-8789.661 12 391.95
Submission method	4584.766	7488.65	0.61	0.540	-10 092.72 19 262.25
Settling obligations	-11 124.75	6592.842	-1.69	0.092	-24 046.49 1796.978
cons	-27 693.67	24 644.79	-1.12	0.261	-75 996.57 20 609.23

The *p*-values of these variables, as portrayed in Table 4, were all above 0.05 and z-scores less than +1.96 and more than -1.96, indicating statistically insignificant relationships. The results show that hypotheses 1 and 6 cannot be rejected, whilst Hypotheses 2–5 are rejected. Turnover, tax compliance strategy and highest qualification of the tax preparer do not significantly affect the tax compliance costs incurred in the construction industry. Although Hypothesis 3 was rejected, the age of the construction business was found to have a positive, rather than negative, relationship with tax compliance incurred.

Discussion

The regression tests show that the number of employees, age of business and the type of qualification significantly affect the tax compliance costs that are incurred by small businesses in the construction industry of South Africa.

Small businesses that have more employees are expected to incur higher tax compliance costs compared to those that have fewer employees. This can be explained by additional employees, which is associated with more paperwork, for example tax certificates, more employees' tax and administration, thus increasing the tax compliance costs. This argument resonates with Guyton et al. (2004:5), who claim number of employees to be one of the key drivers of employment tax. Fundamental challenges for taxing smaller businesses arise from the need to withhold payroll taxes and social contributions from employees (IMF 2007:5), which is dependent on the number of employees a small business has. Smulders (2013:105) concurs by claiming that external tax compliance costs increase with the increase in the number of employees the business has. This result, however, contradicts Coolidge et al. (2009:10) who found the number of employees a business had to reduce the likelihood of outsourcing, thus reducing the tax compliance costs. The study found that businesses that carried tax compliance work in-house incur the lowest tax compliance costs compared to those that fully or partially outsourced the tax compliance work.

The insignificant relationship found between turnover and tax compliance costs contradicts the findings of Yesegat (2009:222), Lignier and Evans (2012:633) and Smulders et al. (2016:724), who found turnover to be a key driver of tax compliance costs. According to Contos et al. (2009:54), the cause for an increase in tax compliance costs is the number of

activities, which is associated with the number of receipts. Additional receipts increase the volume of activities, which, in turn, increases the total burden. This argument, however, may not be applicable to the construction industry where there are fewer receipts generated because of the nature of the business. An increase in revenue in construction business is not necessarily associated with an equal increase in receipts, as most projects take long before being receipted.

The significant positive relationship found between the age of a business and tax compliance costs was expected as an increase in age is normally associated with growth in the number of employees, a factor that was found to have a positive relationship with tax compliance costs. This result does not support the finding by Smulders et al. (2016), who did not find any relationship between the age of a business and the tax compliance costs incurred in complying with income tax, VAT and employees' tax. The study, however, found a negative relationship between capital gains tax and turnover tax. Younger businesses were found to incur higher tax compliance costs compared to the more established businesses.

Having a tax preparer who possessed a commercial qualification significantly reduced the tax compliance costs incurred by small construction businesses. This result is in line with Smulders (2013:102) who found the knowledge of accounting of the respondents to have a significant effect on tax compliance costs. One way of having an understanding of accounting is through having a commercial qualification. Tax preparers with commercial qualifications are most likely to have a good knowledge of accounting, thus minimising tax compliance costs by efficiently performing the activities and not resorting to outsourcing the tax services.

Limitations

A number of limitations emerged during the research process. A basic problem of measuring tax compliance costs lies in the reliability of the taxpayers' statements. Respondents may overestimate or underestimate the costs because they do not remember or keep record of all activities. The responses are based on the memory of the respondents. Disentanglement of joint business costs between tax compliance costs and other costs is a difficult procedure which may affect results. Much of small business compliance burden is linked to activities such as record-keeping and detailed calculations that are normally not recorded. The proportions provided by respondents are based on gut feeling, some of which may be grossly incorrect. Differences in tax year and financial year meant that costs could be overlapping. This means that comparison of small businesses has to be done cautiously. Regardless of these differences, the study assumed that all small businesses used the tax year as their financial year. The study was cross-sectional in nature; therefore, causality cannot be claimed with certainty. Regardless of the above limitations, the study provided a good insight into the causes of high tax compliance costs from the taxpayers' perspectives.

Implications and recommendations

The results of the study show that businesses that are bigger and older incur higher tax compliance costs. The costs are minimised by having appropriately qualified tax personnel and the use of e-filing. Small businesses with tax preparers without commercial qualifications incur high tax compliance costs most probably as a result of taking long hours on tax tasks, redoing the tasks because of errors, being prone to inspections and audits, consulting tax sources and/or engaging external service providers. The factors that were found to have an effect on tax compliance costs seem to revolve around understanding of the tax system which has knock-on effects on growth and size of the business. With personnel having appropriate skills and qualifications, small businesses would incur low tax compliance costs and survive longer. It is through understanding tax that small businesses would be willing and able to use e-filing, which, in turn, reduces tax compliance costs.

Attracting employees with appropriate skills and qualifications is a big challenge for small businesses because of high demand of such personnel. It is therefore fundamental that the small business owners or managers and government put more emphasis on empowering employees who are already working within the company with appropriate qualifications. One way of empowering the employees is through encouraging and supporting them to further their education. This can be done through part-time and/or online studies. Part-time and/or online studies are a good option as they have minimal impact on the presence of the employees at workplace and, as a result, they can still perform their duties whilst learning. Business owners can play a crucial role in this process by subsidising the costs of study, offering study breaks and/or rewarding personnel who attain relevant qualifications. The government can lessen the burden by offering tax rebates to employers who support their employees.

Through its relevant arms, the government can play its part in enhancing knowledge of small business employees by facilitating provision of tailor-made training. The tailor-made training, designed with content and structure, specifically meant for small businesses in a specific sector reduces the burden of spending much time on content that is irrelevant to them. This training can be prepared and offered by institutions of higher learning as part of their community engagement programmes. The role of the government would then be to facilitate and foster the relationship between the two parties. Such a strategy would minimise the amount of time spent away from work, thus having minimal impact on productivity.

Conclusion

This is one of the first studies to determine exogenous factors driving tax compliance costs of small businesses in the construction sector of South Africa. The other studies before were not sector-specific and their results could be negatively affected by averaging effects. The results of this study could

assist business owners and managers in identifying efficient tax approaches within the business which could minimise the burden of tax compliance costs. Such approaches include the use of e-filing, recruiting and/or training personnel responsible for tax tasks. The results can also assist with better planning from government departments in terms of the kind of tax support most appropriate for small businesses in the construction industry.

Conclusion

The purpose of this study was to determine factors that have a significant effect on the tax compliance costs that are incurred by small businesses in the construction industry. The few studies carried out in South Africa have all focussed on small businesses within the economy; thus, this study complements those studies by focussing on a single sector. Such a focus reduces the effects of aggregation as noticed by differences in results of the studies. The results can be valuable for small business owners and those responsible for allocation of resources. These can also be used by external service providers when they are deciding on what they can offer to their clients and how to charge for their services. Such knowledge improves the quality of decisions by the small businesses, external service providers and the government as an allocator of resources.

Acknowledgements

The authors thank Ms M. Matambo for data coding and entry into Excel spreadsheet and Dr S. Mishi for assistance with data analysis.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

O.M. was responsible for the research process including literature review, data collection, analysis and interpretation as well writing the manuscript. G.E.C.-T. contributed to the development of research instrument, data analysis, writing of the manuscript, proofreading and making necessary changes and adjustments. D.M. contributed to the development of the research questionnaire and methods used and suggested changes to the manuscript.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

Data availability statement

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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