Tulane Economics Working Paper Series

What are the Costs of a New Tax Administration? The Case of a Personal Income Tax in Kuwait

James Alm
Department of Economics
Tulane University
jalm@tulane.edu

Working Paper 1804
March 2018

Abstract

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Keywords: Public administration, tax administration, administrative costs.
JEL codes: H2, H5, H83

WHAT ARE THE COSTS OF A NEW TAX ADMINISTRATION? THE CASE OF A PERSONAL INCOME TAX IN KUWAIT

James Alm *

ABSTRACT

This paper assesses the viability of introducing a new personal income tax (PIT), focusing on the administrative costs of new tax. I first present a methodology for calculating the one-time start-up costs and the ongoing administrative costs of a new PIT. I then apply this methodology to the specific case of Kuwait. I estimate that the *first-year* total administrative costs of a new PIT tax administration in Kuwait range from Kuwaiti dinars (KWD) 46.8 million to KWD 90.9 million (or from USD 154.4 million to USD 300.0 million), depending on how the construction costs are financed. However, after the initial construction costs are incurred, I find that the *annual* total administrative costs of a PIT fall significantly to about KWD 50 million (or about USD 164 million), regardless of specific financing methods, and then rise at an annual rate of less than 6 percent per year to reach KWD 82.0 million (or USD 270.6 million) by year 2020, driven mainly by labor force growth. I also estimate that the likely revenues of a new PIT far exceed these administrative costs, even if the PIT is imposed at low rates.

KEYWORDS

Public administration, tax administration, administrative costs.

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* Tulane University. Please address all correspondence to: James Alm, Department of Economics, Tulane University, 208 Tilton Hall, New Orleans, LA 70118 (email jalm@tulane.edu; phone +1 504 862 8344; fax +1 504 865 5869). I am grateful to Malise Madura for help on the calculations in earlier versions. This paper began after a request from some individuals in the Kuwait Ministry of Finance to consider the effects of introducing a personal income tax. The Ministry was most interested in the costs of a new tax administration and the expected revenues for the new tax. It was also interested in constructing various models to estimate the subsequent effects of a new tax on such variables as employment, savings and investment, the trade balance, inflation, foreign investment, gross domestic product, and the like. Ultimately, the Ministry decided not to proceed on the project. However, the initial discussions were intriguing, and they led ultimately to this paper.

INTRODUCTION

Nearly all oil-rich countries in the Middle East and beyond are heavily reliant on oil revenues to finance their government expenditures. Especially in the countries included in the Cooperation Council for the Arab States of the Gulf, typically referred to as the Gulf Cooperation Council (GCC) countries, oil revenues have financed between 70 and 95 percent of total government expenditures during 2011-2016, with non-oil tax revenues generating only a minor share of revenues.[1] With the decline of oil prices in recent years, these countries have experienced significant fiscal problems. These problems, together with uncertain long term prospects for oil-based revenues, have led them to consider alternative, non-oil-based, revenue sources. Although GCC countries have sometimes experimented with traditional tax instruments over the years, these experiments have typically been short-lived.[2] At present, there is virtually no personal income tax in any GCC country, despite its nearly universal presence in other countries around the world. Indeed, international organizations like the International Monetary Fund (IMF) have begun calls for the transition from an oil-based to a non-oil-based tax system, and GCC countries themselves are starting to respond to these calls.[3]

A crucial issue in these considerations is the cost of establishing a new tax administration. There is a substantial theoretical literature on designing an "optimal" tax system and also one on reforming existing tax structures.[4] There is also a large literature on

[1] These countries include: the Kingdom of Bahrain, Kuwait, the Sultanate of Oman, Qatar, the Kingdom of Saudi Arabia, and the United Arab Emirates (UAE).
[2] For example, Saudi Arabia introduced various forms of income taxes in 1950 on nationals and non-nationals, but the taxes were quickly reformed to exclude nationals and in 1975 income taxes on foreigners were suspended. Also, Kuwait introduced a corporate tax in 1955, and then other GCC countries followed suit, including UAE and Oman in the early 1970s. However, corporate taxes in the GCC countries were reduced substantially during the first decade of the 21st century, largely to encourage foreign direct investment. The
[3] For example, see Harrison (2010), International Monetary Fund (2011, 2015), Mansour (2015), and Shukurov (2015). Also, Kuwait approved the introduction of a corporate income tax in 2016, along with other measures designed at collecting additional taxes. To date, these reforms do not appear to have been put in place.
[4] See Auerbach (1985), Auerbach and Hines (2002), and Boadway (2012) for discussions of optimal taxation.

the many administrative aspects in the design of taxes[5], including a growing literature that estimates the costs to the government of administering the taxes (often termed the "administrative costs" of taxation).[6] However, there is little research on what it would cost a country, with virtually no pre-existing tax system, to build one totally from scratch. The administrative cost of a new tax administration is clearly a crucial consideration for GCC countries. More generally, the administrative cost of a new tax administration is a central issue for any government contemplating the introduction of a new tax. Even so, there is little systematic analysis of these administrative costs.

This paper assesses the viability of introducing a new personal income tax (PIT) in one GCC, Kuwait. I first present a methodology for calculating the one-time start-up costs and the ongoing administrative costs of a new PIT. I then apply this methodology to the specific case of Kuwait. I believe that this methodology, when applied to other countries, has the ability to generate useful measures for the overall administrative costs of a new tax administration.

I estimate that the *first-year* total administrative costs of a new PIT tax administration in Kuwait range from Kuwaiti dinars (KWD) 46.8 million to KWD 90.9 million (or from USD 154.4 million to USD 300.0 million) depending on how the construction costs are financed.[7] However, after the initial construction costs are incurred, I find that the *annual* administrative costs of a PIT fall significantly to about KWD 50 million (or about USD 164

[5] See especially the seminal works by Goode (1981), Bird (1989), and Bird and Casangera de Jantscher (1992). Also, see Slemrod (1990), Alm (1996), Slemrod and Gillitzer (2014), and Keen and Slemrod (2017) for discussions that incorporate "optimal" tax administration considerations.

[6] Note that "administrative costs" are only part of the overall "operating costs" of taxation. As discussed by Evans (2001, 2003), the "operating costs" of taxation are typically defined to include both the costs to the government of administering the taxes (or the "administrative costs") and the costs to taxpayers of complying with the taxes (or the "compliance costs"). Discussions of the operating costs of taxation go back to Smith (1776) and his four maxims of good tax practice (e.g., equity, certainty, convenience, and economy), of which the latter three clearly emphasize the operating costs of the tax system. Measurement of these operating costs has attracted significant scholarly attention since the pioneering work by Haig (1935) and especially by Sandford (1973), Vaillancourt (1989), and Sandford, Godwin, and Hardwick (1989). For insightful discussions of much of this literature, see again Evans (2001, 2003). Note also that are other costs of taxation, notably the efficiency costs of taxation. Both compliance costs and efficiency costs are discussed later.

[7] The Kuwaiti dinar (KWD) is among the highest valued currency units in the world. The exchange rate between the KWD and the U.S. dollar (USD) is currently 1 KWD = 3.3 USD, and has been at about this level since 2010.

million), regardless of specific financing methods, and then rise at an annual rate of less than 6 percent per year, to reach KWD 82.0 million (or USD 270.6 million) by year 2020, driven mainly by labor force growth. I also estimate that the likely revenues of a new PIT far exceed these administrative costs, even if the PIT is imposed at low rates.

INSTITUTIONAL BACKGROUND [8]

Kuwait is a high-income country with the world's sixth largest oil reserves. It is one of the largest exporters of oil products, with estimated reserves of about 102 billion barrels (U.S. Energy Information Administration, 2016). Crude petroleum, natural gas, and other oil-related activities account for the majority of gross domestic product, export revenues, and government revenues. Other than petroleum and gas reserves, Kuwait has very few natural resources. Adjacency to the Persian Gulf has led to minor development of a shrimp and fish industry. Due to limited natural freshwater resources and virtually no arable land, any other form of agricultural production is impossible (U.S. Central Intelligence Agency, 2012).

In 2010, Kuwait had a GDP of 35,633.7 million Kuwaiti dinars (KWD) (or USD 117,591.2); GDP per capita was KWD 10,225 (or USD 33,743), making Kuwait one of the highest income countries in the world. The extraction of crude petroleum and natural gas accounted for 51.5 percent of total GDP. Other economic activities comprising a significant part of GDP included manufacturing (5.3 percent), financial services (14.9 percent), transport, storage and communications (8.8 percent), and public and social services (15.6 percent). Kuwait's exports were valued at KWD 14.9 million in 2010, 90 percent of which came from petroleum. Imports totaled KWD 5.7 million, consisting primarily of intermediate and consumption goods. The largest imports were food and beverages, industrial and construction supplies, clothing and other manufactured goods, and vehicles and parts.

[8] Unless otherwise indicated, all statistical information comes from various annual publications of the Kuwait Central Statistical Bureau.

Government revenues for the 2009 to 2010 period totaled KWD 17,687.0 million (or USD 58,367.1), at almost 50 percent of GDP. Nearly 94 percent of these revenues came from oil receipts, which are collected through the fully government-owned Kuwait Petroleum Corporation (KPC). The KPC and its subsidiaries control virtually any oil or natural gas-related activity in the country, ranging from resource extraction to marketing refined products to foreign buyers. Additional revenue was generated by custom duties and fees, electricity and water services, and transport and communication services. Total government expenditures of KWD 11,250.0 million (or USD 37,125.0) included salaries, purchase of goods and services, construction projects, and other unclassified transferable payments.

The mid-year population of Kuwait for 2010 was 3,484,900, of which nearly 70 percent were immigrants. The primary sources of immigrants are India, Egypt, Sri Lanka, Bangladesh, Syria, Iran, and Pakistan. From 2000 to 2010, the average annual population growth rate was about 2.8 percent. The increase in total population over this period was due primarily to increasing growth rates of the non-Kuwaiti population. The growth of the Kuwaiti population has been relatively stable.

The supply of labor is largely dependent upon the inflow of foreign workers. In 2010 there were over 1.7 million non-Kuwaitis, age 15 and older, in the labor force, compared to about 338,000 Kuwaitis. On average, Kuwaiti workers have much higher levels of education than foreign workers. The 2010 Census reported that over half of foreign workers were either illiterate or only able to read and write. Non-Kuwaiti workers are concentrated almost entirely in the private sector, primarily in construction, retail, and service occupations, and a significant number work as domestic servants for private households. The vast majority of Kuwaiti workers have completed secondary school at the least. Just as foreign workers work almost entirely in the private sector, Kuwaiti workers dominate the public sector. Public sector employment is much more appealing due to higher wages, fewer work hours, and

generous benefits and pensions. For over a decade, the government has passed measures, such as job training and subsidized benefits, to encourage Kuwaiti employment in the private sector.

METHODOLOGY

There is to my knowledge no systematic empirical research on calculating the costs of establishing an entirely new tax administration. These costs can be usefully classified into one-time capital costs required to construct a new tax administration facility and that are part of the start-up phase, annual ongoing administrative staff salary costs of operation, and annual ongoing maintenance and capital costs that are associated with the new facility.[9] The one-time capital costs are mainly the construction costs of a new tax administration facility; the annual ongoing staff costs of operation are mainly salaries for the PIT staff; and the ongoing capital costs are associated with depreciation expenses and salary costs of maintenance staff. Following standard terminology, I refer to these three components of costs as the total "administrative costs" of taxation. Even so, I use two scenarios to estimate the total administrative costs, in which the construction costs of a new building are fully paid in the initial year of construction ("Full Payment") and in which the construction costs are financed by borrowing ("Borrowing"). I present the results for each scenario separately.

I make several assumptions in my estimation methodology. First, I use the characteristics of tax administrations from 27 Organisation of Economic Co-Operation and Development (OECD) and 15 non-OECD countries as baselines for determining the staffing requirements of a new tax administration in Kuwait, using information largely from the OECD (2015), with wage costs estimated using data from the International Labor Organization (ILO) and the Kuwait Central Statistical Bureau. Second, I use construction

[9] Note that the one-time capital costs have been called "commencement costs", while the ongoing costs are sometimes referred to as "recurrent costs". See Sandford, Godwin, and Hardwick (1989) for discussion.

cost estimates from the International Facility Management Association (IFMA), again supplemented with the relevant wage information. Third, these construction cost estimates also allow me to estimate ongoing depreciation expenses, and I supplement these depreciation expenses with IFMA estimates for maintenance staff requirements (together with wage information) to estimate ongoing maintenance staff costs.

Finally, I total all costs to generate my estimates of the costs of a new tax administration, again distinguishing these estimates by the method of financing the construction costs. I also estimate these costs over a 10-year time horizon, using estimated rates of labor force growth as drivers of the costs.

Consider each of the main cost components, and the ways in which I operationalize the estimates.

One-time Construction Costs

I estimate the construction costs of a new facility by first estimating the total number of square feet necessary for the staff size and then applying region-specific construction costs. The U.S. General Services Administration (GSA) asked the U.S. Office of Real Property Management Performance Measurement Division to conduct a survey in order to estimate a benchmark for optimal workplace size and utilization (U.S. Office of Real Property Management Performance Measurement Division, 2011). Data on workspace use and size was collected from numerous public and private organizations, and then disseminated to identify standards for specific types on the basis of USF and RSF measurements for a domestic public organization. I estimate construction costs using *Spon's Middle East Construction Costs Handbook*, as compiled by Franklin (2005), which provides approximate estimates for the construction of different types of facilities by unit of area. Note

that these estimates include base, preliminary, overhead, and general costs, and do not reflect any unpredicted costs, availability of resources, or professional fees.

More precisely, the benchmark for a domestic government organization from the GSA analysis is 190 "usable square feet" (USF) or 218 "rentable square feet" (RSF) per employee. Typical workspace allocations for different administrative positions are shown in Table 1. An administrative staff of 3027 therefore requires 575,130 USF or 659,886 RSF of workspace. I use the RSF figure in the estimates.

Again using estimates from *Spon's Middle East Construction Costs Handbook*, the cost per square foot for office facilities is KWD 70.42, so my estimate for the construction costs of a new building with 659,886 RSF is KWD 46.5 million.

I consider two alternative scenarios for these construction costs. In one scenario, I assume that the government pays all construction costs in the initial period. In a second and perhaps more realistic scenario, I assume that the government borrows to finance the construction costs, at an annual cost of 5 percent.

Annual Ongoing Administrative Staff Salary Costs

I estimate the number of staff required to administer a new PIT by using comparative data from existing revenue bodies in OECD and non-OECD countries, as estimated by the OECD (2015). See Table 2. Using staffing and taxpayer information for OECD and non-OECD countries, I estimate that the average number of registered personal income taxpayers per tax administration staff member is 680.3, with substantial variation across countries. Table 2 shows population and tax administration characteristics for the 42 countries. For each country, I calculate the number of registered PIT payers per administrative staff member, and this average ranges between 40 and 2800. I assume that the potential PIT tax base of Kuwait is the total number of employed workers, which is about 2.1 million people. The most similar

countries in the sample, in terms of the number of registered PIT taxpayers, are Slovenia (1.02 million), Singapore (1.62 million), Slovak Republic (2.56 million), and Ireland (3.1 million). The proportion of PIT payers per staff member ranges from 413 in Slovenia to 946 in Singapore, leading to the conclusion that similarities in population do little to indicate what would be the most appropriate staffing size. Therefore, I use the overall average across all 42 countries, or 680.3 registered PIT taxpayers per staff, as a baseline. For the 2.1 million potential taxpayers in Kuwait, the administrative staff would require about 3027 employees.

I then estimate the annual salary costs for the administrative staff by differentiating staff members by function and vocation using cross-country comparisons, and then applying region-specific wage rates. Across the 42 comparison countries, staff is divided into five broad categories: audit (32 percent), client account management (30 percent), debt collection (10 percent), corporate management (15 percent), and all other functions (12 percent). Account management refers to all activities required to maintain a taxpayer's account, such as registration, filing, data entry, and tax withholding; corporate management deals with all overhead costs, including information technology.

I obtain regional wage and salary rates from the International Labor Organization (ILO) (2012) and the Kuwait Central Statistical Bureau.[10] The OECD benchmark of 32 percent auditors implies the tax administration would need to hire at least 982 accountants, each with annual earnings of about KWD 11,050. I assume that client account management and debt collection require only clerical staff, that corporate management requires central government executive officials, and that all other functions are performed by information technology (IT) specialists. This implies the hiring of 1227 office clerks each earning KWD 5931 annually, 364 IT specialists each earning KWD 15,925 annually, and 454 executives each earning KWD 14,056 annually. The total annual administrative salary costs are KWD

[10] See also International Labor Organization (2016).

30.3 million. A breakdown of administrative salary costs is shown in Table 3. According to recent OECD (2015) estimates, aggregate salary costs, on average, account for 70 percent of all administrative costs. Therefore, total annual administrative costs should be about KWD 43.3 million.

Annual Ongoing Maintenance Costs: Salary and Depreciation

The International Facility Management Association (IFMA) (2008, 2016) benchmark for the size of facility maintenance staff is one full-time employee for every 47,000 RSF. Therefore, a facility of the estimated size needs at least 14 full-time maintenance employees. The maintenance staff would be required to fulfill a number of responsibilities, such as routine repairs and janitorial work, each requiring different skills. I assume that 3 electricians, 3 plumbers, 3 repairmen, and 3 cleaners will be hired, each earning annual salaries of KWD 4712.5, KWD 2437.5, KWD 2892.5, and KWD 1706.3, respectively. Maintenance staff therefore costs KWD 11,748.8 annually.

As for capital depreciation costs, I estimate these using a depreciation rate of 2.5 percent per year, based on the assumption of straight-line depreciation and a tax life of 39 years.

Growth over Time

I simulate changes in the costs over a ten-year period. I use IMF data from 2004 to 2009 to find an average annual employment growth rate for domestic and foreign workers in the years past 2010. The average rate of growth of the labor force between 2004 and 2009 was 4 percent, and Kuwaiti and non-Kuwaiti employment grew at respective rates of about 3 percent and 5 percent. These growth rates are assumed to remain constant, and are then used to project employment levels up to 2020. The changes in employment are in turn used to

determine the yearly change in the size of the PIT administrative staff, the associated salary costs, and total administrative salary costs; the change in size of the administrative staff is also used to estimate how many additional square feet of office space would be needed, which necessitates additional construction costs, additional maintenance staff costs, and additional depreciation expenses. In all cases, I assume that the labor force growth rates remain at 3 percent and 5 percent over the 10-year period and that regional salary rates and construction costs also remain constant over this time. All values are expressed in constant 2010 KWD.

RESULTS

Recall that I use two scenarios to estimate the total administrative costs, in which the construction costs of a new building are fully paid in the initial year of construction ("Full Payment") and in which the construction costs are financed by borrowing ("Borrowing"). I present the results for each scenario separately.

Scenario 1 (Full Payment)

The total administrative costs of a new PIT are estimated in 2010 at **KWD 90.9 million** (or USD 300.0 million). These costs are broken down as follows.

With an initial administrative staff of 3027 employees, the first-year salary costs are KWD 30.3 million, which translate to total first-year administrative staff salary costs of KWD 43.3 million on the assumption that the OECD average of 70 percent for administrative salary costs to total administrative costs holds. A new facility of 660,000 rentable square feet costs KWD 46.5 million to build. This facility also requires KWD 11.7 thousand in first-year salaries for the full-time maintenance employees, and KWD 1.2 million in depreciation expenses.

Therefore, total *first-year* (or 2010) administrative costs are **KWD 90.9 million** (or USD 300.0 million). See Table 4.

Given the huge initial capital construction expenses of KWD 46.5 million, this total *first-year* administrative cost figure considerably overestimates the *annual*, or ongoing, administrative costs of a new PIT administration. The growth of these costs over a 10-year period is more representative of these annual costs, and these are also shown in Table 4 along with Figure 1. Once the initial construction costs are paid, the *annual* salary costs of administrative staff and maintenance staff, along with annual depreciation expenses and additional construction costs required by a growing administrative staff, is only **KWD 49.6 million** (or USD 163.7 million) in 2011. This annual administrative cost estimate grows accordingly over time, reaching **KWD 82.0 million** (or USD 270.6 million) in 2020.

Scenario 2 (Borrowing)

The main difference between Scenarios 1 and 2 is in the initial 2010 costs. With borrowing rather than full payment of construction costs, the 2010 borrowing costs are KWD 2.3 million. The other cost components are the same as in Scenario 1, so the total *first-year* administrative costs now become **KWD 46.8 million** (or USD 154.4 million). After 2010, the total costs in the two scenarios are very similar. See Table 5 and Figure 2.

DISCUSSION

These estimates indicate that the initial *first-year* administrative costs of new PIT tax administration in Kuwait range from KWD 46.8 million to KWD 90.9 million (or from USD 154.4 million to USD 300.0 million), depending on how the construction costs are financed. However, after the initial construction costs are incurred, the *annual* administrative costs of a PIT fall significantly to about KWD 50 million (or about USD 164 million), regardless of

specific financing methods, and then rise at an annual rate of less than 6 percent per year, driven mainly by labor force growth.

These estimated administrative costs are clearly a principal component of the relevant economic costs of a new tax administration, but they ignore some additional cost – and benefit – considerations that are relevant to a new tax administration.

Quantifying Some Benefits of Taxation

The benefits of a new PIT are of several types. One benefit is the reduction in the variability and uncertainty of a tax system heavily reliant on a single source of revenues. Further, with a progressive rate structure, a PIT is income elastic, so that its revenues grow over time relative to income. A PIT can also be used to redistribute income in ways consistent with societal preferences. Of perhaps most importance, these benefits include the revenues that a PIT would generate.

The revenues depend on the specific features of a PIT. Purely for illustrative purposes, I specify a particular tax rate and tax base structure, and I then use the most recently available economic information to estimate these revenues.[11]

Specifically, I assume that a flat rate tax of 5 percent is enacted. Given the absence of detailed individual information, I assume that there are no personal exemptions, deductions, or exclusions. I include only employed persons in the tax base. I estimate average annual income using the Kuwait 2014 Annual Statistical Abstract and the Kuwait 2013 Household Income and Expenditure Survey published by the Central Statistical Bureau of Kuwait, in which all income information is differentiated by nationality. I assume that income subject to taxation is the sum of gross current income, gross current transfers, and non-periodic

[11] Note that the Kuwait Ministry of Finance issued a draft PIT law in 2005, with a progressive rate structure of: 2.5 percent for KD 1 to KD 10,000; 5 percent for KD 10,000 to KD 50,000; 10 percent for KD 50,000 to KD 250,000; 15 percent for KD 250,000 to KD 1,000,000; and 20 percent for greater than KD 1,000,000. This PIT law was never enacted.

revenue, and I estimate the annual tax liability for an average Kuwaiti and non-Kuwaiti worker using a 5 percent flat rate tax applied to income.[12] Note that I assume that foreign and domestic workers are treated exactly the same, so that all annual income earned in Kuwait is taxes at the same rate regardless of nationality. I then multiply the average individual liabilities by the total number of Kuwaiti and non-Kuwaiti workers to calculate the potential PIT revenues. I also simulate the growth of these PIT revenues over time, using the same assumptions as in the cost simulations, where all KWD units are converted to constant 2010 KWD. Note that is straightforward to estimate the impact of, say, a 10 percent (or a 1 percent) flat rate PIT simply by multiplying the estimates of a 5 percent flat rate PIT by 1 (or by 1/5).

These estimates are presented in Table 6. These estimates indicate that the revenues from a 5 percent PIT far exceed even the first-year costs of the PIT. I estimate the revenues of a PIT would be **KWD 858.4 million** (or USD 2.8 billion) in 2010, relative to the higher of the estimated 2010 administrative costs of KWD 90.9 million (or USD 300.0). Both costs and revenues increase over time, but the increase in PIT revenues far exceeds the increase in costs. By 2020, estimated revenues are **KWD 1.4 billion** (USD 4.6 billion), while estimated costs are KWD 82.0 (USD 270.6 million). Even a much lower 1 percent flat rate PIT would generate in 2020 revenues (KWD 293.4 million, USD 968.2 million)) far in excess of costs (KWD 82.0, USD 270.6 million). Note that these estimates say nothing about the incidence of the PIT, although it seems likely that the burden will fall largely on the individual worker, at least if the worker is Kuwaiti.

Quantifying Some Other Costs of Taxation: Compliance Costs and Efficiency Costs

[12] Gross current income includes net income from wages or salary, business activities, financial assets, and non-financial assets. Gross current transfers consist of any transfers from the government or elsewhere.

There are also additional aspects of the costs of a new tax administration. One added cost is the "compliance cost" of taxation, or the costs incurred by taxpayers in complying (or in not complying) with their tax obligations. There is now a large and growing literature that attempts to estimate these costs using a variety of methods, generally distinguishing compliance costs by type of taxpayer (e.g., individual versus business, small business versus large business, and the like) and by type of tax (e.g., personal income tax, corporate income tax, value added tax, and the like), and also distinguishing between the compliance costs to the taxpayer versus the compliance costs to society. According to a recent survey by Evans and Tran-Nam (2014), this research concludes (among other things) that tax compliance costs are significant and high, ranging from 2 percent to 10 percent of revenues and from 2 to 6 times administrative costs, depending on the specific features of the tax.[13] These compliance costs will depend closely upon how the tax is designed. For example, if a self-assessment system is utilized, then individual taxpayers will bear much of the costs of the system. Similarly, if the system is badly designed with high levels of uncertainty, then compliance costs may be higher than otherwise.

Even so, the compliance costs of a new PIT seem likely to lie at the lower end of these estimates, in large part because the new PIT is likely to rely heavily on employer withholding of taxes. For example, Evans and Tran-Nam (2014) estimate that the "Taxpayer Compliance Costs" (TCC) of a pay-as-you-earn (PAYE) income tax are significantly lower than the compliance costs of other taxes (e.g., capital gains tax, value-added tax, goods and services tax, fringe benefits tax, wholesale sales tax, business income tax, prescribed payment system, and the like), roughly 2 percent of tax revenues.[14]

Using this estimate of the compliance costs together with the estimated revenues of a PIT, a PIT that generated KWD 858.4 million in 2010 revenues would also create compliance

[13] Also, see Evans (2001, 2003) for useful surveys of this work.
[14] For more detailed estimates, see also Tran-Nam, Evans, Ritchie, and Walpole (2000).

costs of **KWD 17.2 million** (= 0.02 X KWD 858.4 million), or USD 56.7 million similarly, the MEB costs would rise in 2020 to **KWD 27.9 million** (= 0.02 X KWD 1,396.7 million), or USD 92.2. These compliance costs are significant if relatively small. Of course, a PIT that required individuals to calculate and file individual tax returns would impose higher compliance costs, likely by a magnitude of 2 to 3 times these estimates (Tran-Nam, Evans, Ritchie, and Walpole, 2000).

Another added cost of taxation is the distorting effects of a new PIT, although these efficiency costs may be offset by a decline in the efficiency costs of the current system of oil-based revenues. These distorting effects are best measured by the "marginal excess burden" (MEB) of a tax, defined as the additional efficiency cost of a tax that is created in raising an additional dollar (or other unit) of revenues. To my knowledge, there are no estimates of the MEB of a PIT in Kuwait, for obvious reasons. However, one can get an approximate magnitude by looking at estimates of the MEB of a PIT and of other taxes in other countries. For example, in a classic study Ballard, Shoven, and Whalley (1985) use a computable general equilibrium model to estimate the MEBs of the major U.S. taxes. Their calculations indicate that the MEB of a PIT ranges from 0.163 to 0.314, depending upon labor supply and savings elasticities, which suggest that each $1 of revenues from the PIT generates efficiency losses of about 16 to 31 cents. They also calculate that the MEB of specific excise taxes is generally quite low, in the range of 3 cents to 12 cents for each additional dollar of excise tax revenues, while the MEB of a general consumption tax is very high, in the 26 to 39 cents range.

As a rough and illustrative estimate of these efficiency costs, consider the higher MEB estimate of a PIT from Ballard, Shoven, and Whalley (1985), or 0.314, together with the estimated revenues of a PIT. A PIT that generated KWD 858.4 million in 2010 revenues would then create large and significant MEB costs of **KWD 269.5 million** (= 0.314 X KWD

858.4 million), or USD 889.4 million; similarly, the MEB costs would rise in 2020 to **KWD 438.6 million** (= 0.314 X KWD 1,396.7 million), or USD 1, 447.4 million. Even so, however, the estimates of Ballard, Shoven, and Whalley (1985) also suggest that the MEB costs of a new PIT may well be more-or-less offset by a reduction in the MEB costs from a reduction in oil-based revenues that would be allowed by the new PIT, depending on the specifics of the oil tax reduction. Other estimates of the MEB of taxation generate broadly similar results (Browning, 1987; Dahlby, 2008).

CONCLUSIONS

Overall, these many estimates indicate that the overall costs of a new PIT in Kuwait, including compliance costs and efficiency costs, are likely to be far outweighed by the additional revenues of the tax. Of course, several considerations suggest caution in the use of all of these estimates. On the revenue estimates, reciprocal tax agreements that exempted foreign workers would reduce significantly these revenue estimates. Indeed, according to the Kuwait Ministry of Finance (2010), Kuwait has certified double taxation agreements with 47 countries. Further, the lack of detailed statistics on personal income in Kuwait may lead to the underestimation of the size of the tax base and potential revenues. Revenues from the PIT are calculated using only average annual income levels for domestic and foreign workers. This sample excludes all persons earning taxable income exclusively from sources other than employment, such as financial activities or real estate. Domestic and guest workers are treated equally in the estimates, but the potential for foreign labor supply to fluctuate each year could cause the size of the tax base also to vary from year to year. Indeed, there is some evidence to suggest that a new PIT might affect the inflow of labor (Harrison, 2010).[15]

[15] For example, in 1988 foreign workers and investors in Saudi Arabia threatened to exit the country in response to an income tax proposal in Saudi Arabia. Proponents of the policy believed that implementing the tax would set a precedent that the other GCC countries would be inclined to follow. However, the proposal was eventually dropped. When the proposal was revived in 2002, it generated the same vehement opposition, leading the Saudi

The administrative cost estimates should also be used with caution. These cost estimates are heavily reliant on the OECD characteristics used to determine PIT staffing needs. In particular, the number of PIT taxpayers per staff member is a very general assumption, and the reasons for variations in staffing are numerous and seldom observable. Factors ranging from population density to educational attainment to the political regime can affect the way tax systems look. The cost estimates are also heavily reliant on wage estimates that may not reflect current labor market conditions. Finally, the composition of the administrative staff by occupation cannot be accurately predicted because hiring decisions will be made on an individual basis and at the discretion of the employer, and the estimates of workspace allocation are also based upon country averages that may not apply to Kuwait. Even so, I have examined the robustness of the administrative costs estimates to variations in the major staffing assumptions, and I do not find significant effects on the estimates.

Finally, it may well be that there are alternative taxes that are less administratively costly and more revenue productive. Although almost no Kuwaiti workers are illiterate, over half of the guest workers are illiterate. When taxpayers are unable to read or write, the administrative costs of collecting income tax information are greater (Riezman and Slemrod, 1987). Also, other taxes may have lower administrative costs. For example, Kenny and Winer (2006) model the gravitation of countries towards that the types of taxes that will incur the lowest administrative costs. They find that countries that specialize in international trade will tend to use trade taxes, and countries with high population will tend to use property taxes. They also find that countries that rely heavily on oil production are more likely to rely on non-tax revenues sources, a result entirely consistent with current GCC country practices.[16]

Indeed, there are concerns that developing – or developed – countries may find it increasingly difficult to impose a broad-based global PIT, given such considerations as factor

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government to the official conclusion that it was unfair to tax any guest worker.

[16] See also Gordon and Li (2009).

mobility, transfer pricing, and offshore financial centers, all of which are related to the broad notion of globalization and most of which reduce the ability of a taxes imposed on income to generate revenues (Alm and Wallace, 2006). These forces suggest that a more scheduler income tax, such as the one I consider here, may be a more appropriate strategy. However, moving toward any PIT, even one based on a scheduler system of wage taxation, at a time when these globalization forces are increasing may well be a risky fiscal strategy.

Despite these cautionary notes, I believe that my methodology uses plausible and realistic assumptions, along with the most reliable data available. The resulting estimates provide consistent evidence that the likely revenues from a PIT in Kuwait far exceed the initial and ongoing costs of the tax administration. It is now up the Kuwait government, as well as the governments of other GCC countries, to consider diversifying their tax systems.

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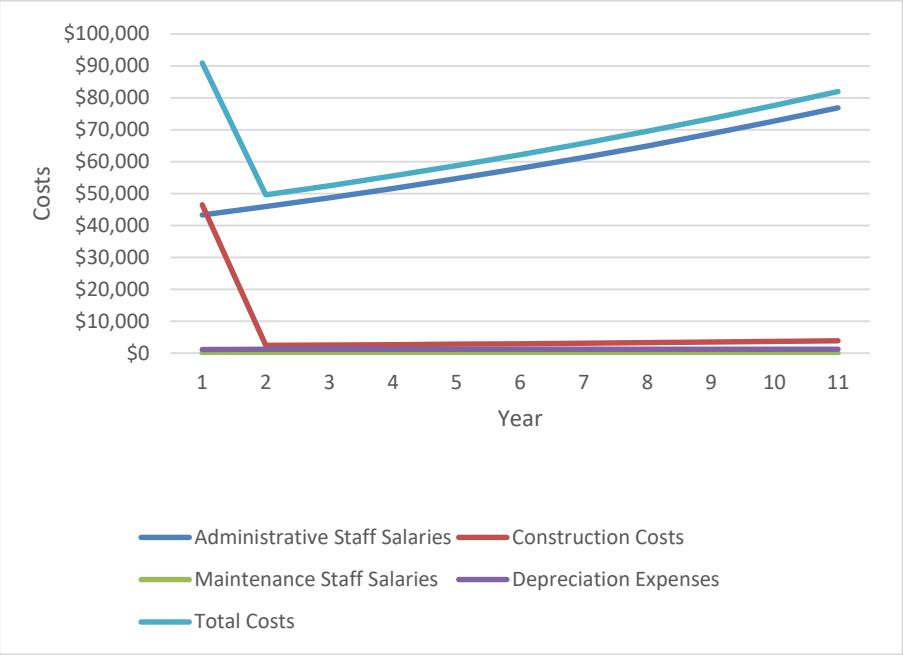
Figure 1: Scenario 1 (Full Costs) – Projected Changes in Costs, 2010 to 2020 (KWD thousands)



Source: Calculations by author.

Figure 2: Scenario 2 (Borrowing) – Projected Changes in Costs, 2010 to 2020 (KWD thousands)

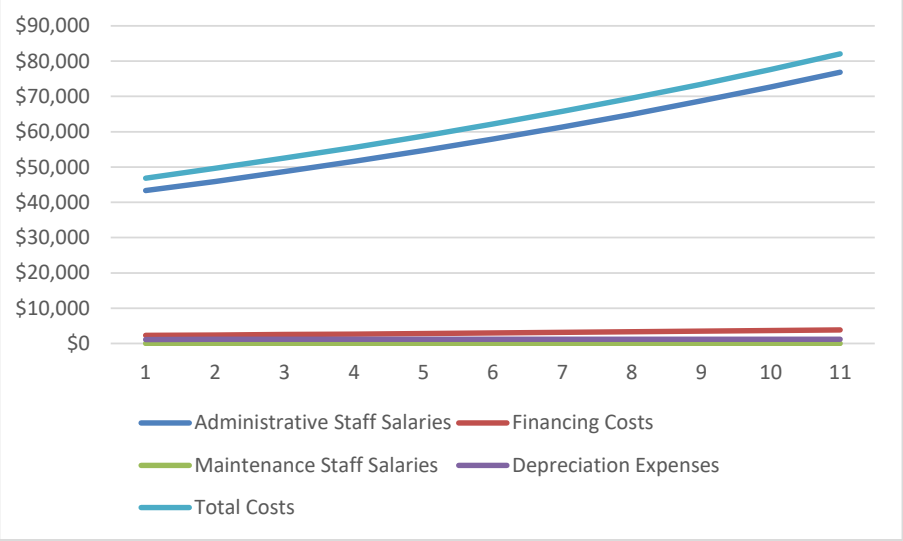


Table 1: Workspace Allocation for Domestic Government Institution, by Staff Position

Position	Usable Square Feet (USF)	Configuration
Executive	400	Private office
Director	300	Private office
Manager	200	Private office
Supervisor	120	Private office
Technical	120	Private office
Support Staff	80	Cubicle
Clerical	48	Cubicle

Source: Office of Real Property Management Performance Measurement Division (2011).

Table 2: Number of Registered PIT Taxpayers Per Administrative Staff for OECD and Non-OECD countries, 2010

Country	Citizens (millions)	Labor Force (millions)	Registered PIT Payers (millions)	Total Staffing (millions)	Registered PIT Payers/Staff
Australia	21.96	11.5	20.63	21,910	941.6
Austria	8.36	4.28	6.30	7,761	811.8
Belgium	10.79	4.80	6.80	14,931	455.4
Canada	33.74	18.43	30.00	39,757	754.6
Chile	16.76	7.45	7.72	3,995	1932.4
Czech Republic	10.51	5.29	3.90	15,533	251.1
Denmark	5.52	2.92	4.60	7,680	599.0
Estonia	1.34	0.69	0.75	878	854.2
Finland	5.34	2.70	5.20	5,595	929.4
France	62.63	28.51	36.40	72,814	499.9
Germany	81.90	41.70	26.80	112,291	238.7
Hungary	10.02	4.20	4.69	15,182	308.9
Iceland	0.32	0.18	0.26	97	2680.4
Ireland	4.46	2.20	3.10	6,105	507.8
Israel	7.23	3.02	0.62	5,618	110.4
Italy	59.75	24.97	41.80	33,584	1244.6
Japan	127.51	66.17	23.69	56,216	421.4
Korea	48.75	24.39	5.23	19,779	264.4
Mexico	107.55	45.40	23.60	26,129	903.2
Netherlands	16.45	8.78	8.64	30,707	281.4
New Zealand	4.32	2.32	5.72	6,038	947.3
Norway	4.83	2.59	4.40	6,434	683.9
Poland	38.15	17.28	17.42	60,401	288.4
Portugal	10.64	5.58	7.00	11,055	633.2
Slovak Republic	5.42	2.69	2.56	5,686	450.2
Slovenia	2.04	0.95	1.02	2,470	413.0
Spain	45.93	23.04	19.46	27,755	701.1
Sweden	9.30	4.91	7.40	10,419	710.2
Turkey	71.90	71.90	23.81	41,341	575.9
United Kingdom	60.93	31.24	31.30	70,700	442.7
United States	307.01	155.54	258.20	92,577	2789.0
Argentina	40.13	16.40	0.93	23,206	40.1
Bulgaria	7.57	3.20	0.64	7,976	80.2
Cyprus	0.80	0.40	0.29	855	339.2
India	1,199.06	467.00	32.65	42,108	775.4
Indonesia	231.55	113.30	12.70	31,825	399.1
Latvia	2.26	1.19	0.88	4,300	204.7
Malaysia	27.76	11.38	8.86	9,942	891.2
Malta	0.42	0.18	0.26	396	656.6
Romania	21.47	9.33	6.10	25,387	240.3
Singapore	5.01	3.03	1.62	1,712	946.3
South Africa	49.32	17.38	5.54	14,751	375.6
Average					**680.3**

Source: OECD (2015).

Table 3: Annual Administrative Salary Costs by Occupation

Occupation	Number of Employees	Individual Annual Wage or Salary (KWD)	Aggregate Annual Wage or Salary (KWD millions)
Accountants	982	11,050	10.851
Office Clerks	1,227	5,931	7.277
IT Specialists	364	15,925	5.797
Executive officials	454	14,056	6.381
Total	3,027	46,962	30,307

Source: International Labor Organization (2012).

Table 4: Scenario 1 (Full Costs) – Annual Costs of PIT Tax Administration, 2010 to 2020 (KWD thousands)

Year	Administrative Staff Salaries	Construction Costs	Maintenance Staff Salaries	Depreciation Expenses	Total Costs
2010	43,295	46,467	12	1,162	90,935
2011	45,927	2,409	13	1,222	49,571
2012	48,699	2,537	13	1,225	52,474
2013	51,617	2,671	14	1,228	55,531
2014	54,690	2,813	15	1,232	58,750
2015	57,927	2,962	16	1,236	62,141
2016	61,335	3,120	17	1,240	65,711
2017	64,924	3,285	18	1,244	69,471
2018	68,705	3,460	18	1,248	73,431
2019	72,686	3,644	19	1,253	77,602
2020	76,880	3,838	20	1,258	81,996

Source: Calculations by author.

Table 5: Scenario 2 (Borrowing) – Annual Costs of PIT Tax Administration, 2010 to 2020 (KWD thousands)

Year	Administrative Staff Salaries	Borrowing Costs	Maintenance Staff Salaries	Depreciation Expenses	Total Costs
2010	43,295	2,323	12	1,162	46,792
2011	45,927	2,444	13	1,222	49,605
2012	48,699	2,571	13	1,225	52,508
2013	51,617	2,704	14	1,228	55,564
2014	54,690	2,845	15	1,232	58,782
2015	57,927	2,993	16	1,236	62,171
2016	61,335	3,149	17	1,240	65,740
2017	64,924	3,313	18	1,244	69,499
2018	68,705	3,486	18	1,248	73,457
2019	72,686	3,668	19	1,253	77,627
2020	76,880	3,860	20	1,258	82,018

Source: Calculations by author.

Table 6: Projected PIT Revenues with a 5 Percent Flat Rate Tax (KWD thousands)

Year	PIT Revenues
2010	858, 399
2011	900,917
2012	945,612
2013	992,599
2014	1,041,999
2015	1,093,939
2016	1,148,553
2017	1,205,981
2018	1,266,372
2019	1,329,882
2020	1,396,676

Source: Calculations by author.