

A Comparative Study between Formal and Informal Tax Evasion in Iran

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ABSTRACT

The aim of this paper is comparing informal and formal tax evasion in Iran. Results indicate that average and dispersion of tax evasion in the formal sector is larger than the informal sector in Iran's economy. Averages of tax evasion in formal and informal economy are 49.6 and 39.6 percent respectively. These results indicate that taxation system in Iran help to tax evasion in economy. Therefore this system should reform based on institutional approach

KEYWORDS: Comparative Study, formal Tax Evasion, informal Tax Evasion, Iran.

INTRODUCTION

Tax evasion is an illegal activity undertaken to reduce a person or company's tax bill (Embaye, Abel and Wei-Choun.2010).The failure to declare part or all of income to the tax authority is one of the most frequent methods of tax evasion; but other methods have also been described. At the other end of the spectrum from tax evasion, tax compliance is seeking to comply with the tax law by full disclosure of all relevant information on all tax claims, seeking to pay the right amount of tax required by law at the right time and in the right place and etc. (OlamideFagbem et.al.2010).

The tax avoidance and tax evasion are two worldwide problems that both developed and developing economies are being suffered by it.In this paper, we compare informal and formal tax evasion in Iran.

RESEARCH METHOD

First, we introduce tax evasion model in informal economy by using a monetary model as following:

$$Cm2_t = \alpha_0 + \alpha_1 Cm2_{t-1} + \beta_1 Niperc_t + \beta_2 Pindex_t + \beta_3 TaxGDP_t + \varepsilon_t$$

Where cm2 is currency ratio, Niperc is Income per capita, Pindex is price index, TaxGDP is the share of tax revenue in GDP.

For each year predicted values of currency ratio including tax variables (C/M2)_t and without tax variables (C/M2)_w are calculated by estimated regression equation. The difference between the two terms gives us an indication that how much currency-holding is tax induced. This difference is then multiplied by M2 to get illegal money. Subtracting illegal money from M1 gives legal money in the economy. Velocity of money (V) in the underground economy is calculated by dividing national income with legal money. Assuming that velocity of money is the same for both legal and illegal money, multiplying velocity of money by illegal money gives the underground economy. Tax evasion is calculated by multiplying the undergroundeconomy by total tax to GDP ratio.

Second, we introduced formal tax evasion model as following:

$$TGDP_t = \alpha_0 + \alpha_1 TGDP_{t-1} + \alpha_2 VIndusGDP_t + \alpha_3 VAgriGDP_t + \alpha_4 VServGDP_t \\ + \alpha_5 OilGDP_t + \alpha_6 GDPPerc_t + \alpha_6 Inf_t + \varepsilon_t$$

Where TGDP is tax to GDP ratio, VIndusGDP, VAgriGDP and VServGDP are Share of value added sectors of industry, agriculture and services in GDP respectively. OilGDP is the share of oil revenue in GDP. GDPPerc is GDP per capita. Finally, Inf is inflation rate.

We have used data base from web site of central bank of Iran. Also, we have implied regression analysis for interpret results.

Third, we compared informal and formal tax evasion based on top models.

EMPIRICAL RESULTS

We estimated first model as following:

$$Cm2_t = -5.12 + 0.68Cm2_{t-1} + 0.29Cm2_{t-2} + 0.0000005Niperc_t - 0.004Pindex_t + 0.49TaxGDP_t$$

(0.098) (0.000) (0.064) (0.067) (0.364) (0.057)

$$R^2 = 0.91 \quad \bar{R}^2 = 0.89 \quad F = 79.8$$

By using this model, we estimated informal tax evasion in Iran as following table:

Table 1. Tax Evasion in Informal Economy

362	1984	7.24	1960
433.59	1985	6.57	1961
424.28	1986	6.03	1962
383.70	1987	7.70	1963
333.20	1988	8.84	1964
393.44	1989	11.39	1965
574.61	1990	14.68	1966
1026.03	1991	16.61	1967
1420.85	1992	22.40	1968
1211.18	1993	28.38	1969
1668.97	1994	34.38	1970
2114.17	1995	36.87	1971
4329.20	1996	45.31	1972
6584.55	1997	56.99	1973
10729.33	1998	56.22	1974
19095.86	1999	121.96	1975
14398.16	2000	150.10	1976
16361.93	2001	204.16	1977
18436.20	2002	221.73	1978
24351.40	2003	141.45	1979
31604.10	2004	122.31	1980
56801.23	2005	233.58	1981
61457.94	2006	236.25	1982
77316.16	2007	315.00	1983

Second, we estimated second model for estimation tax evasion in formal economy in Iran.

$$LTGDP_t = 1.32 + 0.42LTGDP_{t-1} + 0.65LVIndusGDP_t - 0.3LVAgriGDP_t - 0.23LOilGDP_t$$

(0.207) (0.001) (0.000) (0.045) (0.179)

$$- 0.07LGDPPerc_t - 0.007Inf_t$$

(0.004) (0.004)

$$R^2 = 0.67 \quad \bar{R}^2 = 0.62 \quad F = 14.05$$

In the next section, we estimated tax evasion in formal economy based on model introduced in this section. Tax evasion series indicate that this variable has increased at this period.

Table 2. Tax Evasion in Official Sector in Iran Economy

393.31	1984	5.67	1960
331.25	1985	7.83	1961
369.42	1986	10.44	1962
451.66	1987	10.20	1963
625.05	1988	10.59	1964
693.20	1989	13.33	1965
1214.41	1990	14.65	1966
1555.92	1991	21.52	1967
2094.43	1992	21.19	1968
3750.79	1993	29.07	1969
3114.69	1994	32.11	1970
3143.01	1995	23.11	1971
5100.09	1996	46.16	1972
7174.71	1997	77.75	1973
9462.63	1998	99.93	1974
15229.04	1999	145.49	1975
25767.52	2000	202.01	1976
26071.86	2001	184.51	1977
29263.96	2002	191.49	1978
32676.04	2003	233.52	1979
42570.62	2004	216.82	1980
45824.99	2005	222.51	1981
73203.84	2006	231.96	1982
98340.89	2007	318.65	1983

Now, we compare tax evasion in formal and informal economy in Iran based on estimated models:

Table 3. Estimation Results

St. Dev	Min	Max	Mean	Period	Variables
16843.3	6.03	77316.2	7373.3	1339-1386	Estimated Tax Evasion in Informal Economy
19992.7	5.67	98340.9	8974.9	1339-1386	Estimated Tax Evasion in formal Economy
4.72	28.91	48.02	39.6	1339-1386	The Share of Tax Evasion in Total Tax Incomes (Informal Economy)
12.23	28.67	92.35	49.6	1339-1386	The Share of Tax Evasion in Total Tax Incomes (formal Economy)

Average and dispersion of tax evasion in the formal sectors larger than the informal sector in Iran's economy. Averages of tax evasion in formal and informal economy are 49.6 and 39.6 percent respectively. These results indicate that taxation system in Iran help to tax evasion in economy. Therefore this system should reform based on institutional approach.

Conclusion

Tax required by law at the right time and in the right place and etc. (OlamideFagbem *et al.* 2010). The tax avoidance and tax evasion are two worldwide problems that both developed and developing economies are being suffered by it. In this paper, we compare informal and formal tax evasion in Iran.

Average and dispersion of tax evasion in the formal sector is larger than the informal sector in Iran's economy. Averages of tax evasion in formal and informal economy are 49.6 and 39.6 percent respectively. These results indicate that taxation system in Iran help to tax evasion in economy. Therefore this system should reform based on institutional approach.

REFERENCES

- [1]. Carr, Marilyn and Martha A. Chen. 2001. "Globalization and the Informal Economy: How Global Trade and Investment Impact on the Working Poor". Background paper commissioned by the ILO Task Force on the Informal Economy. Geneva, Switzerland: International Labour Office.
- [2]. Embaye, Abel and Wei-Choun Yu. Tax Evasion and Currency Ratio: Panel Evidence from Developing Countries. Available at: <http://www.ifs.org.uk/comms/comm64.pdf>. July 30, 2010.
- [3]. Men and Women in the Informal Economy. International Labour Organisation. 2002. ISBN 92-2-113103-3. Retrieved 2006-12-18.
- [4]. OlamideFagbem, Temitope. MarteUadiale, OlayinkaandAbdurafiuOlaiya Noah. The Ethics of Tax Evasion: Perceptual Evidence from Nigeria. European Journal of Social Sciences – Volume 17, Number 3 (2010).
- [5]. World Bank (2010). "Shadow Economies All over the World". World Bank. Retrieved 15 July 2011.