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## FACTORS AFFECTING THE GAP IN TAX RECEIVABLE REVENUES

*Omid Hajati*<sup>1\*</sup>, *Hassan Farazmand*<sup>2</sup>, *Seyed Morteza Afghah*<sup>2</sup>, *Seyed Aziz Arman*<sup>3</sup>

<sup>1</sup>Ph.D Student, Faculty of Economics and Social Sciences, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

<sup>2</sup>Associate Professor, Department of Economics, Faculty of Economics and Social Sciences, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

<sup>3</sup> Professor, Department of Economics, Faculty of Economics and Social Sciences, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

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### ABSTRACT

The present study aimed to investigate factors affecting the tax gap from an economic, social, political and organizational perspective in Khuzestan province. To this end, the theoretical foundations and empirical studies were used to estimate the tax capacity model, according to which the tax gap model was developed using a variety of variables, including tax rate and inflation (economic factors), Gini coefficient (social factor), political stability (political factor), and tax audit (organizational factor). The estimation results of the tax capacity model revealed that the tax effort exhibits no stable trend, and that the tax received by the Tax Affairs Organization presents uncertain and fluctuating behaviors. Moreover, the estimation results of the tax gap model suggested that the tax gap decreased with increasing audit capability in the Tax Affairs Organization. Furthermore, enhanced inflation also increased the tax gap, and the tax gap decreases with increasing political stability. However, despite compliance with theoretical principles, the relationship between the Gini coefficient and the tax gap was not significant at  $p=0.05$ . Accordingly, income inequality in the province is not expected to affect the tax gap. According to the findings, the relationship between the tax rate and the tax gap was positive and significant; hence, the tax gap in the province is expected to raise with an increase in the tax rate.

**JEL classification:** H27, H21 H26, H71

### INTRODUCTION

Rising costs are imposed on the government to perform its classic tasks, including economic security, price stability, job creation, and equitable income distribution; hence, it requires secure and sustainable financial resources. Funding is usually provided via taxes, the sale of natural resources, the sale of assets, borrowing from the central bank or the society. In countries

exporting natural resources, including Iran, revenues from the export of oil and its products account for the largest share of non-tax revenues, and tax revenues play the secondary role in financing government budgets (Ayodele Aknabi, 2019). This has aroused economic instability and uncertainty about government revenues. Accordingly, one of the strategic goals of the government has been to reduce the dependence of the budget on oil revenues, increase the share of tax revenues, and modify the tax system in Iran (Laws of Iran's five-year economic and social development plans). This is because tax revenues fluctuate relatively less than the global factors as they rely on the real production of the country. Moreover, this makes the government more accountable to the public's demands (Musgrave, 1987), thereby playing a critical role in regulating wealth and income, improving social and economic justice, and preventing income inequalities (Goss et al., 1997). Many developing countries often compensate for budget deficits by reducing public expenditures, especially on health, education, and infrastructure, during financial hardship. Given that a decrease in the government's expenditures, especially in health and education sectors, would have irreversible consequences on the economic and social development of the country, effective measures should be adopted to increase the approved tax revenues. One of the main strategies in this regard is to reduce the gap, which is posed by several factors, including inflation, income inequality, political instability, corruption, tax assessment process (auditing), hidden economy, tax avoidance, and tax evasion. Some of the factors can be examined in terms of value creation and agency theory. Value creation considers the fact that managers spare their efforts to reduce taxes to decrease their financial obligations and save cash, thereby increasing the profits of economic activities and encouraging and receiving rewards (Pourheidari et al., 2013). In some cases, such behaviors provide the grounds for corruption and abuse of agency. Similarly, Desai and Dharmapala (2009) show that managers, under the pretext that tax cuts benefits shareholders, avoid paying taxes in various ways; however, they divert resources to their personal interests and hide them in the financial statements. Tax evasion is another factor enhancing tax gap. In this regard, the taxpayer does not send the taxable income from a job or a capital and illegally avoids paying the tax by doing so. A taxpayer sometimes makes attempts to avoid taxes within the framework of tax laws and is not considered with the possible discovery of his action by the Tax Affairs Organization. In other words, tax evasion occurs (Didar et al., 2014). Some studies have researched the relationship between tax rates and hidden economies. According to Nigels et al. (1999), high tax rates promotes the incentives to engage in informal activities and tax evasion, resulting in a tax gap. In other words, the tax gap is the difference between what should be received according to the tax laws with the received tax, the tax not paid on due time, and tax evasion.

Considering that the ratio of tax revenues is much smaller in developing countries (about one-third) than in developed countries (Gordon & Le, 2009), and given that developing countries need more public services in infrastructure sectors, including investment, education, health, and welfare, in-depth studies should be conducted to increase tax revenues. Now, the question is how to decrease the tax gaps. What factors are effective in decreasing the tax gap? to what extent do the factors affect the tax gap? The

present study aimed to detect factors affecting the tax gap from an economic, social, political and organizational perspective within the framework of regional (provincial) studies.

The paper is outlined as follows. Section 2 addresses the theoretical foundations of the research, and empirical studies are presented in Section 3. In Section 4, the research method, the specifications of the model, and the estimation results are included. The findings of the study are discussed in Section 5.

## **THEORETICAL FOUNDATIONS OF THE TAX GAP**

From a theoretical perspective, taxes are classified and investigated as direct and indirect taxes. Direct taxes include property and wealth taxes, corporate taxes, and income taxes, each of which has some sub-branches (Musgrave & Musgrave, 1993). In classifying taxes, value-added tax (VAT) is considered as a type of indirect tax on the domestic consumption and sale of goods and services, which is multi-stage and emerges as value-added in each of the stages from production, completion, to final consumption. In this regard, VAT is a multi-stage sales tax targeting the final purchaser or consumer of goods and services (Pazhouian, 2005). Two main views exist to explain tax behaviors in a country. The conventional neoclassical view seeks to explain tax evasion in society regarding the conventional economics principle (i.e. maximizing expected profits and individual rationality). Another view interprets the assumptions adopted by neoclassicists in incomplete and weak modeling and is to add non-economic factors (e.g., the role of informal institutions) to models (Becker, 1968). To this end, in the public finance literature, tax ratios are first defined with regard to the national/regional GDP tax base. Its behavior is then exploited based on economic patterns to determine tax capacity and tax gap (International Monetary Fund, IMF, 1984). From a theoretical perspective, although tax capacity is defined in accordance with the approved laws, tax capacity in empirical studies is defined based on this ratio, according to which the tax gap is estimated (Alfirman, 2012). In other words, the tax gap reflects the difference between actual tax revenue (performance) and potential tax revenue. Their gap has been considered as the inefficiency of the tax system as the government would experience declining tax revenues. Accordingly, it needs to be determined what factors affect the tax gap and how effective they are. Yitzhaki (1974) believes that increasing tax rate makes individuals not report their income correctly and decreases their willingness to pay taxes, thus enhancing the tax gap. This occurs when the penalty set for the non-payment of tax does not increase proportional to the imposed tax rate. Otherwise, the substitution effect is lost, and the income effect only remains. According to O'Higgins (1985), inflation can increase actual tax rates and thereby promote operations in the informal economy. If the government imposes high tax rates, and the organization has no capacity and conditions to afford the approved tax, the tax gap is enhanced. Otherwise, as the tax rate increases, individuals may move to the informal economy faster or slower. The rate of inflation is another factor, which may create and increase the tax gap. The same claim is also made by Fishburn (1981). He argues that if individuals' nominal incomes have no variation, inflation will reduce their

current and future actual incomes. Assuming no monetary illusion, taxpayers try to compensate for it by not paying taxes. He documented that if individuals are relatively risk averse, the rate of tax evasion and the tax gap along with the general level of prices will increase. Confirming this relationship, Panades and Caballe (2004) indicated that inflation caused by the government's money printing arouses the tendency to not pay taxes and thus increases the tax gap.

To sum up, the extent of tax evasion, tax avoidance, and tax gaps vary from country to country because of different economic, political, social, and organizational factors. Assuming that other conditions remain the same, Brooks (2001) notes that the hidden economy and the tax gap increase as tax laws and regulations become more complicated. The complexity of the laws not only decreases individuals' freedom and authority to participate in the formal economy but also provides tax evaders with the grounds for eisegesis. Moreover, labor market regulations generate some trade barriers and restrictions on foreign workers and affect the volume of the underground economy. In this case, simplifying laws facilitates taxpayers' understanding and has a significant impact on reducing tax avoidance; hence, it promotes the effectiveness and efficiency of the tax system and reduces the tax gap. In their study, Johnson et al. (1997) documented that countries with more regulations have larger informal economies, in comparison to their total GDP. Similarly, Giles (1997) introduced the inefficiency of the tax system and the inadequacy of the legal system and structure as the main factors leading to individuals' late payments and highlighted the significance of organizing the tax system to deal with tax complaints and objections, legal prosecutions, and collection of unpaid taxes. Richardson (2006) confirmed this issue. In study by Johansson et al. (1997) on how economic activity moves toward the hidden economy, the same issue was documented. According to liberal economists, a regulatory system possessing an extensive licensing system promotes corruption. To reduce corruption, taxable revenues should be explicitly defined, and digital tools should be employed to control and decrease the tax gap (Alm & Martinez-Vazquez, 2001).

Another main issue to address the tax gap is agency in economic activities. The theory of power proposed by Salamon et al. (1977) suggests that companies having superior political and economic relations, compared to other companies, use their political power to manage their taxes and pay their tax in part. According to Chen et al. (2010), politically-motivated companies provide low-quality accounting information because of the market's poor control over the quality and transparency of financial information. Kim and Zhang (2005) confirmed this issue, and added that political communication affects the managers' motivation to present accurate financial reporting; hence, it can be one of the main factors in increasing the tax gap. Regarding factors such as low costs of non-compliance with tax laws and regulations, an advantage in information about tax and executive laws, and low market demand for transparency of their accounting information, these companies are more likely not to express their taxes properly and thus increase the government's tax gap. Wang (2010) also believes that agency in economic activities is one of the factors leading to tax evasion. According to him, tax evasion may be motivated by a diversion of benefits to managers or by a change in the distance between the provision of shareholders' benefits

and withdrawal by managers. Given the significance of agency, Graham and Tucker (2006), Wilson (2009), and Lim (2011) conducted studies on the role of companies' tax behaviors in increasing the tax gap. They found out that tax evasion required concealing or complicating the transaction and reduced the transparency of taxpayers' financial reports (Neck et al., 2012). According to Chen et al. (2009), the higher the tax avoidance is, the greater the ambiguity of economic actors' transactions is. Giles (1998) regards the tax gap and how it can be changed as an appropriate way to detect informal and illegal activities. To sum up, economic, social, political and organizational factors affect the tax gap and should be considered.

### **EMPIRICAL STUDIES ON TAX CAPACITY AND GAP**

Given that the tax gap is estimated based on the data from tax capacity estimates, both experimental studies are presented in this section. Castalls et al. (2001) studies tax capacity and revealed that reduced tax capacity decreases the government's general expenditure and increases debt levels. As Horacio (2004) mentioned, moving towards more financial responsibilities at lower levels of central government (decentralization) is of essence to maximize the government's funding. Determining tax capacity, he suggested that tax decentralization would lead to reliable results. In their study, Le et al. (2008) concluded that countries with higher income levels, lower population growth rates, more open trade, less value-added in the agricultural sector, and better institutions would collect more tax revenues. Fanuccito and Pisino (2010) adopted per capita income as a level of development along with inflation and income distribution in estimating their model. Alfierman (2003) also considered tax ratio, agricultural sector's share, participation rate, labor force, and virtual variables for provinces to estimate potential tax borders and concluded that government's administrative incompetence, lack of modern technologies and equipment, and the lack of human resources were the main factors affecting the tax gap. In her research entitled "Tax performance: A comparative study", Tira (2004) was to analyze tax performance by using Masgrave's (1969) random method. Considering variables such as the tax-to-GDP ratio, GDP per capita, export ratio, imports, agriculture, industry, debts, and aid-to-GDP ratio, population density, the shadow variable of tax evasion, and money supply, she concluded that high-income countries use their tax capacity more than low-income countries and have a smaller tax gap. Watson and Sookram (2005) estimated the underground economy using Tanzi's monetary model and noticed that per capita income, imports, foreign debt, unemployment, and inflation affect tax evasion in the long run. Le et al. (2008) researched the expansion of the income potential of desert countries and observed that tax reforms were of essence to increase additional income. Examining the government's tax efforts, Abdul Jalil (2011) revealed that more developed countries make more tax efforts than less developed countries. Neck et al. (2012) investigated the impact of legal capacity on tax avoidance (in the labor market) and the expansion of the shadow economy (underground economy) and specified the relationship between the complexity of the tax system and how it affects the expansion of the underground economy. Alfierman (2012) considered government's administrative incompetence, lack of modern technologies and equipment,

and the lack of human resources as the main factors affecting the tax gap. Le et al. (2012) empirically examined the tax effort of countries in a sample of 110 developed and developing countries and found out that countries with higher incomes, lower population growth rates, more open trade, lower value-added share of the agricultural sector in the economy, more qualified institutions could collect more tax revenues and had a smaller tax gap. Considering the developed countries, they concluded that tax capacity and the tax gap should be examined with regard to institutional factors. In another study, Fenochietto and Pessino (2013) investigated the tax efforts of countries by considering factors such as the extent of development (per capita income), literacy rate, inflation, income distribution (Gini coefficient), corruption, and the ease of tax collection. Feger and Edgie (2014) studied the impact of non-economic factors, especially historical events such as colonialism in sub-Sahara Africa (SSA) on tax efforts. Parfenova et al. (2016) investigated the regional tax capacity. Kwaku Amoh (2019) also researched the tax capacity and tax effort to decreased the tax gap and revealed that the efficiency of the Tax Affairs Organization in establishing tax justice is of significance in a developing country. They also claimed that reforming tax and audit laws and having a rapid review of the tax status play a critical role in the economic development of a country.

#### **DATA, RESEARCH METHODS, AND MODEL EXPLANATION**

In this section, tax effort is first defined using the tax ratio. Then the ratio of tax in Khuzestan province to that of the OPEC member countries is presented. After having an introduction on the tax ratios in Section 4.1, the econometric models of tax ratios, tax capacity, tax effort, and tax effort are described using theoretical analysis and empirical studies. The researchers in this study extracted data about tax from the Tax Affairs Organization, rates of inflation and income inequality (Gini coefficient) from the Statistics Center of Iran, economic stability from the World Bank's website, tax audit from the Tax Affairs Organization in Khuzestan Province from 2000 to 2014. In Section 4.2, the tax capacity and tax efforts are estimated by the Ordinary Least Squares (OLS) method using EViews software version 9. Finally, the tax gap model is estimated in Section 4.3.

#### **Tax effort and tax capacity**

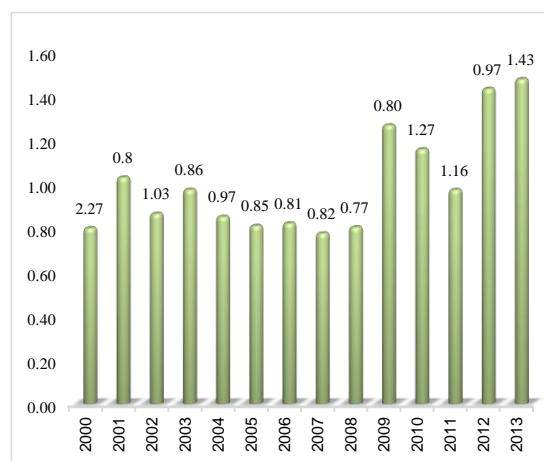
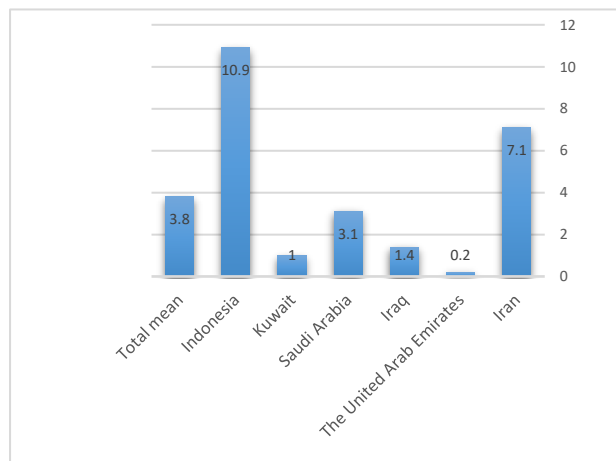
In empirical and applied studies, tax effort is defined as follows:

$$(1) TE_i = \frac{T_i^a / GDP_i}{T_i^p / GDP_i}$$

where,  $TE_i$  is tax effort,  $T_i^a$  is tax received,  $T_i^p$  is potential tax or tax capacity,  $GDP_i$  is GDP, and  $i$  reflects different types of tax bases. The numerator and denominator reflect the tax ratio in different sectors, and their ratio represents the tax effort. The closer the tax effort is to number one, the closer the tax revenue is to the tax capacity and the smaller the tax gap will be. To determine the tax effort, the tax ratio and the tax capacity are presented and estimated in Section 4.2.

First, the tax ratio is discussed. The tax ratio of Khuzestan province reveals that the tax ratio has upward fluctuations during the concerned period;

however, the ratio does not exceed 2.27% of GDP in Khuzestan province (Figure 1-a). The ratio of Iran's tax to other OPEC oil member countries' reveals the better tax rate of Iran (Figure 2-a).



(Iran, The United Arab Emirates, Iraq, Saudi Arabia, Kuwait, Indonesia, Total mean)

**Figure 1-a. Tax to GDP ratio in Khuzestan province member countries**

**Figure 2-a. Average tax ratio of OPEC**

Source: Research findings: <https://databank.worldbank.org>

**Explaining and estimating tax capacity**

To determine the impact of factors affecting the tax gap in Khuzestan province, the tax ratio is first explained. To this end, using theoretical and experimental studies, the following general model is presented:

$$T/GDP_t = f(Manu_t, Serv_t, Mgdpt) \quad (2)$$

where,  $T/GDP_t$  is the ratio of tax revenues (Kwaku Amoh, 2019),  $Manu_t$  is the share of value-added in industry,  $Serv_t$  is the share of value-added in the service sector (Parfenova et al., 2016), and  $gdp_t$  is the per capita income of the province as a welfare indicator (Fenochietto and Pessino, 2013). Moreover, t represents time. The estimation results of the linear tax capacity model using the OLS method are as follows:

Variables	coefficient	sd	t-statistic	p-value
$Serv_t$	0.00724	0.002995	2.41736227	0.0015
$RIManu_t$	0.01724	0.008127	2.12132398	0.0348
$Mgdpt$	0.070351	0.039645	1.774538	0.0801
$C$	-0.11920	0.228614	-0.521420	0.2502
			DW=1.98	$R^2 = 0.91$

**Table 1- Estimation of tax capacity**

As shown in Table (1), the value-added coefficients of the service and industry sectors are positive and significant at  $p=0.05$ ; hence, the tax revenue ratio is expected to increase as the value-added of key sectors of the province increases. Moreover, per capita income has a positive and significant relationship with the ratio of tax revenues in the province at  $p=0.05$ . Accordingly, the ratio of tax revenues in the province is expected to increase with an increase in the welfare level. The coefficient  $R^2$  suggests that the included explanatory variables have acceptable explanatory power and account for more than 91% of the tax capacity in the province. Durbin-Watson statistic revealed no serial correlation between model error statements; hence, it can be used to estimate tax capacity, tax effort, and tax gap. Table (2) presents the results of this study:

**Table 2. Estimation of tax capacity of Khuzestan province (million Rials)**

Year	Tax capacity	Received tax	Tax effort (%)	Tax gap
2001	1,370,499	1,004,194	73	366,305
2002	2,069,656	1,226,726	59	842,930
2003	2,344,731	1,578,549	67	766,182
2004	3,308,243	1,933,173	58	1,375,070
2005	4,547,091	2,466,871	54	2,080,220
2006	5,503,393	3,013,827	55	2,489,566
2007	7,303,399	3,749,927	51	3,553,472
2008	7,687,713	4,171,791	54	3,515,922
2009	6,626,135	5,839,671	88	786,464
2010	9,036,163	7,122,149	79	1,914,014
2011	12,448,611	8,156,024	66	4,292,587
2012	11,346,092	11,055,315	97	290,777
2013	16,533,204	15,813,965	96	719,239
2014	27,196,687	25,269,290	93	1,927,397
Mean	8,380,115	6,600,105	71	1,780,010

Source: Research findings

### Explaining and estimating tax gap

As observed in Section 4.2, the time series of tax capacity data and tax gap is estimated by estimating the tax ratio model parameters. In this section, the tax gap model is examined regarding the data in Table (2). First, the general model of the tax gap is presented according to the theoretical foundations and empirical studies:

$$TG = f(Tr, Inf, Pi, Gini, Ta) \quad (3)$$



where,  $TG$  is tax gap,  $Tr$  is tax rate,  $Inf$  is inflation,  $Pi$  is political stability,  $Ta$  is tax audit, and  $Gini$  is Gini coefficient (income inequality index). These factors are considered as factors determining economic, social, political, and organizational effects.

**Table 3. Estimation of factors affecting tax gap**

Variable	coefficient	sd	t-statistic	p-value
<i>INF</i>	0.014357	0.006695	2.1444	0.0441
<i>Ta</i>	-0.022098	0.008891	-2.4854	0.0003
<i>TR</i>	0.081932	0.035025	2.3392	0.0403
<i>Gini</i>	3.247831	2.97521	1.0916	0.6201
<i>Pi</i>	-0.210682	0.053311	-3.9519	0.000
<i>C</i>	-0.493278	0.658543	-0.7490	0.9104
		DW=2.02	F=76.62	$R^2 = 0.98$

Source: Research findings

As it is show, the coefficients of the explanatory variables (namely inflation, tax audit, tax rate, and political stability) are in line with theory and are significant at  $p=0.05$ . Moreover, the model estimated at  $p=0.05$  does not reject the F-statistic, and the error term has no first-order autocorrelation. This model could explain > 98% of the tax gap in Khuzestan province.

## CONCLUSION

The present study aimed to investigate the impact of economic, social, political and organizational factors on the tax gap in Khuzestan province during 2000-2014. First, the tax capacity model was presented using theoretical foundations and empirical studies. Second, the tax gap model was defined using the explanatory variables, including tax rate, inflation (economic factor), Gini coefficient (social factor), political stability (political factor), and tax audit (organizational factor), as the main variables affecting the tax gap. The estimation results of the tax capacity model revealed the fluctuating behavior of the tax effort (Table 3). Although the Tax Affairs Organization has exhibited an upward trend in attracting tax resources during the concerned period, it has revealed uncertain and fluctuating behaviors as well. According to the research findings, the relationship between inflation, tax audit, tax rate, and political stability with the tax gap are in line with theory. Accordingly, the tax gap is expected to be decreased by increasing the audit capacity of the Tax Affairs Organization. Furthermore, an increase in inflation increases the tax gap. This relationship is also consistent with theoretical foundations and empirical studies. Regarding the estimates, the tax gap is decreased as the political stability increases. Given that political stability encompasses the components of managerial stability and social stability, the tax gap is expected to be decreased with an increase in managerial stability, thereby enhancing the government's tax revenues. Further, the relationship between the Gini coefficient and the tax gap was as expected; however, it was not significant at  $p=0.05$ ; hence, income inequality is not expected to affect the tax gap in Khuzestan province. Moreover, the relationship between the tax rate and the positive tax gap was also significant

at  $p=0.05$ . In this regard, the tax gap is expected to increase as the tax rate increases.

## REFERENCES

- Bord, A., & Neko Amal Kermani, M. (2017). VAT gap in Iran from 2009 to 2015. *Tax Research Journal*, 35, pp. 58-38.
- Pazhouian, J. (2005), *Public Sector Economics (Taxes)*, Noor-e- Elm Pub., Tarbiat Modares University, Economics Research Institute, Third Edition.
- Pourheidari, O. & Shafiei Hemmatabad, H. (2013). The Impact of changing companies' tax rates on profit management: A case study on the amendment to the tax law 2001. *Bi-Quarterly Journal of Applied Research in Financial Reporting*, 2(2), pp. 25-44.
- Didar, H., Mansourfar, Gh., & Kaf'ami, M. (2014). The Impact of corporate governance mechanisms on tax gap in companies listed on the Tehran Stock Exchange, *Quarterly Journal of Accounting and Auditing Reviews*, 21 (4), pp. 409-430.
- Souri, A. (2015). *Econometrics (Advanced)*, Volume 2, with the application of EViews and Stata. Cultural Studies Pub. 3rd ed.
- Farazmand, H. & Baharvand Ahmadi, E. (2008). Factors affecting the tax capacity of Lorestan Province, An MA Thesis.
- Musgrave, R. A. & Musgrave, P. B. (1993). *Public Finance in Theory and Practice*, Translated by M. Ahmadi, Y. Ebrahimifar, Program and Budget Organization's Pub., Center for Socio-Economic Evidence and Publications.
- Abdul Jalil, A.Z. (2011). "Land-based Tax Capacity And Tax Effort Of The State Governments in Peninsular Malaysia: A Representative Revenue System (RRS) Approach", *e-BANGI: Journal Of Social Sciences and Humanities*, 6 (2), 206-219.
- Alfirman, L. (2012). "Estimate of stochastic frontier tax potential: can Indonesian local government increase tax revenues under decentralization?", working paper no. 02-19.
- Alm, J. & Martinez-Vazquez, J. (2001). "Institutions, Paradigms and Tax Evasion in Developing and Transition Countries". Paper Presented in *Public Finance in Developing and Transition Countries: A Conference in Honor of Richard Bird*, Georgia State University.
- Ayodele Aknabi, O. (2019). "State Institutions and Tax Capacity: An Empirical Investigation of Causality, IMF Working paper, wp/19/177.
- Becker, G. S (1968), "Crime and Punishment: An Econometric Approach", *Journal Political Economy*, Vol. 76, 169-27.
- Chen, Y. , Huang, SH. , Pereira, R. and Wang, J (2009). "Corporate Tax Avoidance and firm opacity". Discussion Paper.
- Desai, M.A., Dharmapala, D. (2009). "Corporate Tax avoidance and Firm Value". *Review of Economics and Statistics*, Vol. 91, 537–546.
- Fenochietto, R. and Pessino, C. (2013). "Understanding Countries' Tax Effort". IMF Working Paper, wp/ 13/244.
- Fishburn, G. (1981). "Taxevasion and inflation". *Australian Economic Papers*, 20(37), 325–332.

- Giles, D. (1997). "The Hidden Economy and Tax Evasion Prosecutions in New Zealand". *Applied Economics Letters*, Taylor and Francis Journals, 4(5), 281- 285.
- Giles, D., Werkneh, G.T., and Johanson, B.J. (1998). "Asymmetric Responses of the Underground Economy to Tax Change". (Iss 1485-6441). *Econometrics Working Paper*. EWP9911.
- Gordon, R., & Li, W. (2009). "Tax Structures in Developing Countries: Many Puzzles and a Possible Explanation", *Journal of Public Economics*, 93(7-8), 855-866.
- Guess, G. Loehr, W. and Vazques, M. (1997). "Fiscal Decentralization: A Methodology for Case Studies". CARE 2 Discussion Paper, No3.
- Horacio, S. (2004). "Tax Effort and Tax Potential of State Governments in Mexico: A Representative Tax System". Working Paper. No. 315.
- IMF. (1984). "On Measure of a Tax System, Tax Effort as in Developing Countries", *Staff Papers*, 12-56.
- Johnson, S., Kaufmann, D., & Shleifer, A. (1997). "The Unofficial Economy in Transition". *Brooking Papers on Economic Activity*, 2(3), 159-221.
- Kaplow, L. & Shavell, S. (2002). "Fairness Versus Welfare: Notes on the Pareto Principle, Preferences, and Distributive Justice". *The Journal of Legal Studies*, 32(1), 331- 362.
- Kim, B., Jung. K., and Kim, I. (2005). "Internal Funds Allocation and the Ownership Structure: Evidence from Korean Business Groups". *Rev Quant Finance Acc Vol.* 25, 33-53.
- Kwaku Amoh, J. (2019). "Burden of an Emerging Economy: Evidence from Ghana". *International Journal of Economics and Financial Issues*, 9(3), 12-21.
- Le, Tuna Minh. Moreno-Dodson, Blanca. Bayraktar, Nihal. ( 2012 ). "Tax Capacity and Tax Effort". *Extended Cross-Country Analysis from 1994 to 2009*, Word Bank
- Le, T. M., Blanca, Mo-D. and Jeep R. (2008). "Expanding Taxable Capacity and Reaching Revenue Potential: Cross-Country Analysis". *The World Bank, Poverty Reduction and Economic Management Network, Policy research working paper 4559*: 1-36.
- Le, T. M. & Blanca Mo-D and Nihal, B. (2016). "Tax Capacity and Tax Effort: Extended Cross-Country Analysis from 1994 to 2009". *World Bank*.
- Lim, Y.D. (2011). "Tax Avoidance, Cost of Debt and Shareholder Activism: Evidence from Korea". *Journal of Banking and Finance*, 456-470.
- Musgrave, R. (1987). "Tax Reform in Developing Countries". Chapter 9 of *The Theory of Taxation for Developing Countries*. David Newbery and Nicholas Stern (Eds.). Washington, DC: The World Bank Group.
- Neck, R. & Schneide, F. (2012). "Tax Avoidance Versus Tax Evasion: on some Determinants of Shadow Economy". *International Tax Public Finance*.
- O'Higgins, M. (1985). "The Relationship Between the Formal and Hidden Economies: An Exploratory Analysis for Four Countries". *The Economics of the Shadow Economy Studies in Contemporary Economics*, 15, 127- 143.

- Parfenova, L., Pugachev, A., & Podvieszko, A. (2016). "Comparative Analysis of Tax Capacity in Regions of Russia". *Technological and Economic Development of Economy*, 22(6), 905-925.
- Richardson, G. (2006). "Determinants of Tax Evasion: A Cross Country Investigation". *Journal of International Accounting, Auditing and Taxation*, 15(2), 150-169.
- Salamon, L. M., and J. J. Siegfried (1977). "Economic Power and Political Influence: The Impact of Industry Structure on Public Policy". *American Political Science Review*, Vol.71, No 3, 1026-1043.
- Schneider, F., Enste, D.H., (2000). "Shadow Economies: Size, Causes, and Consequences", *Journal of Economic Literature*, 38, 77-114.
- Teera, Joweria M. (2004). "Could do Better: An Appraisal of Uganda's Tax Performance Relative to sub Saharan Africa". University of Bath, Department of economics.
- Wang, X. (2010). "Tax Avoidance, Corporate Transparency and Firm Value". Working paper, University of Texas at Austin.
- Wilson, R. J. (2009). "An Examination of Corporate Tax Shelter Participation". *Journal of Accounting Review*, vol. 84, 969-999.
- World Bank, (2016). "World Development Index", Washington. DC, the World Bank Group.
- Yitzhaki, S., (1974), "A Note on Income Tax Evasion: A Theoretical Analysis", *Journal of Public Economics*, 3(2), 201-202.