
THE INFLUENCE OF PROPERTY TAX IDENTIFICATION COST ON PROPERTY REVENUE PERFORMANCE IN TANZANIA

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ABSTRACT

Property tax is taken as major source of revenue to finance public infrastructures if is fairly and properly administered. This study investigated the influence of property tax identification cost on property tax performance. The guiding objective was to examine the relationship between property tax identification cost and property tax performance. Data were collected from 127 respondents using survey method and analyzed using multiple regressions. The results revealed that Property tax identification cost has statistically significant in the prediction of property tax performance. The conclusion is that, property tax identification cost enabled the tax authority to expand the tax based through increasing the number of taxable properties in the property tax rolls. Thus, the study recommends that, the taxing authority should allocate substantial budget for surveying, hiring equipment, transportation and record keeping to strengthening property tax identification capacity. This could be done through application of technological innovation and the use of GIS which integrates all important activity for property tax identification.

Keywords: Property tax identification cost, Property tax Performance, GIS-Technology.

1. INTRODUCTION

Property tax is often identified as a major source of local government revenue that has the potential to contribute substantially to locally raised funds all over the world (McCluskey et al. 2022). It remains to be a single most important source of revenue in many parts of the world and well suited for local government (Wilson et al. 2022; Radvan et al. 2021; Martinez, 2020). Despite its importance as a major source of revenue globally, in developing countries property tax performance is far below when measured against its potential (Olha and Keneth, 2021).

Property tax is said to be progressive, administratively feasible and automatically scale-up with urban expansion (Grieco et al. 2020; Wilson, 2022). OECD, (2021) suggests that, property tax have great potential for mobilizing local revenues although there are significantly differences between developed and developing countries. The data from (UNU-WIDER Government Revenue Dataset, (2020) suggest that, in developing countries the ratio of property tax revenue to the total taxes is approximately to 0.4% as compared to 5.6% in developed countries. On the other hand, in most of developing countries property taxation have commonly produced between 0.03 to 0.06 percent of GDP, while in developed and transition countries it produced between 2 percent to 3 percent. This significant deviation in property tax performance measured in terms of ratio of the

total taxes and percentage to GDP between developed and developing countries calls for special attention aimed at improving the property system.

The reviewed studies indicate that, major drawbacks on implementing property tax system in developing countries are administration constraints, incomplete and outdated tax rolls, limited staff and resources to carry out updates and how the tax is actually perceived by the tax payers (Grieco et al. 2020). It is said that, property tax is difficult to administer and costly if it is not administered well (Dobay, 2019). A high administrative cost and a small revenue yield tend to make a good property tax losing its potential (Knebelmann and Pouliquen, 2021). Therefore, the effective property tax administration enhanced the taxing authority to have desired impact on the economy in terms of efficiency land management, equity and revenue capacity (ICTD, 2021; Grieco et al. 2020). This however, will depend on the ability of the taxing authority to allocate adequate costs for property identification, property assessment as well as property tax enforcement.

Cost efficiency is an important key idea in achieving organization financial performance (Williamson, 1994). Property tax cannot be self-assessed and is normally associated with very high staff costs. It is among of the costliest taxes since it involves several activities like property identification, property tax assessment and valuation, property tax enforcement, management of appeal system, billing and revenue collections (William, E 2019; IMF, 2016). According to Dobay (2019) commented that, the cost for implementation of property tax activities vary widely and can be look as a share of property tax revenue as high as 10 percent or as low as 1% or less in some developed countries. Thus, when administration costs are compared with property tax revenue yield it can be easily seen as a poor financing choice for local governments. It makes more financial sense to spend most of the administrative cost on the types of taxes that generate more tax revenues.

The introduction of digital platforms and geographic information system (GIS) create opportunities for the property tax administration to systematically assign tasks, monitor the activities of its staff and oversee the whole property tax system at a least cost (McCluskey et al, 2018). The technological innovations address the challenges related to spatial nature of property tax identification, assessment and enforcement (Lauren, 2024). The availability of satellite images and aerial photographs taken by drones and tablets has changed how land and property records are compiled and updated (Knebelmann, 2022; Kyle, 2024; David M., 2019; Graham et al. 2018). This allows for digital data management systems to link geospatial data such as Geographic Position System (GPS) coordinates to ownership information and is particular useful in place without a functioning addressing system (Larry et al. 2023; Graham et al. 2018). The system helps in detecting, registering, characterizing and valuing properties automatically (Knebelmann, 2022). The system supports the taxing authority in creating and managing the property tax roll which is important document for an efficient property tax system at a least cost.

GIS-technology and digital innovations offers a solution toward property tax identification and finally improves property tax performance. The integration of aerial imagery and Geographical Information System (GIS) data linked to the property tax register is highly needed in low or middle income countries like Tanzania (Knebelmann, 2022; McCluskey, 2021). GIS-technology enhanced property tax registers, allows each plot to be geo-referenced, enabling the administration to easily locate it irrespective of the quality of the addressing system (Knebelmann, 2022;

McCluskey et al. 2018). The system supported by the use of tablets, drones and smartphones to streamline and strengthen the collection of information about taxpayers, properties and occupancy, to create digitalized property tax registers (Knebelmann et al. 2021; Graham et al. 2018; McCluskey and Huang, 2019). Land and property ownership registers and property tax registers are often separate, and in many contexts they are managed by different government. In this case, digital transformation on the use of geographic information system seems to be the best strategy for the taxing authority to cut-down both operational and administrative costs for carrying out the key cost factors of property tax performance (Larry et al. 2023; McCluskey et al. 2019). The study intended to examine the influence of property tax identification cost on property tax performance.

2. LITERATURE REVIEW

Property identification cost refers to the cost that requires the taxing authority to pay in order to facilitate the identification of the taxable property (Martinez, 2020). It involves the use of computerized geographical information system (GIS) which provides geographical records of properties that clearly delineate properties' boundaries and locate them with precision (Larry et al. 2023). Property identification cost it include the process of acquiring the equipment's tools like powerful computers and technical expertise to facilitate property identification and creation of cadastral maps (McCluskey and Huang, 2019; Kyle, 2024). In this case, property tax identification costs facilitate the creation of digitalized property tax registers that contains enumeration work in the field, to collect additional information on taxpayers, properties, occupancy and usage for each plot (Dobay et al. 2019).

Modernization and innovation of property tax system facilitate taxing authority to manage the key problems of the property tax system (McCluskey et al. 2022). The automated property tax system enhanced taxing authority to identify properties through the use of aerial imagery. The problem of valuation and assessment can be solved through the use of simplified automated approach. The problem of billing system can be solved through the use of better communication e-demand notes and email. The problem of property tax payment can also be solved through the use of E-banking and mobile money transfer, and the problem of monitoring and compliance also can be solved through the use of GIS (McCluskey et al. 2018).

Property tax identification found to have an impact on increasing property tax revenue by 34% in many municipalities in Colombia (McCluskey, 2021). Digitalization of property tax data has considerably strengthened the efficiency of property tax identification from the field, due to the increased affordability of smartphones and tablets (Knebelmann, 2022). The system captures the current state of buildings through detection of physical changes of oblique aerial photography for easy of referencing (Lauren, 2024). When high quality data and human resources are available, computer assisted mass appraisal (CAMA) once integrated with GIS can significantly reduce the staff cost and increase efficiency of property identification assignment (Kyle W, 2024). Remote sensing technologies can also be used for property identification to take aerial images and then geo-referenced them to generate digital maps, exploiting 2D satellite or drone images to measure the area of plots or buildings. Also allowing for the recovery of 3D and making possible to detect changes in constructions between two periods in time (Knebelmann, 2022).

The cost element creates a need for this study to investigate the existing relationship between

property tax identification cost and property tax performance. These costs include; survey cost (SC), transportation cost (TC), equipment cost (EQC) and coordination cost (COC) are needed to facilitate property identification. Therefore, the study's objective was to examine the influence of property tax identification cost on property tax performance.

2.1 Theoretical Review: Transaction Cost Economy theory (TCE)

Transaction cost economy theory (TCE) is the foundation of modern economics and is used in the determination of the growth and optimization of the organizational structures that achieves economic efficiency by minimizing the costs of exchange (Coase, 1988). The theory is all about the cost efficiency and economic views of organization as being principally concerned with relative optimization of transaction costs (Williamson, 1985). It is based on the theory of the firm which solely explains that the main objective of the firm is to maximize profit or minimize the costs through efficient allocation of resources. The theory has played an important role in understanding when it is more efficient for a transaction between two parties to occur within the market or within an organization (Shahab et al. 2019). The theory provides the theoretical foundation on why some economic transactions takes place on the market and others within the boundaries of the company and what factors determine the allocation of the transactions between these spheres (Coase, 1986).

The TCE theory seems to be relevant for this study because it based on the idea that economic exchanges come with costs that go beyond the price of the transaction itself. According to Williamson's theory, organization arise when the costs of transacting in the market are higher than the costs of organization within the firm. Implementation of property tax identification requires taxing authority to spend costs for survey (SC), transportation (TC), equipment (EQC) and coordination (COC) respectively. However, the Transaction cost economy theory is criticized as being applied in the era when physical goods and transactions were predominantly physically on economic organization and overlook the impact of technological change (Williamson, 2002).

The currently development in the digital economy has introduced numerous questions on how to manage transactions cost within organizations and the market-based ecosystem (McCluskey et al. 2018). The newly technological development in information and communication technology, many services have shifted from labour intensive delivery to self-service electronic consumptions (McCluskey, 2021; Kyle, 2024). With modern information systems and more particularly to Geographical Information System (GIS) makes easier to manage massive property tax activities like capturing of data, manipulating, storing and communicating to different users (McCluskey and Huang, 2019; Larry et al. 2023). They enable organization to create systems (database) that facilitates many interdependent tasks to be geographically distributed for the benefits of the organization and the individual.

2.2 Empirical Literature Review

Precise property identification simplifies property tax administration by reducing property overlapping and providing better and less costly information to be used in the property tax assessment (UN-Habitat, 2020). The study conducted by Wakara et al. (2020) in Dodoma Municipal Council assessed the implementation of the property tax system. The study used descriptive statistics for data analysis. The study found that property tax system is not effectively

implemented due to; lack of updated property register, lack of property valuation, insufficient staffs for valuation, lack of E- Taxation technology and weak property tax collection machinery. The reviewed literature contributed to the identification of the key property tax performance indicators used as the main study variables. However, the study's weakness was that it did not take into account the cost element on the implementation of property tax system.

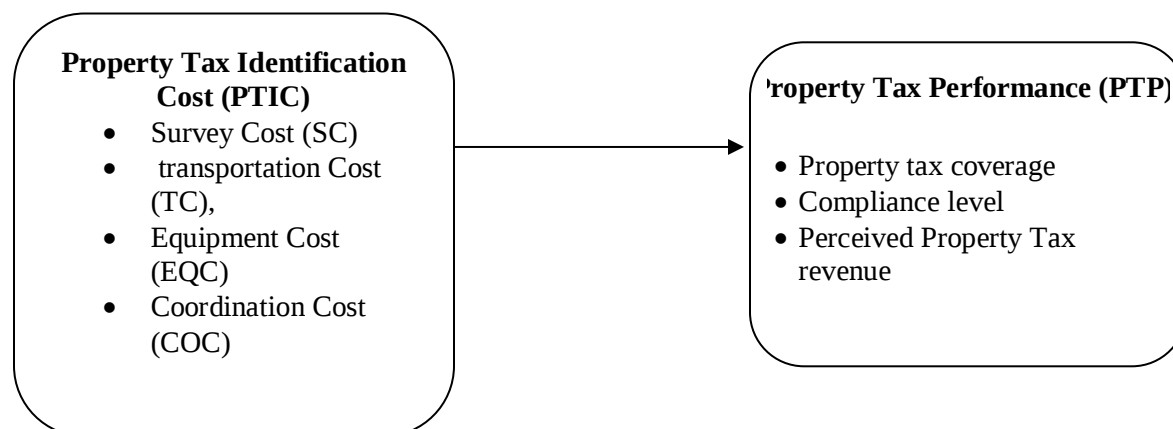
On other hand, Knebelmann, (2022), conducted a study on benefits and challenges of digitalization of property taxation projects in developing countries. The study identified the potential benefits gained by the taxing authorities in the use of property digitalization. The benefits include: facilitating property identification, monitoring data collection in the field, simplifying property tax collection through the use of GIS coordinates mobile devices and a web-based application. The study also identified the challenges face many developing countries in improving their property tax systems that include: incomplete and outdated property tax rolls, limited staff and resources to carry out updates and ambiguity in land rights respectively.

Furthermore, Olha and Kenneth (2021) conducted a study on property tax assessments, collections and revenue performance in economic down-turns in the selected large American cities. The study used secondary sources from the selected cities on property tax indicators to estimate the current property tax performance. A linear regression model was used to extend the estimation of property tax performance indicators to the rest of the cities. The study found that property tax performance in some cities is far below its potential in terms of collection per GDP. The study is considered to be relevant since it enabled the researcher to widen understanding on the key indicators used to estimate the property tax performance. However, the study did not consider the influence of cost on the said indicators on property tax performance.

2.3 Conceptual Framework

A conceptual framework of the study represents a linear relationship between independent variable which is property tax identification cost (PTIC) that consist of: survey cost (SC), transportation cost (TC), equipment cost (EQC) and coordination cost (COC) and property tax performance as dependent variable measured by Property tax coverage (PTC), Compliance level (CL) and Perceived Property Tax revenue (PPTR) respectively.

Figure 1: Conceptual Framework



Source: Synthesized from the literature, 2024

The underlying concept of this study is based on the assumption that Property tax performance has a linear relationship with three cost factors namely; property tax identification cost, property tax assessment cost and property tax enforcement cost. However, this paper focused on the relationship between one cost factor which is property tax identification cost and property tax performance.

2.4 Hypothesis development

The study examined the influence of property tax enforcement cost on property tax performance. The developed hypothesis states that “property tax identification cost positively influences property tax performance”.

3. METHODOLOGY

The study adopted positivism research philosophy. It pre-defined research variables with the help of the theories and context of the study. The study used survey strategy that allows the collection of large amounts of quantitative data from primary sources in a sizeable population with highly economical manner (Kothari, 2023). This study is purely quantitative and it based on scientific principles that are moving from theory to collection of quantitative data. The study also adopted deductive research approach since it enables the researcher to measure the dependent and independent variables simultaneously (Sunder et al., 2019). The deductive research approach facilitates to confirm theories and to test the developed hypotheses.

The study population was 185 district councils from 26 regions in Tanzania mainland represented by one TRA staff per each district. The unit of inquiry was the opinion of the TRA staff dealing with property tax collection. Sample size was determined using the Taro Yomane (1976) formula {i.e. $N/[1 + N(e)^2]$ } Whereby: “N” represents number of local government authorities in Tanzania mainland which is 185, “e” represent a margin error (0.05 or 5%) with 95% confidence interval as cited by Ahuja, (2022).

The Calculation of sample size was: $\{185/[1 + 185(0.05)^2]\} = 126.5 = 127$

Therefore, the study involved a total of 127 respondents that were simple randomly selected from the staff dealing with property tax as a sample size.

The study used structured questionnaires to collect data from the field. The questions were organized on the five-point Likert scales that ranged from (1. Strongly disagree, 2. Disagree, 3. I don't know, 4. Agree and 5. Strongly Agree). Data were analyzed using Statistical Package for Social Science SPSS version 26. The quantitative data analysis method was done to establish the relationship between the variables. The multiple regression analysis (MRA) was used to determine the following: assessing the strength of the relationship between cost factors and property tax performance, to predict the value of property tax performance based on the value of the cost factors, to measure the statistical significance of the variables and for hypotheses testing.

4. RESULTS

4.1 Measure of Reliability

The study used Cronbach's Alpha to check the internal consistency of the instrument used in order to determine if each the data collected produced consistent results . According to (Martin, 2018;

Mathias and Marcel, 2021)) the standard Cronbach's Alpha coefficient of scale should always be above 0.7. The reliability test indicates that all the scales were significant having alpha values above the prescribed threshold of 0.7.

4.2 Model summary results

The study's objective was to examine the influence of property tax identification cost on property tax performance. It was important to measure the quality of prediction of the dependent variable. The multiple regression analysis (MRA) was used to determine correlation coefficient (R) and coefficient of multiple determinations (R-square).

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.720 ^a	.680	.672	.23401

a. Predictors: (Constant), PTIC

b. Dependent Variable: PTP

Source: Field surveys, 2024

The obtained value of correlation coefficient (R) was 0.720 (Table 1) which suggests that a large correlation between variables. This implies that all variables included in the model are the good predictors of the property tax performance. The R-square was 0.680 which suggests that 68% of the property tax performance was explained by property tax identification cost. 32 % of the property tax performance is contributed by other parameters out of the scope of current study.

4.3. Measure of statistical significance of the model

Analysis of variance (ANOVA) (Table 2) was undertaken to determine whether the overall regression model used for the study was a good fit for the collected data at the selected probability level. The data in the ANOVA presented in (Table 2) show that the F-ratio is given by $F(3, 121) = 26.836$, $p < 0.000$. The obtained results indicated that the P-value (0.000) was less than the set significance level (0.05). This suggesting that the regression model is a good fit of the data. This impliedly that property tax identifications cost is statistically significantly predicting the property tax performance.

Table 2. ANOVA: Testing for Statistical Significance of the Model

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	54.449	3	18.150	26.836	.000 ^b
Residual	81.832	121	.676		
Total	136.281	124			

a. Dependent Variable: PTP

b. Predictors: (Constant), PTIC

Source: Field surveys, 2024

4.4 Regression Coefficient Results

The analysis in (Table 3) presents the coefficient for property tax identifications cost which determine the size of the effect on the property tax performance. The results indicates that, property

tax identification cost had a significant effect on the property tax performance (unstandardized coefficient $\beta = 0.064$, Beta = 0.046 and $P > 0.001$). This result supports the alternative hypothesis which stated that property tax identification cost positively influences property tax performance. The results also shown that the VIF for property tax identification cost was 2.864 which is less than 10 while the tolerance value was 0.349 which is greater than 0.1 to conclude that there is no problem of multicollinearity (Martin, 2018).

Table 3. Estimated model coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig. P value	Collinearity Statistics	
	β	Std. Error	Beta			Tolerance	VIF
1	(Constant)	10.319	.591	.541	.590		
	PTIC	.064	.157	.049	.409	.349	2.864

a. Dependent Variable: PTP

Source: Field surveys 2024

The regression ($PTP_i = \beta_0 + \beta_1 PTIC_i$) becomes ($PTP = 10.319 + 0.064$

The results from the analysis Table 3 indicates that the unstandardized coefficient for PTIC is + 0.064, which means that for every unit increase in property tax identification cost, there is an increase in property tax performance by 0.064. ad the variable were statistically significant ($P < 0.05$)

5. DISCUSSION

The objective of the study was to examine the influence of property tax identification cost on property tax performance. The study had two hypotheses, namely; null hypothesis and alternative hypothesis. The null hypothesis states that “*Property tax identification cost has no impact on property tax performance*”. While the alternative hypothesis states that “*Property tax identification cost positively influences property tax performance*”. The result from the analysis directly supported the relationship between property tax identification cost ad property tax performance ($\beta = 0.064$, Beta = 0.046 and $P > 0.001$). These results suggest that, property tax identification cost is an important ingredient in achieving property tax performance.

The results found in this study are consistent with the findings of several other empirical studies. For instance, UN-Habitat, (2020), reported that precise property tax identification enhanced property tax administration by reducing property overlapping and providing better and less costly information to be used in the property tax assessment. Similarly, Martinez, (2020) argued that Property tax identification has an impact on increasing property tax revenue in many municipalities in Colombia. Moreover, Larry, (2023) commented that, property identification exercise through the use of computer assisted mass appraisal once integrated with geographical information system (GIS) and global positioning system (GPS) have significant impact on property tax administration.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study demonstrates that property tax identification cost has positive impact on property tax performance. The results from the analysis indicated that property tax identification cost made significant contribution to the prediction of property tax performance. The findings supported the argument that, property tax identification cost enabled the tax authority to expand the tax base through increasing the number of taxable properties. By increasing the number of taxable properties in the tax base, automatically increases the ability of the taxing authority to achieve the tax objective.

Property identification provides database for estimation of revenue for the taxing authority through offering the property registers which include the number and the location of properties entitled for property tax revenue. Property register includes the physical addresses of property owners, accurate number of properties available within jurisdiction. Thus, it simplifies revenue estimation from property tax and therefore simplifies the exercise of tax collection and hence property tax performance. However, it is important to note that property tax identification costs which include (survey cost, transportation cost, equipment cost and coordination cost) should go hand to hand with other cost factors in order to have an impact on property tax performance.

6.2 Recommendations

The study findings revealed that, property tax identification cost is an important ingredient in achieving property tax performance. This is due to the fact that, property tax performance is dependent much on the ability of the taxing authority to identify all taxable properties within its jurisdiction and ensuring that no property is left out of the tax base. That means in order for the tax authority to achieve its tax objective of raising property tax revenue all landed properties are to be identified and recorded. The more the coverage in property identification process, the more the property tax bases in the property tax register the more revenue from property tax. Hence, the study suggests the following recommendation: -

First, taxing authority should allocate substantial budget for regular updating of the property tax records. Effectiveness of property tax revenues highly relies on the capacity of tax authority to identify existing and newly developed taxable properties.

Secondly, For the purpose of enhancing the property identification capacity, the taxing authority should invest in technological innovation and digitalization system for property tax records through GIS. GIS technology facilitates significantly and more efficiency in property identification. The system integrates all important information regarding the taxpayers like, type of property; size, location, occupancy and usage for each plot which finally strengthening property tax system. Thus, GIS utilization substantially expands and updates property tax records through the use of comprehensive digitized-maps produced from mobile devices, satellite and drones automatically.

REFERENCES

- Ahuja, R (2022). Research Methods. New Delhi, prem Rawt
- Bell, E., Bryman, A., Harley, B, (2022). Business research methods. Oxford University press. United Kingdom.
- Antwi, S., Hamza, K. (2015). "Qualitative and Quantitative Research Paradigms in Business Research: A Philosophical Reflection". European Journal of Business Management. 7 (3): 2222 – 2839.
- Coase, R.H (1986) The nature of the firm . Economica,
- Coase, R.H. (1988). The firm, the market, and the law. Chicago: University of
- David Magor (2019) Can you Modernize and Reform Property Tax in the 21st Century? Publication: International Conference on Assessment and Administration.
- Dobay, N. (2019),The Best (and Worst) of International Property Tax Administration: COST-IPTI Scorecard on the Property Tax Administrative systems of the US States and Selected International Jurisdictions, Council on State Taxation.
- Frost, J. (2017). How to interpret R-squared in regression analysis. Retrieved from <http://statisticsbyjim.com/regression/interpret-rsquared-regression> Accessed.
- Graham, D., Pattison, T. and Owen, R. (2018) 'Satellite image analysis for operational maintenance of a property database for Dakar City'. Washington DC: World Bank Conference on Land and Poverty.
- Grieco, K., A.B. Kamara, N.F. Meriggi, W. Prichard, and G. Stewart-Wilson. (2020). Simplifying Property Tax Administration in Africa: Piloting a Points-Based Valuation in Freetown, Sierra Leone. Summary Brief Number 19. United Kingdom: International Growth Centre.
- ICTD – International Centre for Tax and Development (2021) 'Effective property valuation for tax purposes: balancing precision and equity'. Webinar, 24 March (<https://www.ictd.ac/event/effectiveproperty-valuation-tax-precision-equity/>).
- Knebelmann, J. (2022). Digitilisation of property taxation in developing countries: Recent advances and remaining challenges. ODI Report. London: ODI (www.odi.org/publications/digitilisation-of-property-taxation-recent-advances-and-remaining-challenges)
- Knebelmann, J. and Pouliquen, V. (2021) 'Strengthening property valuation for taxation in Dakar, Senegal'. Blog. International Centre for Tax and Development (<https://www.ictd.ac/blog/propertytax-valuation-reform-dakar/>).
- Knebelmann, J., Pouliquen, V. and Sarr, B. (2021) 'Developing and adopting new digital tools for property tax reform in Dakar, Senegal'. Blog. International Centre for Tax and Development (<https://www.ictd.ac/blog/developing-adopting-digital-tools-property-tax-reform-dakar-senegal/>).
- Klees, J. S. (2016). Inferences from regression analysis: Are they valid? University of Maryland, USA.
- Kolosemi, J (2017). Research methods and Approaches. Oxford University Press.
- Kothari, C.R. (2023). Research Methodology: Methods & Techniques (Second Revised Edition ed.) New Age International Publishers Limited. New York,
- Kyle Wikstrom (2024) Using GIS to share Property tax information and increase transparency in assessment. Publisher- GIS Technology Conference, 2024
- Larry Brotman, Wendy Semmler, David Salzar (2023); GIS for property tax Oversight and

-
- administration. GIS Technology 2023.
- Lauren Voelker (2023) Beyond the Map: GIS improving Assessments Operations. Publication: GIS Technology Conference, 2022.
- Lauren Voelker (2024) GIS for Assessment Professionals. Assessments Operations. Publisher: GIS Technology Conference, 2024
- McCluskey, W. (2021) 'Using ICT in property discovery, valuation and tax administration'.
- McCluskey, W. and Huang, C.-Y. (2019) 'The role of ICT in property tax administration: lessons from Tanzania'. Brief 2019:06. Bergen: Chr. Michelsen Institute.
- McCluskey, W.J., R. Franzsen, M. Kabinga, and C. Kasese. (2018). The Role of Information Communication Technology to Enhance Property Tax Revenue in Africa: A Tale of Four Cities in Three Countries. ICTD Working Paper 88, International Centre for Tax and Development.
- McCluskey, W. J., R. Bahl, and R. Franzsen, eds. (2022). Property Tax in Asia: Policy and Practice. Cambridge, Massachusetts: Lincoln Institute of Land Policy.
- McCluskey W.J, Roy Bahl and Riel, C.D Franzsen (2022) Strengthening Property taxation within Developing Countries. Journal of Asian and African Studies.
- Martinez, L. (2020) 'Sources of revenue and government performance: evidence from Colombia'.
- Mathias Borgsted and Marcel Scholz (2021) Quantitative and Qualitative approaches to Generalization and Replication. A representationalist view.
- Martin, K. G. (2018). Interpreting Regression Coefficients. The Analysis Factor. Retrieved from <https://www.theanalysisfactor.com/interpretingregression-coefficients/> Accessed on 13 June 2018.
- Nathans, L., Oswald, F. L., & Nimon, K. (2012). Interpreting multiple linear regressions: A guidebook of variable importance. Practical Assessment, Research & Evaluation, 17(9).
- Olha Krupa, Kenneth A, (2021) Property tax Assessments, Collections and Revenue performance in economic down-turns: An examination of large American Cities, Journal of Property Tax Assessment and Administration.
- OECD (2021), A Review of Local Government Finance in Israel: Reforming the Arnona System, OECD Multi-level Governance Studies, OECD Publishing, Paris,
- Osborne, J., & Waters, E. (2002). Four assumptions of multiple regressions that researchers should always test. Practical Assessment, Research & Evaluation, 8(2).
- Prichard, W. and Fish, P. (2017) 'Strengthening IT systems for property tax reform'. Summary Brief 11. London: ICTD.
- Prichard, W., Custers, A.L., Dom, R., Davenport, S. and Roscitt, M. (2019) 'Innovations in tax compliance: conceptual framework'. Policy Research Working Paper 9032. Washington DC: World Bank.
- Rahman, S (2017). "The advantages and Disadvantages of using Qualitative and Quantitative Approaches and Methods in Language Testing and Assessment research. A literature Review" Journal of Education and Learning 6(1): 102-112.
- Razali, N & Wah (2011) "Power Comparison of Shapiro – Wilk, Kolmogorov- smirnor, Lilliefer and Anderson – Darling tests" Journal of statistical Modeling and Analytical, 2 (1): 21-33
- Radvan, M., R. Franzsen, W.J. McCluskey, R. and Plimmer. 2021. Real Property Taxes and Property Markets in CEE Countries and Central Asia. Maribor: Lex Localis.
-

-
- Sands Stiefer Esq (2021) Recent Development in Real Property taxation: Substantive publication, IAAO Annual legal Seminar.
- Saunders, M. N. K., Lewis, P. & Thornhill, A. (2019). Research Methods for Business Students. (8th Edition), Pearson, New York.
- Sileyew, K. J. (2019). Research Design and Methodology. Intechopen.
- Seva, U. L., Ferrando, P.J., and Chico, E. (2017). Two SPSS program for interpreting multiple regression results. Behaviour Research Methods 42 (1)29–35. Springer, Retrieved from <https://link.springer.com/article/10.3758/BRM.42.1.2> 9 15 June 2018.
- Shahab, S., Clinch J.P., O`neill E., (2019). An analysis of the Factors Influencing Transaction Costs in Transferable Development Rights Programmes. "Ecological Economics 156:409-19. Crossref.
- Shahab, Sina (2022). Transaction Costs in Planning literature. A systematic Review. Journal of Planning literature, Volume 37, Issue 3 August, 2022.
- Shieh, G. (2010). On the misconception of multicollinearity in detection of moderating effects: Multicollinearity is not always detrimental. Multivariate Behavioral Research, 45, 483 507. doi: 10.1080/00273171.2010.483393
- Stevens, J. P. (2009). Applied multivariate statistics for the social sciences (5th Ed.). New York, NY: Routledge.
- Tabachnick, B.G & Fidell, L.S. (2007), Using Multivariate Statistics (5th ed.) New York: Allyn and Bacon.
- Taro Yomane (1976) Statistics: An Introductory Analysis, 2nd Edn. New York, NY: Harper and Row.
- UN-HABITAT (2016) Land and Property Tax, United Nation Human Settlement Programms, Nairobi UN Habitat (2016), Property tax regimes in Europe, UN Habitat.
- UNU-WIDER (2020) United Nations University, World Institute for Development Economics Research, Government Revenue Dataset
- URT (1982). The Local Government Finances Act, 1982. Dar es Salaam: Government Printer
- URT (1993). Urban Authority (Rating) Act 1983 Law No 2 of 1983.
- URT, *Local Government (Urban Authorities) Act No. 7, 1982* Dar es Salaam: Government Printer
- Wakara Ibrahim, N Damas Okoth, and Hussein Ngomaikra (2020) Assessment on Effective Implmentation of Property Tax System in Tanzania. The case of Dododma Municipal Council, Journal of Asian and African Studies.
- Walters L.C. and W.J. Cornia, eds. (2020). A Primer on Property Tax: Administration and Policy. Wiley-Blackwell (pp. 41–68). Page 15 of 16
- Wilson Prichard, Colette Nyirakamana and Graeme Stewart Wilson (2022). The Progress, Problem and Potential of Property Taxazation in Sub-Saharan Africa. A Review of the literature.
- William E Banfield (2019) Recent developments in Real Property taxation: Substantive Publication: IAAO, Annual legal Seminar
- Williamson, O. 1985. The economic institutions of capitalism: Firms, markets, relational contracting. New York: Free Press.
- Williamson, O. 1994. Transaction cost economics and organization theory. In N. Smelser & R. Swedberg (Eds.), Handbook of Economic Sociology: 77-107. Princeton, NJ: Princeton University Press.
- Williamson, O. 2002. The theory of the firm as governance structure: from choice of contract.
-

Journal of Economic Perspectives, 16 (3): 171-195.

Zalaghi, H and Khazaeni, M (2016) Role of Deductive and Inductive Reasoning in Accounting Research and Standard setting. "Asian Journal of Finance and Accounting