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A Report on the Egyptian Tax System

by

Mark Gersovitz, Roger H. Gordon and Joel Siemrod

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Mark Gersovitz, Roger H. Gordon and Joel Slemrod

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Executive Summary

Egyptian government revenues depend importantly on two indirect taxes (on imports and on sales) and on two direct taxes (on business and personal incomes). In addition to the revenue it provides, each tax affects the efficiency of the decisions that Egyptian consumers and producers take, the distribution of well-being in Egyptian society, and the burden of tax administration. These criteria form the basis of an assessment of all tax systems, although this report focuses almost exclusively on the statutory system and therefore does not systematically document how the system actually works.

The two indirect taxes have been reformed recently and the statutes are broadly consistent with good performance in this area. There is, however, scope for further efficiency gains by eliminating taxation of various inputs (cascading). There is also the potential for increasing efficiency and equity and for easing the burden of administration by changing the structure of rates.

Statutory tax rates on business income are conformable with international practice, but the statutory system of deductions that determines the tax base has very complicated effects on the incentives to invest. There are large tax subsidies to investment through large established corporations while noncorporate businesses or new, small corporations experience large tax penalties. Within types of finance, there are large subsidies to debt finance and favorable tax treatment of financial intermediaries, especially pensions and insurance. There are large distortions to individual portfolio decisions.

Personal incomes are taxed under a series of taxes depending on the source of the income. Although statutory rates can be high, deductions mean that few taxpayers pay rates above 30%. The combination of the various taxes and their deductions, however, appears to result in marginal rates that are first around 30%, perhaps fall to 15% and then rise again back to 30%. The statutes provide some deductions that may lower rates even further, and the system does not seem to be an instrument for income redistribution.

Tax administration requires a penalty structure that ensures that taxpayers find it generally desirable to comply with the tax system. Under the Egyptian statutes, however, there is little or no financial incentive to pay taxes in a timely fashion. Furthermore, there is casual evidence that actual economic behavior in Egypt deviates from what would be predicted from an examination of the statutes, suggesting that there is a large gap between what the statutes specify and how the tax administration works.
Résulté analytique

L'État égyptien tire l'essentiel de ses recettes de deux impôts indirects (sur les importations et sur les ventes) et de deux impôts directs (sur les sociétés et sur le revenu des personnes physiques). Outre les recettes qu'il procure, chaque impôt influe sur la rationalité des décisions que prennent les consommateurs et les producteurs égyptiens, sur la répartition du bien-être dans la société égyptienne et sur la charge qui pèse sur l'administration fiscale. C'est sur ces critères que se fonde l'évaluation de tous les systèmes fiscaux, encore que ce rapport soit presque exclusivement axé sur les dispositions légales et ne décrive donc pas systématiquement la façon dont le système fonctionne.

Les deux impôts indirects ont été récemment réaménagés et les nouvelles dispositions sont, dans l'ensemble, propres à assurer un bon rendement. Il serait toutefois possible d'améliorer encore l'efficacité en éliminant la taxation (en cascade) de divers biens intermédiaires. Une restructuration des taux permettrait également d'améliorer l'efficience et l'équité et d'alléger la charge pesant sur l'administration fiscale.

Les taux d'impôt légaux appliqués aux bénéfices des sociétés sont conformes aux pratiques internationales, mais le système de déductions qui détermine l'assiette a des effets très compliqués sur les incitations à investir. Les investissements effectués par le biais de grosses sociétés bien établies bénéficient d'importants avantages fiscaux, alors que les entreprises non constituées en société ou les petites sociétés nouvelles sont fortement pénalisées par l'impôt. Quant aux types de financement, on constate que le financement par l'emprunt est largement subventionné et que les intermédiaires financiers, en particulier les caisses de pension et d'assurance, jouissent d'un traitement fiscal favorable. Il existe de fortes distorsions au niveau des décisions individuelles de gestion des portefeuilles.

Les revenus des personnes physiques sont assujettis à divers impôts, qui sont fonction de leur source. Les taux légaux peuvent être élevés mais, à cause des déductions, peu de contribuables paient des taux supérieurs à 30%. Toutefois, par le jeu des divers impôts et déductions, il semble que le taux marginal avoisine 30%, retombe ensuite à 15%, pour remonter à 30%. Le code des impôts permet certaines déductions qui peuvent abaisser encore les taux, et le système ne semble pas être un instrument de redistribution des revenus.

L'administration fiscale a besoin d'un système de pénalités qui incite les contribuables à respecter leurs obligations fiscales. Mais les dispositions du code des impôts ne prévoient guère d'incitations financières pour les encourager à payer à temps leurs impôts. En outre, on constate que le comportement économique en Égypte s'écarte de ce que laissèrent prévoir les textes, ce qui donne à penser qu'il existe un grand décalage entre ce qui est prescrit et la façon dont l'administration fiscale fonctionne.
موجز تنفيذي

تعمد إبرادات الحكومة المصرية إلى حد كبير على ضريبيتين غير مباشرين (على الالزادات والعمولات) وضريبيتين مباشرين (على دخل الشركات [أي الأرباح الصناعية والتجارية] والدخل الشخصي)، وبالإضافة إلى الإبرادات التي تحققها كل ضريبي، فإنها تؤثر على كفاءة الضرائب التي يتم تحصيلها المستهلكون والمتجهون المصريون، وتوزيع الوفاء في المجتمع المصري. وعند ادارة نظام الضرائب، وتشكل هذه المعايير الأساس الذي يستند إليه تنفيذ جميع أنظمة الضرائب، وأن كان هذا التقرير يركز بصورة شبه كاملة على الجانب القانوني في نظام الضرائب، وبالتالي لا يوقع بانتشار كيفية عمل هذا النظام بالفعل.

وقد أدخلت في الآونة الأخيرة اصلاحات على الضريبيتين غير المباشرين، وأصبحت القوانين المنظمة لها متمشية بصورة عامة مع معايير الأداء الجيد في هذا المجال. غير أن هناك مجالات تحديد اضافية في الكفاءة عن طريق الفحص الضريبي المفروض على معلومات الانتاج المختلفة (الضرائب التسلسلية)، كما أن هناك امكانية لزيادة الكفاءة والمصداقية وتخفيف عبء الادارة عن طريق تغيير معايير معدلات الضريبة.

وتتشمل المعدلات الموصى عليها في قانون الضريبة على الأرباح الصناعية والتجارية (ضريبة الشركات) مع الممارسات الدولية، ولكن الخصومات التي ينص عليها القانون والتي تحدد حجم الوعاء الضريبي، لها تأثير ملحوظ جدا على حساب الاستثمار، إذ تقدم إعانات (أعفاءات) ضريبية كبيرة للاستثمار من خلال الشركات الناشئة، بينما تتعاون مؤسسات الأعمال التي لا تتخذ شكل شركات أو الشركات الجديدة الصغيرة عن عمليات ضريبية كبيرة. وفي نطاق أنواع التمويل، تقدم إعانات كبيرة للتمويل بالدين ومعاملة ضريبية تفضيلية لأسهم المالين، خاصة صناديق المشاريع وشركات التأمين، ولذلك توجد تطورات كبيرة في الضرائب الفردية الخاصة.

بموافقة الاستثمار.
وتتعرض سلسلة من الضرائب على الدخل الشخصية حسب مصدر الدخل، وعلى الرغم من أن المعدلات التي تنص عليها القوانين المنظمة لهذه الضرائب قد تكون عالية، فإن الخصومات تعبير عن قيمة من الممولين (دافعي الضرائب) هم الذين يدفعون الضرائب على أساس معدلات تجاوز 40 في المائة. غير أنه يبدو أن الجمع بين تعدد الضرائب والخصومات المرتبطة بها يؤدي إلى اخفاق المعدلات الهاشمية التي تكون قريبة في البداية من نسبة 40 في المائة، ربما إلى نسبة 15 في المائة، ثم ارتفاعها ثانية إلى نسبة 30 في المائة. وتنص القوانين المنظمة لهذه الضرائب على بعض الخصومات التي قد تؤدي إلى تخفيض اضافي في معدلات الضرائب، ولا يبدو أن نظام الضرائب يمثل آداة ل createDate توزيع الدخل.

ويطلب نظام إدارة الضرائب وجود هيكل عقوبات يضمن أن الممولين يستحقون بصورة عامة الالتزام بنظام الضرائب. غير أن قوانين الضرائب المصرية لا توفر حافزا ماليا يذكر لدفع الضرائب في مواعيد استحقاقها، وعلاوة على ذلك، فإن هناك أعدة عرضية على أن السلوك الاقتصادي الفعلي في مصر يحرف عن النتائج التي يمكن توقع استخلاصها من إجراء فحص لهذه القوانين، مما يوجه فجوة كبيرة بين ما تنص عليه القوانين وبين كيفية عمل نظام إدارة الضرائب.
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1. Introduction: The Role of a Tax System

1. This paper analyzes the Egyptian tax system as of our visit to Egypt in September and October, 1991.

2. By way of introduction, the remaining parts of this section review some general issues in the design of tax systems for developing countries. The next section provides a brief overview of the sources of tax revenue in Egypt. Sections III through VI are the core of the report. Section III discusses the indirect taxes, mainly the tariff system and the sales tax. Section IV discusses the taxation of income from property while section V discusses the taxation of income from labor. Section VI discusses the administration of the statutory system, in which large discrepancies between the law and its implementation can have very important economic effects.

RAISING REVENUE

3. The most basic attribute of a tax system is the amount of revenue that it raises. This revenue provides the income that allows government to do things for its citizens. These are the apparent benefits from a tax system. The revenues also represent one of the costs of the tax system. This direct cost arises because whatever the government gets is that much less that private individuals can spend on their own. There are other, less direct costs to the raising of revenue addressed below, but this contrast of a benefit with the direct cost immediately brings to mind a tradeoff between the size of the public sector and the size of the private sector.

4. The tradeoff between the size of the private and public sectors is a very important one, but one that this report does not address. The assumption is that a decision has already been made on the desirable amount of revenue to raise and therefore on the direct cost that taxpayers are to incur. In other words, the alternative tax reforms discussed in this report preserve revenue neutrality. They represent different ways of raising the same amount of revenue, with different relative strengths in terms of their indirect costs. Many governments want to minimize these indirect costs, and the report suggests how to do so in the case of Egypt.
MINIMIZING DISTORTIONS

5. A number of indirect costs to the private sector must be added to the direct cost of taxation that is the transfer of resources from the private to the public sector. The first category of these indirect costs is deadweight loss, so named because it represents loss to the private sector without a corresponding gain to the public sector.

6. These losses arise from tax avoidance by the private sector. These are legal, legitimate choices that individuals and firms can make to change their behavior in ways that have the immediate effect of decreasing their tax payments. Of course, taken together taxpayers cannot decrease the direct cost to them of the tax system. The government will keep adjusting the tax system to raise the same amount of revenue. But individual taxpayers will see the situation differently; each person will view his own actions as having no effect on the tax system, but as decreasing his own tax burden.

7. What each of these avoidance activities represents is a change in behavior from what individuals preferred to do before the government taxed them. It is these distortions in behavior that lead to the deadweight loss.

8. To take a concrete example: Say person A is not a very good house painter but his neighbor, B, is, while A is a good gardener and B is not. In the absence of an income tax, it is to A’s and B’s mutual advantage for A to pay B to paint A’s house while B pays A to look after B’s garden. By contrast, when there is an income tax that is sufficiently high, A may find it more desirable to paint his own house and avoid income taxes on the money he earns from gardening, while B does the same by looking after his own garden. Neither A nor B pays any taxes in this fanciful example, but both of them are inconvenienced, and a dollar measure of this inconvenience is the deadweight loss. This dollar measure could be obtained from knowing how much A and B would be willing to pay to go back to the old situation without any income tax. Obviously it is less than the tax they could have paid to go on with the old system, but chose not to. How much less may be a hard question to answer. Other times these switches in activities may not be made because individuals may find it advantageous to continue some
taxable activities and so the government meets its revenue target, although private individuals taken together experience some deadweight losses.

9. In many practical comparisons between alternative tax rules, however, one need not have a precise knowledge of the magnitude of the deadweight loss. Instead, it is possible to rely on many qualitative rules that use general principles to say that one way to raise a given amount of revenue results in less deadweight loss than another because it distorts behavior less. Much university research has been devoted to developing these types of rules, and many of the more practical of them have been put into operation by the World Bank and are described in World Bank documents.1

10. Later on, the report discusses general rules of this type. Just now, however, we turn to other general considerations that condition our thinking about the design of tax systems.

CORRECTING MARKET FAILURES

11. While taxation introduces distortions in behavior that lower well-being, taxation can also be used to correct distortions that occur in the private economy by altering undesirable private behavior. The taxation of polluting activities is one example of this use of the tax system. Of course, any case for government intervention to correct a failure in private markets must be made convincingly. Policies designed to correct market failures that do not exist will change behavior, but in an undesirable way.

EASE OF ADMINISTRATION

12. Additional costs of the tax system arise because the government has to administer the tax system and taxpayers have to comply with the tax system. The government’s administrative costs consist of the salaries of auditors and inspectors and the facilities that they use. The

1 See the recent paper by the Public Economics Division, World Bank, Lessons of Tax Reform (Washington: World Bank, April, 1991).
private costs of compliance consist of the keeping of records and the filing of forms, and in any distortions that arise if they re-arrange their activities to evade taxes. These last losses parallel the deadweight losses that arise from tax avoidance.

13. While the government wants to keep its administrative costs low, it must do so in ways that ensure that taxes are paid. The government should also design the tax system taking into account the costs of taxpayer compliance.

ATTENDING TO EQUITY

14. A final and very important attribute of a tax system is its influence on the distribution of economic well-being among different individuals. Different configurations of the tax system have different effects on individuals with different incomes, and governments want to take these effects into account.
II. Sources of Revenue in Egypt

Table 1: Tax Revenue by Source (%)

<table>
<thead>
<tr>
<th>Type of Revenue</th>
<th>Actual 89/90</th>
<th>Prelim 90/91</th>
<th>Projected 91/92</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Profit</td>
<td>31</td>
<td>36</td>
<td>32</td>
</tr>
<tr>
<td>Personal Income</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Goods and Services</td>
<td>24</td>
<td>22</td>
<td>27</td>
</tr>
<tr>
<td>Customs Duties</td>
<td>25</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>Stamp Taxes</td>
<td>9</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: IMF

15. As Table 1 shows, almost half of tax revenue comes from the taxation of commodity transactions, 49% of all tax revenues in 1989. These revenues include both tariffs and sales taxes, and the ways they operate are discussed in section III. Most of the remaining revenue comes from taxes on incomes, primarily company incomes but also private incomes. Taxes on incomes from property including corporate profits are discussed in section IV, while taxes on incomes from labor are discussed in section V. The stamp taxes, themselves a very diverse group, and miscellaneous other taxes account for the remaining approximately 15% of total tax revenue.
III. **The Main Indirect Taxes in Egypt**

16. The two most important indirect taxes are the tariffs on imports and the sales tax. Both of these groups of taxes have been restructured within the last six years. While important improvements should certainly still be made in each of these taxes, the recent reforms have been generally very desirable, and the priority for further tax reform in Egypt should be the direct taxes on business and personal incomes.

17. The tariff is applied on the importation of commodities to Egypt. The sales tax system consists of a number of schedules for the taxation of commodities and services. The tax is due when a sale is made by a manufacturer, when a service is sold, and when a commodity is imported. In the case of imported goods, the sales tax is applied to the price of the commodity inclusive of the tariff.

18. In the rest of this section, the report outlines the strengths and some remaining shortcomings in the indirect tax system.

A. **Tariffs versus Sales Taxes**

19. Among the rules that are directly relevant to Egypt’s situation is that it is desirable to tax all consumption of a particular commodity at the same rate regardless of whether it is imported or produced domestically. That is, it is better to raise revenue using a comprehensive sales tax than an import tax. With the exception of the last increases in tariffs, Egypt’s recent reforms have been consistent with this rule, because they appear to have downgraded the importance of the tariff system in raising revenue relative to the sales tax. Furthermore, with the exception of some commodities listed in schedule 1 of the sales tax law, the sales tax is applied at the same rate to goods whether domestically produced or imported.

20. The reason for taxing domestic production and imports at the same rates is as follows: Both taxes on sales and import tariffs applied at the same rate result in the same increase in the price of the commodity and therefore in the same distortion in consumer behavior. The
consumer chooses to spend some of what he previously spent on the newly taxed commodity on other things that do not bear the tax but that give less satisfaction than his original pre-tax bundle of purchases. But the import tax (tariff) has one additional distorting effect that can be very serious. It raises the price that domestic producers get for the newly taxed goods and causes them to leave other activities in which they are efficient for activities that are only attractive to them because there is a tariff. Furthermore, to raise the same amount of revenue as a sales tax, the tariff would in fact have to be much higher because it is applied only to imports, a narrower base for taxation than all domestic consumption. This causes even more distortions in consumer and producer behavior, and even more deadweight loss.

21. Thus if the comparison is between a sales tax and a tariff that raises the same revenue, the Bank (and many others) recommends a sales tax. Indeed, estimates for the Philippines suggest that the ratio of deadweight loss from raising an extra dollar of revenue from higher tariffs can be 50 times the cost from raising that same extra dollar through additional sales taxes.²

B. THE TAXATION OF INPUTS AND CASCADE:

22. Cascading occurs if inputs to the production of a commodity are taxed, the inputs to these inputs are taxed (and so on), and the commodity itself is taxed. It, and more generally the taxation of inputs, result in several problems:

23. First, cascading means that commodities that are produced in many stages by separate firms have prices that incorporate more tax than commodities produced in fewer stages. The effect of the tax system is therefore to tax heavily the consumers of multi-stage goods and to discourage the consumption of these goods. Of course, it is always the case that taxation on discourages consumption. The tax system, however, should be designed with a rate structure that affects consumption in ways that minimize deadweight loss or discourage socially undesirable

consumption, rather than in ways that arise arbitrarily from the number of firms through which a commodity passes. Furthermore, while commodity taxation always taxes heavily individuals who consume relatively more of heavily taxed goods, the rates should be chosen explicitly to affect particular groups, perhaps the rich, and not as a by-product of how many firms the commodity passes through before it reaches the final consumer.

24. In principle, the pattern of tax rates could be designed to offset this effect of cascading by adjusting taxes so that the effect on the final price was what was desired for economic reasons rather than what was arbitrarily produced by the number of firms involved in production. In fact, however, such compensation would be wholly impractical as it would involve a tailor-made system. In particular, the same good used in production of several other goods would have to be taxed differently depending on the number of stages of production of each particular good that it was to be used to produce. Furthermore, such a tailor-made system would still have undesirable effects relative to a system that taxed only final sales (or, what is the same thing, value added at all stages), as follows.

25. A second problem with cascading sales taxes is the incentive they provide to firms to find ways to economize on their use of inputs in production to avoid the tax. Such substitution is not without its costs, and it introduces inefficiency into the production process. This is a kind of deadweight loss, and one that can be completely avoided by a tax system that does not tax inputs if it can tax the final consumption of the product; this is a fundamental rule of commodity tax design.

26. Third, firms will try to avoid the taxation of inputs by forming integrated enterprises that merge many stages of production into one firm to avoid taxes at intermediate stages. It may not, however, be efficient for the same firm to undertake this number of stages of production, so that a cascading tax system will induce a further type of inefficiency. Firms may also set up ownership links among firms so that producers of inputs can sell at artificially low prices to the next stage, thereby avoiding taxes and maximizing the profits of the jointly owned group of firms. It may be possible to deter partially such transfer pricing through the evaluation of
transactions at reference prices obtained from transactions among independent firms, but at very considerable administrative cost.

THE TAXATION OF INPUTS IN EGYPT

27. The Egyptian sales tax tries to avoid cascading and its effects by taxing only at one stage, that of the manufacturer, importer or service provider, and by allowing these taxpayers to deduct the sales taxes paid on some of their inputs from the tax that they owe on their own sales. These are good features of the system, but they are not wholly successful in avoiding all the problems of cascading.

28. First, the law does not allow all taxpayers to subtract the sales tax that is paid on all the inputs that they use. For one thing, it is not clear whether manufacturers can claim a credit for taxes paid on capital equipment, but equipment is an input just as are materials. Capital equipment is easy to exempt because many items are never used for personal consumption, and therefore evasion by diversion from use in production to private consumption should not be a problem. An exception may be construction inputs that could be diverted to home construction.

29. Another problem is that firms, to the extent that they can subtract the taxes that they pay from what they owe, are not entitled to a rebate for taxes paid in excess of taxes owed, but can merely carry forward the excess taxes paid for subtraction in the future. In the Egyptian situation of high nominal interest rates, on the order of 20%, the carrying forward of the excess sales tax diminishes its real value. This problem of excess tax on inputs is not likely to be general, because most firms should be owing more tax on their outputs than they pay on their inputs. New firms or firms that are making major expansions may have to carry over taxes on capital equipment, leading to the problems of cascading because delay means that these credits, if allowed, lose value.

30. Firms that produce commodities on schedule A of the General Sales Tax Law, however, find that they effectively cannot subtract the taxes they pay on their inputs. These goods are exempt in that no taxes are paid when they are sold, but they are not zero-rated as exports are
because firms producing these goods are not allowed to obtain a rebate for the taxes they pay on their inputs. These firms therefore face all the undesirable effects of a system that taxes inputs. Schedule A commodities include some food processing industries that must be relatively important in the Egyptian economy, as well as the printing and publishing industry. To avoid the undesirable effect of input taxation in these industries, firms should be allowed a rebate for the taxes they pay on their inputs. This will also avoid any taxation of these goods arising from the taxation of their inputs, and these are goods that the Egyptian government apparently wishes to see untaxed because they are consumed by the poor or because it wants to encourage access to printed materials. Similar problems may occur for goods on schedule B, that are taxed only at 5% if their inputs are taxed at sufficiently higher rates that the firm pays more taxes on its inputs than it owes on its sales.

31. Another way in which producers are not allowed to subtract the sales tax that they pay on all their purchases of inputs is if they purchase from wholesalers or traders who do not themselves have to charge tax on their sales but who have been charged tax on the purchase of their own inputs. For instance, imported inputs that are brought in by traders rather than by manufacturers directly are taxed, and there is no provision for crediting the tax the trader has paid if a manufacturer purchases from the trader. This consideration induces manufacturers to do their own importing, which may be inefficient. Furthermore, it discriminates against small manufacturers who cannot easily import but who might be more efficient than large manufacturers in production. Similar problems may arise if the manufacturer buys from a wholesaler or retailer who has already paid taxes to a manufacturer.

32. Furthermore, taxpayers who use goods from schedule 1 and schedule C and services from schedule 2 of the General Sales Tax Law may not subtract the taxes paid on them from the taxes they owe when they use them as inputs. For most of these goods and services, this disallowance is not relevant, because these goods are items of final consumption such as tea and tobacco or tourist services. Iron bars and hydraulic cement are, however, inputs to production and taxes

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3E. Ahmad and N. H. Stern, *The Theory and Practice of Tax Reform in Developing Countries* (Cambridge: CUP, 1991) show that in Pakistan the taxation of exempt commodities through the taxation of their inputs can have important effects.
paid on them should be subtracted from the taxes paid by producers whether these materials are used to produce commercial buildings (themselves an input to production) or private homes. In the latter case, it is purchase of the private homes that should be taxed, while if it is impossible to tax homes, a credit for these taxes should at least be allowed against the taxes paid on the sale of commercial buildings. Similarly, companies offering sound and light shows should be able to subtract the taxes they pay on the utilities that they use for the shows; what should be taxed is the final consumption of sound and light shows by the tourists perhaps at a higher rate than currently.

33. Another special case appearing in schedule C is petroleum products. While petroleum products are often an input to production, this tax plays an important role in correcting market failures that arise because it is difficult to charge for the use of roads directly. In particular, vehicles that use a road cause two types of costs for which they are not charged directly. Vehicles damage roads, increasing the costs of road maintenance and imposing costs on other vehicles that end up using rougher roads than otherwise. Furthermore, primarily in cities, vehicles create road congestion that is costly to the drivers of other vehicles. Vehicle operators can be discouraged from creating these costs by taxes that induce them to use their vehicles less. Because both commercial and private vehicles create these costs, a sales tax on transport inputs applied without subtraction from sales taxes that are owed is the appropriate remedy for these otherwise unchargeable costs. Current practice in Egypt of not allowing any subtraction for the sales tax paid on petroleum products is therefore a correct policy.

34. That the law does not allow taxpayers to subtract sales taxes paid on the items listed in schedules 1, 2 and C seems either appropriate, or not to matter very much except in the case of some inputs to construction. A bigger problem is that the producers of these items are not allowed to subtract the taxes paid on their own inputs from the sales tax that they owe, which mean that all these sectors experience the distortions of cascading.

35. A second major area of problems with systems like the Egyptian one is that by being based at the level of the manufacturer they inevitably tax the inputs to subsequent stages, and firms at these subsequent stages try to economize on the use of the manufacturer's product with
a consequent inefficiency. For instance, repair shops that use tools may buy cheaper tools and use more labor to provide services. Restaurant owners may choose cheaper furniture and provide more food in less comfortable restaurants. In these and many other ways, a tax at the manufacturer level induces inefficiencies.

36. By contrast a comprehensive value added tax (VAT) is collected at all stages of sales including retail sales. Cascading and the taxation of inputs is avoided, however, because the tax paid by the purchaser is subtracted from any tax that may be owed on the firm's sales, and if the taxes paid exceed taxes owed, the firm is rebated the difference. If the VAT is the same for all commodities, any firm that sells more than it buys (i.e. any profitable firm) finds that on balance it pays no tax on its inputs. Only the final consumer pays the tax, because he has no sales against which to credit the tax he has paid. Thus the VAT does away with all the problems of cascading. But a comprehensive VAT is probably beyond Egypt's administrative capacity at this time.

37. Because the Egyptian tax only applies at the manufacturing stage, there is an incentive to push activity to the next stage to minimize the tax burden. This can be done by two independent firms if the wholesaler takes on certain activities that the manufacturer might otherwise have done to prepare the commodity for sale. Or, it might be done by two firms with common owners in which the one that manufactures charges the one that wholesales an artificially low price.

38. A last aspect of cascading in the Egyptian system arises in the delay involved in the way that exports are zero rated. Under a zero rating system, exports generate payments from the tax authority to the exporters because firms have credits for the taxes paid on their inputs but do not pay taxes on their sales to international markets. If these payments were not made by the government, these firms would have an incentive to economize on taxed inputs and distortions would be introduced. Furthermore, the cost of the commodity would increase to reflect the taxes on its inputs; it would not be truly tax-free. The zero-rating of exports in which Egypt cannot affect the price it receives in international markets is an appropriate policy. To tax such production would distort the production structure away from goods in which Egypt is a relatively
efficient producer, without a compensating gain from a rise in the price that it receives. While Egypt does rebate sales tax paid on the inputs to exports, the legislation provides that this rebate need only be paid within three months. This delay diminishes the value of these rebates somewhat (by about 5% given the current nominal interest rate of 20%) and leads to some of the effects of cascading. To correct this problem, the government would have to pay interest on the outstanding rebates.

39. Having zero-rated commodities, however, may raise problems of their own. Without zero-rating, the worst that can happen is that an evading firm pays no tax. With zero-rated commodities a firm that can generate fraudulent receipts for taxes paid on its inputs could actually cost the government money.

C. RATE STRUCTURE

40. So far, the discussion has been largely about who pays the tax on what type of transactions, and not about how much is paid. It was possible to state some fairly general principles: Inputs including capital equipment should be untaxed. Rebates on the excess of sales tax paid on inputs over that owed on sales should be refunded, and with interest for delays. Imports and domestically-produced goods should be taxed at the same rate. Next comes a set of considerations that are more difficult to be specific about, but which are nonetheless very important. They determine the structure of tax rates on those goods that can and should be taxed and affect how much is raised from indirect taxes, what the deadweight loss is, and the impact on equity.

41. One type of deadweight loss induced by the sales tax is associated with the change in consumption patterns as consumers respond to the pattern of taxes. When economists first thought about these considerations they emphasized such rules as tax the most those commodities that have the lowest price elasticities of demand. Because consumers cut their purchases the least in response to increases in the prices of such goods (due to taxation) there is the least distortion in behavior and therefore deadweight loss from taxing such goods.
42. More recent examination of these issues has shown, however, that the design of tax rates to minimize deadweight loss is much more complicated than was first thought. The old price-elasticity rule looked at each good in isolation, but more recent analysis stresses the need to look at the effect of taxing one good on the consumption of all other goods together, including leisure.

43. Once this principle is recognized, it becomes clear that it is necessary to know the whole pattern of demand behavior to design a tax structure that minimizes deadweight loss arising from the substitution among commodities. In fact, the pattern of tax rates produced by such an analysis may be highly differentiated and in any case requires a great deal of information to compute. In some cases, it may produce a system that is very different from the low price-elasticity formula. For instance, there are plausible patterns of consumer behavior (demand functions) that would produce the rule that deadweight loss is minimized by taxing most heavily those goods with demands that respond least to changes in income. Such a system would tend to tax poor people most, because the poor consume disproportionately those goods with demands that respond least to increases in income. It would therefore be undesirable from the point of equity. All things considered, and especially given that the most recent household expenditure survey in Egypt with which to study demand patterns is not yet available, it is probably infeasible to base the design of the sales tax on these considerations except in the roughest of ways.

44. To some extent, the government can design elements favoring the poor into the structure of commodity taxes. It does so by lowering the tax rates on commodities that are disproportionately consumed at low incomes and raising them on goods that are disproportionately consumed by the rich. Examples of commodities that might get low rates are unprocessed foodstuffs and bicycles. Examples of commodities that might be taxed relatively

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highly are motor vehicles used for private transportation. A recent study in the Ivory Coast argues that telephone services is primarily purchased by better-off consumers in relatively poor countries, and so is a good base for taxation by governments that want to raise revenue while lessening the burden on poorer consumers.

45. Opinion is split over the desirability of taxes on alcohol and cigarettes, two traditional targets for high taxation. Some analysts argue that these two goods are relatively price-inelastic, suggesting that deadweight losses may be low. Others argue that these goods are relatively income-inelastic, i.e., the poor consume them disproportionately. Furthermore, a traditional argument that these goods should be taxed because their consumption often affects consumers in undesirable ways is undermined by their price-inelasticity, which means that taxation will not easily change the amount people consume. In any case, in Egypt as in most Muslim countries the taxation of alcohol is a relatively unimportant tax base.

46. Unfortunately, because there exists no recent household expenditure survey for Egypt that is now available, it is not possible to design an equity-oriented sales tax based on Egyptian expenditure patterns at different income levels. It is an important priority to process the current survey so that it can be used in tax analysis. Without a household survey, it is impossible to make confident statements about how to choose rates.

47. Despite the lack of a mathematical representation of consumer behavior in Egypt based on statistical information, it seems possible to make some general comments on the Egyptian rate structure:

(a) Many unprocessed, basic foodstuffs are not taxed, although taxes paid by their producers are not rebated. They are therefore exempt, rather than truly zero-rated and there are potential problems of the type discussed in the section on cascading. Furthermore, it is possible that some of these goods pay significant

implicit taxes via the taxation of their inputs, but information to judge this is not available. Assuming that the exemption really does lead to low taxation of these goods, it seems justified on equity grounds. It would seem sensible to classify some of the other food items presently taxed at 5% into this category. Agricultural inputs presently taxed at 5% could also be included on the exempt schedule or even better should be zero-rated like exports.

(b) The basic rate of taxation is 10%, the rate applied to goods that are not separately listed. This is not a particularly high basic rate by international standards.

(c) Many luxury items are taxed at the higher rates of 20 and 30%. There does not seem to be any rationale for distinguishing between these two lists of goods, and it would seem desirable to merge them, perhaps at a common rate of 25%.

By removing the 5% category and collapsing the 20% and 30% category, the rate structure will be somewhat simplified.

48. Another issue is whether the tax should include services. In general, there is no economic distinction between the consumption of commodities and the consumption of services. Both should enter the base of the sales tax, whereas currently only commodities are taxed. By exempting services, the sales tax gives up a potential revenue base that would allow other taxes to be lowered. Exemption of services provides inappropriate incentives to consume services relative to commodities. Because the providers of services cannot deduct the taxes that they pay on their purchases of inputs, their behavior is distorted away from the use of these inputs. Furthermore, the exemption of services gives an incentive to manufacturers to shift value added to firms that produce services to avoid the tax, and this avoidance not only lowers revenues but may result in an inefficient division of production activities between the two sets of firms. These problems have already been discussed in detail in the section on cascading.
49. Once services are taxed, producers using services should be allowed to subtract the sales tax paid on them from the sales tax they owe, just as they can now subtract the sales tax paid on the use of intermediate commodities. Furthermore, providers of services should be allowed to subtract the sales taxes that they pay on their inputs from the taxes they owe on their sales of services. Finally, when these services are included in the sales tax system, the stamp taxes currently levied on many services should be rescinded, as they will then be redundant. As currently applied, the stamp taxes on services involve all the undesirable features of cascading.

50. Application of these principles to specific cases suggests that personal use of telephone services should be taxed; business use should not be. In fact, personal use of telephones is probably a good target for taxation because it is purchased disproportionately by richer consumers in developing countries. Residential use of electricity is probably also a good target. In both cases, taxation on top of pricing at long-run marginal costs of production will mean prices above these costs, but this outcome applies to all goods and services that form part of the tax base. To the extent that the sales tax can be broadened to include services, rates can be lowered on other commodities while revenues are maintained. Nonetheless, as with commodities, it may not be practical to tax services produced by small vendors, including individual professionals. The tax on some services, such as home repairs, may be easily evaded, or the tax can be avoided by individuals who do their own repairs.

51. As noted in the section on cascading, the taxation of transport services requires special treatment because the use of roads causes wear and tear on them and congestion. These costs can only be charged for indirectly by vehicle registration fees and by taxing vehicles, their spare parts and fuels. The optimal choice of these tax rates is a complex question that requires a special study. It is not possible to say whether current Egyptian rates are the best choice, but some indications are possible.

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52. World Bank studies have shown that truck traffic and passenger traffic should be taxed at approximately the same rate.\textsuperscript{8} Trucks cause more road damage but they operate largely on uncongested interurban roads, while passenger traffic creates more congestion but less road damage. Egypt is a country with big, congested cities, and congestion costs are certain to be significant. What is clear is that business should not be allowed to subtract taxes on transport inputs, otherwise the extra costs of transportation in congestion and road damage will not be communicated to them. This is a notable exception to the general rule of crediting the tax paid on production inputs, stated earlier. As noted, current Egyptian practice is to include petroleum products in schedule 1, so that these sales taxes may not be subtracted from the sales tax that a taxpayer owes. This is a desirable exception to the subtraction of sales taxes paid from those owed, and should be extended to the taxes on other transport inputs such as vehicles, spare parts and tires that have the goal of discouraging congestion and road damage.

53. Another special area of tax design is the taxation of tourism to Egypt. Currently, some services specifically consumed by tourists are taxed at special rates under schedule 2 of the sales tax law, but these are at seemingly low rates of 5 or 10%. The key question here is what is the responsiveness of tourist expenditures in Egypt with respect to price (how much market power Egypt has) and how Egypt can best exploit its market power through a combination of taxes on admission to (or exit from) Egypt, accommodations, restaurants, tours, and access to individual museums and sites. It really does not matter that these tourists may be rich relative to Egyptians because taxation of them is not really an equity issue from the point of view of the Egyptian government. Rather, the Egyptian goal should be to maximize the benefits to Egypt from tourism. To establish these rates requires a special statistical study to analyze the elasticities of demand by tourists for the different vacation activities in Egypt.

54. Finally, the commodities of schedule 1 are taxed at specific rates, so much per unit of a commodity rather than a percentage of the value of the commodities as specified for most commodities subject to the sales tax. The advantage of a specific rate is that it is not necessary

to value the commodities, but merely to count them. One disadvantage of a specific rate is that the implicit percentage rate tends to be higher for lower quality products because the specific rates are not highly differentiated by quality. The most serious problem with excises arises if there is a failure to increase the specific rates with inflation. As a consequence the real value of the tax base can be severely eroded. In general, it would seem to be desirable to convert these specific taxes to percentage taxes on value.
IV. Taxation of Income from Property

55. This section assesses the taxation of income from property. Our strategy is to follow income from property through the tax system, starting when this income is first generated and ending with the last taxes paid on it by the ultimate recipients of property income, the individual owners of the property.

56. Property income originates in business enterprises and is taxed through the corporate income tax or the tax on commercial and business partnerships. At the next stage, income is paid either to individuals or to financial intermediaries. In the latter case, it is potentially subject to additional business taxes. When it is finally paid to individuals, income from property is taxed under the tax on mobile capital (primarily a tax on interest income). Finally, all sources of income received by individuals are aggregated and taxed again under the general income tax. There are also various stamp taxes due on different types of activities.

57. We discuss in detail alternative ways in which a given investor can finance different types of investments. The specific alternatives we consider are: (i) direct purchase by an individual of corporate bonds or corporate equity; (ii) direct purchase by an individual of ownership shares in a noncorporate business; and (iii) indirect purchase of corporate securities through investment in one or another form of financial intermediary. The alternative financial intermediaries we consider are banks, insurance companies, pension funds, and mutual funds. We also consider the alternative of these individuals investing abroad in foreign equity or debt, with the foreign corporations then investing in durable equipment in Egypt. In addition, we examine the relative tax treatment of investments classified by new vs. existing corporations, and the relative tax treatment of investments through retention of existing profits vs. the alternative of paying these profits out as dividends and raising further funding through issuing new shares.

58. The key ways that tax distortions affect financial decisions in Egypt are:

1. Large tax subsidies to corporate investment;
2. Tax penalties on noncorporate firms and smaller corporations;
(3) Tax subsidies to debt finance;
(4) Favorable tax treatment of financial intermediaries; particularly pensions and insurance; and
(5) Sharp tax distortions to individual portfolio holdings.

59. It should be noted that our conclusions apply for a moderate but significant inflation rate of the sort that Egypt has experienced recently. Effective tax distortions are very sensitive to the inflation rate. The distortions that we document would be much smaller at lower inflation rates.

60. In contrast to its indirect taxes, there has been no recent comprehensive reform of the Egyptian direct taxes. The currently operative laws have been enacted at different times. The current tax system may therefore have many unintended consequences, as provisions of different laws interact to produce a set of effects.

61. Throughout the discussion, we are looking primarily at the statutory tax system. The actual operation of the tax system may well differ from the statutes, but we have only hints of what discrepancies may arise. Our analysis of the incentives embodied in the statutes are therefore only one ingredient in a total assessment of what changes may be needed in the existing tax system. Section VI discusses how the taxation of income from property may be working in practice, and its implications for tax reform.

A. TAX TREATMENT OF DIRECT INVESTMENT IN A CORPORATION

PURCHASE OF NEW EQUITY

62. Probably the simplest way that individuals can use their savings to invest in durable equipment is to purchase corporate equity. We treat this form of investment as the base case, and compare its tax consequences with those of other forms of financial intermediation. We find that equity investments in firms registered on the stock exchange whose securities are publicly
subscribed are highly subsidized, while those in other firms are treated much less favorably. Also, equity investments in existing firms are highly favored relative to those in new firms.

63. To help clarify the following discussion of the incentive effects of the existing tax code, we describe the criteria we focus on. Under an income tax, a firm is taxed at some rate $\tau$. To what degree does the presence of this tax discourage new capital investments? When the firm undertakes a new investment, it will be taxed at rate $\tau$ on the revenue generated by this new investment. Offsetting this, however, the firm is allowed some extra deductions from its taxable income. Standard deductions include depreciation allowances and interest expenses. Often investment credits are available as well. By allowing these deductions, the government implicitly pays for some fraction of the cost of the original investment. If the new investment costs $I$, denote the present value of the resulting deductions allowed under the tax law by $I^*$. If the only deduction allowed were depreciation, then $I^* < I$ since the deductions in total sum to $I$ but they are spread out over the life of the capital, and this deferral makes them less valuable. The net cost of the investment to the firm is then $I - \tau I^*$, which we can reexpress as $I (1 - \tau^*)$ where $\tau^* = \tau (I^*/I)$. The key observation is that if $\tau^* = \tau$, then investment incentives are left unaffected by the tax — the government pays for $\tau^* = \tau$ percent of the investment and gets $\tau$ percent of the return, just as any shareholder would. Since adding another shareholder does not reduce the rate of return available on the project, neither does introducing a tax system in which $\tau^* = \tau$. Investment is discouraged by the tax system, however, to the extent that $\tau^* < \tau$, and subsidized if $\tau^* > \tau$. Under a classical value-added tax, investment expenditures can be deducted in the year of the investment, but depreciation and interest payments are not deductible, so that $I^* = I$. A value-added tax, therefore, leaves investment incentives unaffected. If only depreciation allowances are allowed, in contrast, then $\tau^* < \tau$ so investment is discouraged.
64. What are the characteristics of the Egyptian tax system? To begin with, corporations must pay corporate taxes on the taxable income generated by their real investment, regardless of how this investment is financed. The corporate tax imposes a tax rate of 40% on the profits of corporations subject to Law 159, except that corporations pay a lower rate of 32% on profits arising from industrial or export activities while corporations engaged in oil exploration and production pay a higher rate of 40.55%. Profits over LE 18,000 also pay an additional tax of 2%.

65. Taxable income includes any revenue generated from the output of this investment. From this revenue, the company can take a variety of deductions. In the year the new equipment is purchased, the corporation receives a one-time deduction equal to 25% of the cost of the equipment. In addition, the company can deduct depreciation allowances in the following years. These deductions are based on the original cost of the investment (despite the 25% deduction) and are calculated on a straight-line basis using quite conservative expected lifetimes for this capital. Since the deductions are based on the original nominal purchase price, and are not corrected for the effects of inflation, their value is reduced by inflation that occurs after the purchase of the capital.

66. In principle, under a true income tax, depreciation deductions should equal the real replacement cost each year of that fraction of the existing capital stock that needs replacement. Even if the conservative tax lifetimes were realistic, the lack of indexing for inflation leads to inadequate depreciation allowances. At current inflation rates in Egypt, however, the initial 25%

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9 In the footnotes that follow, we provide some illustrative benchmarks of how various tax provisions operate. We use continuous (exponential) discounting, and generally base the calculations on an inflation rate of 16% p.a., a nominal risk-free interest rate of 20% p.a., and therefore a real rate of interest of 4% per annum.

10 Typical tax lifetimes for equipment range from ten to sixteen years.
deduction mostly compensates for this effect. As the inflation rate changes, however, the effective tax rate can change materially.

67. Goods removed from inventories must be valued at the minimum of historical cost and market value. In a relatively high inflation environment such as Egypt's, historical cost will almost always exceed market value. Historical cost can be established either by a last-in-first-out rule or by the first-in-first-out rule. Firms will have an incentive to choose the LIFO option, and in most situations this option will avoid the taxation of purely inflationary gains on inventories, which is desirable on efficiency grounds.

68. A corporation can deduct any rent paid on the buildings it uses in its business. A corporation that owns buildings for business purposes can deduct what it would have paid to rent the buildings from another party. This deduction is in addition to the depreciation and expenses on the building that it is allowed to deduct. The total deduction on buildings is therefore larger if the corporation owns rather than rents, and naturally provides an incentive to do so. Furthermore, if the imputed rental deduction provides a competitive return on the cost of the building, investment in buildings is subsidized.

69. Corporations that are registered on the stock exchanges receive an important additional deduction. These firms can deduct an amount equal to the product of their paid-up equity and the Treasury Bill rate. The present value of these deductions depends on any difference between the Treasury Bill rate and the available net-of-tax discount rate used by the firm in discounting a nominally risk-free flow of income. Since individuals receive interest from Treasury Bills tax free, these two rates should be very close. If they are in fact equal, then the present value of

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11Assume, for example, that ten percent of the surviving equipment must be replaced each year. If the real interest rate is 4%, the present value of depreciation deductions under economic depreciation, if the original investment cost I, would equal \( \int_0^{10} 0.1e^{-0.04t}dt = 0.714I \). In contrast, under the current law, if the nominal interest rate is 20%, then the present value of the initial credit plus straight-line depreciation allowances is \( 0.25I + \int_0^{10} 0.1e^{-0.2t}dt = 0.682I \). At least at current inflation rates, the difference does not appear to be large.
the resulting deductions simply equal the amount of paid-up equity. If the investment were entirely financed by new equity, so that \( E = I \), then this deduction by itself is sufficient to cause \( r^* \) to be at least equal to \( r \), eliminating any effective tax on marginal investments. Since firms that are registered on the stock exchange receive not only this deduction based on their paid-up equity but also are allowed depreciation deductions, their investment receives a major tax subsidy. Investment by unregistered firms, in contrast, does not qualify for the paid-up equity deduction, imposing a large tax penalty on firms that do not register on the stock exchange.

70. In fact the subsidy created by the paid-up equity deduction is likely to be even larger. In the above calculation, the figure for paid-up equity remained fixed in nominal terms at the amount received from new equity issues. Under Egyptian tax law, however, two companies can increase their combined paid-up equity by merging. After the merger, the paid-up equity is calculated based on an accounting assessment of the existing firm's assets. This new value will be higher than the previous figure for the paid-up equity since previous investments financed out of retained earnings are included in the former but not the latter, and since the current value of assets will correct for the effects of inflation. The merger therefore raises the value of this deduction. Mergers also allow firms to calculate their depreciation allowances based on the revised valuation of these assets. The tax law therefore creates strong incentives favoring mergers, due to the right during a merger to write-up the paid-up equity and the book value of assets for depreciation purposes, without incurring any offsetting tax penalty. Mergers are costly to undertake in themselves, and the process leads to excessively large companies.

71. Equity issues are, however, subject to stamp duties. This tax applies at a rate of 0.8%

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12If \( E \) is the paid-up equity and \( i \) is both the Treasury Bill interest rate and the investor's discount rate, then the present value of deductions equals \( \int_0^\infty iEe^{-it}dt = E \). Note, however, that until recently these deductions were based on the low Central Bank interest rate rather than the Treasury Bill rate. The Treasury Bill rate is much closer to a market interest rate, implying that this deduction has recently become much more important.

13Investments in projects earning an above-marginal return will still face a tax on the excess return above the marginal rate. If these projects are available without effort, then this surtax does not distort decisions. In general, however, innovation and entrepreneurial effort would be discouraged by this surtax.
to the market value of traded securities and 1.2% to the book value of untraded securities. The market value of traded securities tends to increase with inflation. In a relatively high inflation environment such as Egypt’s, the market value of shares rapidly exceeds their book value. Even with the difference between 0.8% and 1.2% in favor of traded securities, the book value of equity will be sufficiently smaller than the market value given the high inflation rate in Egypt that the stamp tax imposes a sharp penalty on market trading in securities.\textsuperscript{14} Nonetheless, the present value of a 1.2% tax on the book value of equity is minor compared with the above deductions.

72. So far, investment by corporations registered on the stock exchanges is highly subsidized, while the effective tax rate on investment by unregistered corporations is close to the statutory tax rate. We have not yet taken into account the effects of tax holidays. These tax holidays exempt all new corporations with more than 50 employees from both the corporate income tax and the stamp tax for a fixed period, and exempt any other new corporations approved by the General Authority for Investment. These firms normally qualify for an initial five year holiday. These holidays are automatically extended for two years if the local component in machinery, equipment and fittings exceeds 60%. Investments in land and buildings are, however, excluded in this calculation. Furthermore, the tax holiday can be extended beyond the original 5 years for up to 5 additional years at the discretion of the Authority for Investment. Special investments qualify for even more favorable tax holidays than those generally available. These include holidays for investment in new urban communities (10 year exemption) and free zones (indefinite exemption, but with a fee of 1% on the value of all goods entering or leaving the zone).

73. The value of these holidays depends critically on the degree to which these firms would

\textsuperscript{14}If the book value of equity is denoted by $B_b$ and the nominal discount rate equals 20% as before, the present value of a stamp tax on the book value of equity equals $\int_0^\infty 0.012B_b e^{-0.2t} dt = 0.06B_b$, which is minor compared with the previous deductions. In contrast, if the market value of equity grows at two percent per year in real terms, then the present value of the stamp tax on the market value of equity equals $\int_0^\infty 0.008B_b e^{-0.02t} dt = 0.06B_b$, which is far larger than the tax based on the book value.
have positive taxable income during their first five years of operations. Although losses incurred during this period can be carried forward for five years, firms that have tax losses during each of their first five years in business would gain relatively little from the holiday, since they had no profits subject to tax in any case.\textsuperscript{15}

74. Existing firms that set up new subsidiaries that qualify for the holiday potentially gain much more than entirely new firms.\textsuperscript{16} Through use of transfer pricing, the existing firm can transfer its profits to the exempt subsidiary and transfer deductions to the original and taxable firm. This can be done by having the original firm overpay for goods it buys from the new and exempt subsidiary and undercharge for goods it sells to the subsidiary. There is no logical upper limit to the extent of this tax arbitrage, other than the effectiveness of the auditing by the tax authorities. Tax authorities in even the most mature economies find it very difficult to prevent transfer pricing. As a result, the availability of tax holidays can lead to low taxation of the corporate sector as a whole.

75. Existing firms can also qualify for a holiday on the income generated by new investments they make directly rather than through a new subsidiary. A firm undertaking investment that qualifies for such a holiday is taxed on only a fraction of its profits, with the fraction equal to the ratio of the book value of its existing capital to the book value of the existing plus the new capital. If book values correctly measured the real values of existing vs. new capital, and if the firm earns the same rate of return on both, then this system is equivalent to exempting the return on income generated by just the new investment. The relative book value of existing capital will in fact be very much understated, however, since inflation would have eroded the real value of these figures, but not those of the newly purchased capital. As a result, the firm qualifies for an exemption on the income from some of its existing capital as well as on the income from the new capital. Firms that have been earning an above normal return on their existing capital will

\textsuperscript{15}While they gain nothing from the exemption under the corporate income tax, they still can gain some from exemptions under the tax on movable capital and the general income tax.

\textsuperscript{16}Since the law favors new firms with at least fifty employees, these new firms are very likely to be set up by existing firms, since individual entrepreneurs would have a difficult time raising sufficient funding to start a firm at this large a scale. Even if they had the funding, they would likely choose not to, in order to test the waters before investing at a large scale.
have a yet stronger incentive to invest in new capital, even if the return this capital earns is only marginal, since the above rules allow it to shelter from tax some of the above-normal profits it receives on its existing capital. The primary beneficiaries of tax holidays should therefore be existing firms rather than genuinely new firms. By imposing a tax penalty on new firms, the policy discourages market entry, and therefore discourages market innovation and competitive pressure on existing firms.

76. Note that throughout the discussion, we have been assuming that the firm always has enough taxable income to use all deductions to which it is entitled at the time the deductions become available. If the firm’s taxable income from all sources is negative in any year, however, it cannot claim a rebate but is simply allowed to carry these losses (its unused deductions) forward for five years, using them to offset taxable income in these years. If the deductions cannot be fully used within five years, what remains is no longer usable. Furthermore, the deductions (tax losses) stay fixed in nominal terms and in a period of high nominal interest rates, their real value rapidly deteriorates. Given the many deductions allowed under the corporate income tax, many Egyptian firms are likely to have tax losses.

77. How does the existence of tax losses change incentives? If a firm always has tax losses, then it never pays corporate income taxes, and the effective corporate tax rate on new investment is zero rather than negative. If, in contrast, a firm now has tax losses, but expects to have profits in the future (a common occurrence for new firms), then the effective tax rate on new investment will be much less favorable than for other firms. Tax savings on the initial deductions are less valuable since any use of them is postponed in time, whereas taxes due on the profits that result from the investment are likely to be taxed when earned. Since a postponement in the use of deductions for three years cuts their value virtually in half, given the current inflation rate

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17 Another alternative available to a firm earning an above normal return is simply to shut down after its initial holiday period is over, and restart as a new firm. While the physical assets it previously used are not eligible for a second exemption period, forcing the firm to sell these assets and either buy new capital or lease existing assets, the profits that result from the ideas embodied in the firm can be sheltered indefinitely through this device.
in Egypt, investment by firms with current tax losses can be at a substantial tax disadvantage relative to investment by other firms.

78. Rather than lose a substantial fraction of the value of its tax deductions, a firm with tax losses is likely to take advantage of one of various means to make use of these tax losses. One approach is to merge with an existing firm that has taxable profits, allowing the losses from one firm to be deducted concurrently against the profits of the other firm.

79. Another strategy is to lease equipment from the profitable firm. The profitable firm then owns this capital, and can make use of all deductions that result from it. The amount charged in lease payments to the firm using the capital should reflect the amount of taxes saved by the profitable firm in the process. In principle, lease payments should be postponed until the original firm no longer has tax losses, so that these payments can be deducted. In the U.S., firms are very creative in the design of these lease contracts in order to take full advantage of the potential tax savings. Unrestricted use of these leasing arrangements enables firms with current tax losses to make as much use of the deductions for new investment as can firms with taxable profits. This equalizes the effective tax rate on new investment across otherwise equivalent corporations, so that economic rather than tax factors determine the allocation of capital among these firms.

80. Leasing or a similar mechanism is generally desirable, because otherwise the tax system will discourage investments that generate tax losses at some stages but are otherwise worthwhile. A problem arises, however, if the leasing firm abuses or puts the equipment at risk in ways that it would not if it were the owner; such behavior may be difficult for the lessor to prevent costlessly. To get the advantages of neutrality among investments that leasing tends to provide without these ancillary disadvantages, one approach is to allow firms to carry losses forward indefinitely with the potential deduction accumulating interest each year to compensate for the delay in taking the deduction. Alternatively, the tax system can be modified to allow the sale of tax deductions among firms, so that tax losses can be transferred among firms without the need for transfers in the ownership of equipment.
81. So far, we have said nothing about the personal taxes due on income from corporate equity. To begin with, dividends are exempt from the movable capital tax, but in principle are subject to the general income tax. Capital gains, in contrast, are not taxable to individuals. The taxable income generated by dividends is, however, reduced by a variety of deductions. First, these dividends are exempt during those years a new firm qualifies for a tax holiday. After the holiday is over, this dividend income is exempt from the general income tax to the extent to which they are under 10% of the original face value of the equity, or under 20% of the original face value if the corporation offers its shares for public subscription with 40% of its capital paid-up. In the U.S., dividends equal only three or four percent of the market value of firms. If the dividend payout rate were comparable in Egypt, then this deduction should wipe out any taxable income from dividends for several years, until inflation has sufficiently eroded the size of this exemption. Once some dividend income becomes taxable, individuals are still taxed on only half of the amount left after the exemption, as long as the equity is listed on the stock exchange, further reducing the net tax liability. On net, these various deductions reduce the effective tax rate on dividends by almost two-thirds.

82. In fact, the effective tax rate on dividends will be much lower than this, since individuals in high tax brackets will likely own primarily shares in firms still subject to the holiday provisions, which make their dividends tax free. Once the dividends on these shares become taxable, these individual have the incentive to sell the shares to someone in a lower tax bracket, for whom the tax costs are much less. Since there are no capital gains taxes under the general income tax, there is no offsetting cost to this investment strategy.

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Dividends from existing firms that undertake an exempt project appear to be exempt as well if this project were financed by new equity issues.

If dividends start out at 3.5% of the initial equity, and grow at a real rate of 1% per year, so grow at a nominal rate of 17% per year, then dividends will first exceed the exempt amount of 10% of the original contribution in the seventh year. Given that from this date onward only half of the excess is subject to tax, and if the individual's marginal tax rate under the general income tax is \( m \), then the present value of taxes paid on dividends generated by the initial investment of \( E \) is

\[
\int_{7}^{\infty} .5m(0.035Ee^{-0.17c} - .1E) e^{-2c} \, dc = m(.41E).
\]

In contrast, if all dividends had been taxable from the beginning, then the present value of tax payments would have equaled \( \int_{0}^{\infty} 0.035Ee^{-0.17c}e^{-2c} \, dc = 1.17mE \). The effective tax rate on dividends is therefore only \((.41/1.17) = .35\) times the statutory tax rate.
83. Individuals are also allowed a deduction each year under the general income tax for new deposits in banks or for amounts spent purchasing corporate securities, government bonds, and investment or savings certificates, up to the smaller of: 1) 30% of net income, 2) LE 3,000, or 3) the difference between LE 4,000 and the individual's premiums for life insurance. If the personal savings rate is 15% and half of personal savings would be invested directly in corporate securities (an extremely high fraction), then the constraint that only LE 3,000 can be deducted would not be binding until an individual's income exceeds LE 40,000, which is over fifteen times the average annual income in Egypt. For almost all individuals, therefore, further investments in corporate equity can be deducted from taxable income under the general income tax in the year the purchase is made. As a result, if all cash-flow received from equity were taxed in full, then the net tax rate on equity would be zero — the government pays through the initial deduction for m percent of the cost of the investment and receives m percent of the return on this investment. This would require that all dividend income and all proceeds from the sale of equity, and not just the capital gains, be taxable. Since in fact only half of dividends are taxable, further deductions are allowed for investments qualifying for tax holidays, and all proceeds from the sale of equity are exempt, there is a very large subsidy to investment in corporate equity, equal to the value of these extra tax deductions and exemptions. Therefore, almost all investors face a net tax subsidy under the general income tax when they purchase corporate equity.

84. Wealthier investors, however, may face a binding limit on the deductions they can take for purchases of more equity. While these deductions for purchases of corporate securities will reduce their average tax rate on investments in equity substantially, and likely still leave it negative, these investors may face a positive tax at the margin when they purchase additional...

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20Government development debentures, investment or saving certificates or amounts deposited with banks must be kept in a bank controlled by the Central Bank for at least three years to qualify.

21In principle, many individuals can deduct the maximum amount allowed even without adding to their net savings simply by selling any securities they have that are free to be traded and then buying new ones. On the sale of the security, no significant taxes are due, but the funds spent purchasing the replacement securities are fully deductible. Therefore, full use of the deduction does not require large net savings each year.
equity directly. Even this marginal rate should be quite low, due to the various deductions described above.

PURCHASE OF CORPORATE BONDS

85. If investors lend money directly to a corporation, rather than buy new equity from the firm, the tax treatment faced by both the firm and the individual investor changes. To the extent that total tax payments change as a result, there is a tax incentive favoring one form of finance over the other. We find that bond finance is favored relative to equity finance, even though as already noted equity finance is itself often treated very favorably.

86. We begin by focusing on the differences in corporate tax liabilities if bonds are issued rather than equity, but assume no change in the firm's net payout rate in future years. To begin with, a corporation can deduct the nominal interest payments on corporate bonds, but loses the deduction for paid-up equity that it would obtain from new equity issues. If the Treasury Bill interest rate equals the interest rate on corporate bonds, then the two effects just offset each other. In addition, if the corporation is to maintain the same net payout rate over time as with equity finance, then it must issue new debt each period to help cover the cost of the high nominal interest payments.\textsuperscript{22} To the extent that this is done, interest deductions grow over time whereas the deduction for paid-up equity is fixed in nominal terms (ignoring the effects of mergers). This difference dramatically favors debt finance, particularly when the inflation rate is high.\textsuperscript{23} Nominal interest deductions are large enough that they can easily eliminate any taxable income of the firm even at moderate debt/equity ratios.

\textsuperscript{22}We previously assumed that the dividend payout rate was 3.5\% and that the reinvestment rate was 1\%, allowing these dividends to grow at 1\% over time. This implies a rate of cash flow from the investment equal to 4.5\%. Given this cash flow, and given a nominal interest rate of 20\% on corporate debt, the firm can cover these interest costs and a 1\% reinvestment rate only if it issues new debt each period equal to 16.5\% of its existing debt, implying a 3.5\% net payout rate, as with equity finance.

\textsuperscript{23}For example, if the corporate bond interest rate is 20\%, if the value of initial bond issues is $B$, if the nominal value of corporate debt grows at 16.5\% p.a., and if the firm’s discount rate is 20\%, then the present value of interest deductions is $\int_{0}^{\infty} 2Be^{-0.165t}e^{-2t}dt = 5.7B$. If equity finance had been used instead, we showed that the present value of deductions for paid-up equity equaled only $E$, implying a net tax savings from use of debt equal to $4.7\tau B$ in present value.
87. Interest payments, unlike dividend payments however, are subject to the tax on movable capital. If the debt has been offered for public subscription, this tax only applies to the degree to which the interest rate on the corporate debt exceeds the Treasury Bill rate. The difference between the two rates is likely to be small, implying that this tax is not a major consideration, as long as the bonds are in fact offered for public subscription.

88. There are also important tax implications under the general income tax of a shift to use of debt rather than equity finance. A number of tax provisions are the same. The deduction allowed for purchases of corporate securities applies to purchases of corporate debt as well as corporate equity. Only half of both interest and dividends are subject to tax, as long as the securities are listed on the stock exchange. Furthermore, interest payments made by firms that enjoy tax holidays are exempt under the general income tax, just as dividend payments are. After the holiday period is over, however, individuals are allowed a deduction against dividend income equal to 20% of the face value of the equity (10% if not publicly subscribed), in itself favoring equity finance. There is no equivalent deduction for bonds. Another key difference is that the nominal income from bonds is subject to tax, whereas with equity only that component of the return that takes the form of dividends is subject to tax -- capital gains are exempt. Given the high inflation rate in Egypt, this difference in tax treatment is very important. On net, the present value of the net personal taxes due under debt finance is substantially higher than it would be under equity finance.\(^2\) This tax penalty can be lessened, however, by having investors in low or zero tax brackets, e.g. pension funds or insurance companies, buy these corporate bonds.

89. Not only is interest income taxable under the general income tax, but interest payments are tax deductible. This opens up a large tax loophole, whereby individuals can borrow, deduct the interest they pay, then invest in tax exempt or more lightly taxed assets (e.g. corporate equity or even corporate bonds), on net reducing their taxable income. The simplest arbitrage is to

\[\text{\footnotesize \(^2\)For example, if the corporate bond interest rate is 20\% and if the investor buys a proportional amount of the firm's new debt issues, so that his interest income from the firm grows at 16.5\% per year, then the present value of tax payments on interest income equal } m \int_{0}^{\infty} 0.5 (0.2B e^{-16.5 t} e^{-2 t} c t) = 2.86 m B. \text{ This contrasts with a present value of tax payments on dividends of } 0.41 m E.\]
borrow from a bank and then take the amount borrowed and redeposit in the bank. The interest earned is tax exempt while the interest paid is fully tax deductible. Similarly, if the individual borrowed to buy corporate bonds, the interest paid is fully tax deductible but only half of the interest earned is taxable. ²³

90. On net, the tax law provides a strong tax incentive favoring debt over equity finance if but only if the bonds are offered for public subscription and the corporation has positive taxable income. The gain from deducting nominal interest payments under the corporate tax is substantial, and easily overwhelms the cost of having this interest income taxable, after deductions, under the general income tax. If corporations end up with tax losses, however, due to their large interest deductions, then further debt issues are penalized under the tax law. There is no further gain under the corporate tax from more interest deductions, but there is a tax penalty under the general income tax of paying out interest rather than dividends. If bonds are not offered for public subscription, then the interest payments are subject in full to the tax on movable capital, offsetting the gain from interest deductibility under the corporate tax, and again leaving a net tax disadvantage to debt over equity finance.

FINANCE THROUGH NEW SHARE ISSUES VS. RETENTIONS

91. In most countries, there is a substantial tax penalty to paying dividends. This occurs because in most countries dividends are fully taxable under the personal income tax while the capital gains that result from the retention of profits are taxed much more lightly. As a result, in most countries a corporation’s main source of finance is normally retention of past earnings. The situation in Egypt is much more complex. On net there is a slight advantage to paying dividends and issuing new shares rather than retaining profits.

92. What in fact are the tax implications of paying LE 1 extra and compensating by issuing LE 1 in new shares, rather than retaining these funds? The immediate implication of paying

²³Of course, the tax treatment of the recipient of the interest payments must be taken into account. If the money is borrowed from a bank, however, then neither the bank nor the depositor together should owe any taxes, other than the implicit tax arising from reserve requirements.
extra dividends, as in most countries, is that individuals receive income in the form of dividends rather than capital gains, which would arise as a result of retaining earnings. The taxes due on LE 1 more in dividends is .5m, assuming the firm is no longer in a holiday period, whereas the capital gains would have been untaxed. In addition, however, paying LE 1 in dividends and therefore issuing LE 1 in new shares implies an increase in the firm's paid-up capital of LE 1. For firms registered on the stock exchange, this results in a larger deduction in each future year equal to the Treasury Bill rate times LE 1. The present value of these extra deductions, discounting at the same rate, equals LE 1. The resulting savings in corporate tax payments, in present value, is \( \tau \).

93. On net, there is a slight tax advantage to paying dividends and issuing new shares, rather than retaining profits. This occurs because \( \tau > .5m \) in all cases except when shares in an industrial firm are owned primarily by shareholders in the 65% tax bracket. The difference will often be small, however, implying that Egypt does not suffer much from a distortion that is large in most countries.

B. INVESTMENT THROUGH COMMERCIAL AND INDUSTRIAL PARTNERSHIPS

94. The investors in the proposed project have the alternative of owning the activity through partnership shares in a noncorporate firm. As in other countries, income to noncorporate firms is treated differently than corporate income for tax purposes. In Egypt, commercial and industrial firms are very heavily taxed relative to corporations. Since many businesses begin as noncorporate, any tax penalties on the noncorporate form of organization can hinder the entry of new firms.

95. To what degree do the taxes due on this equipment investment change if the equipment is owned by a noncorporate rather than a corporate firm? To begin with, a noncorporate firm is subject to the tax on commercial and industrial profits. The tax rates under the tax on
commercial and industrial profits are identical to the corporate tax rates for larger firms, though are somewhat more favorable for smaller noncorporate firms.26

96. The definition of taxable income is not quite the same for noncorporate vs. corporate firms, however. In particular, only corporate firms qualify for the deduction equal to the Treasury Bill rate times the firm's paid-up equity. As mentioned above, this deduction in present value is very large, in itself eliminating any effective tax on corporate income. This difference, therefore puts corporations at a substantial tax advantage relative to noncorporate firms.

97. Noncorporate firms pay stamp taxes of 1.2% of the original nominal value of their shares, as do corporations whose shares are not publicly traded, so here there is no difference. These firms are at a minor advantage, however, relative to corporations that do have publicly traded shares, where the stamp tax is more important.

98. Interest paid to individuals by noncorporate firms is taxed under the movable capital tax. Whereas interest paid by corporations on publicly subscribed bonds is subject to the movable capital tax only to the extent to which the interest rate exceeds that on the equivalent government bond, interest paid by noncorporate firms is subject to tax in full.27 This tax effectively offsets the tax savings on interest deductibility under the tax on commercial and industrial profits.28

99. The profits and interest payments of these businesses net of the commercial and industrial profits tax and the tax on movable capital are then taxed under the general income tax. In

26In particular, noncorporate industrial firms pay from 20% on the first LE 1,000 of taxable income to 32% on amounts above LE 4,500. An equivalent corporation pays 32% on all profits. Other noncorporate firms pay 20% on the first LE 1,000 but the rate rises to 40% on profits above LE 13,500. The equivalent corporation pays a rate of 40% on all profits. Both forms are subject to a 2% tax on amounts above LE 18,000.

27Given this 32% tax on the nominal interest on noncorporate debt, the nominal interest rate must be enough higher than that on Treasury Bills to compensate investors for this tax disadvantage. If the interest rate on Treasury Bills is 20%, then the interest rate on the noncorporate debt would need to be 29.4%, substantially increasing the cost of borrowing to these firms.

28The offset is precise for industrial firms, where the commercial and industrial profits tax rate also equals 32%.
combination, equity income generated by a noncorporate industrial firm is first subject to the
32% tax on commercial and industrial firms, and what is left net of tax is subject to the general
income tax at rates as high as 65%, implying a combined tax rate that can be as high as 76%.
Similarly, interest income is subject to the 32% tax on movable capital and is then subject to the
general income tax. Even though the tax rates are the same, however, debt finance by
noncorporate firms is substantially penalized by the tax system as long as the inflation rate is
positive, and more so the higher the inflation rate. This is true because capital gains on equity
resulting purely from the effects of inflation are not taxed, whereas the higher interest rate that
simply compensates for the effects of inflation is fully taxable.

100. By comparison, only 50% of the dividends and interest payments of publicly traded
corporations are taxed under the general income tax. In addition, owners of corporate but not
noncorporate shares of firms that enjoyed tax holidays can deduct a fraction of the face value
of the original equity from their dividend income. More critically, individu’s can deduct the
funds they spend buying corporate debt and equity but not the funds they spend investing in
noncorporate firms. Therefore, the general income tax also provides an overwhelming tax
incentive favoring corporate over noncorporate forms of business. Since wealthier individuals
have available a variety of investment opportunities where the income is free of general income
taxes — e.g., government bonds, bank deposits, and equity in corporations still subject to the tax
holiday provisions — the tax penalty for investing instead in a noncorporate firm seems
prohibitive. As a result, successful entrepreneurs are effectively prevented by the tax law from
making use of the noncorporate form. We did not learn enough about the differences in the
regulations affecting corporate vs. noncorporate firms to judge the efficiency implications of this
tax distortion. Normally, the auditing and bookkeeping requirements faced by corporations are
sufficiently costly that only larger firms can afford to undertake them. As a result, this tax
distortion penalizing noncorporate firms in effect penalizes small firms, thereby discouraging
entry of new firms, and restricting the competitive pressure faced by existing firms.

101. In combination, the effective tax rate on income from noncorporate firms is extremely
high by international standards. Since corporate firms are at worst lightly taxed in Egypt, and
often heavily subsidized under the tax system, the tax system dramatically favors corporate over
noncorporate firms. This distortion should discourage entry of new and smaller businesses.

102. While noncorporate firms are severely disadvantaged in law relative to corporations registered on the stock exchanges, they have a much lower profile than these corporations. They therefore have more scope for under reporting taxable income. We were not in a position to judge to what degree easier evasion by noncorporate firms offsets the tax penalty they face in principle under the statutory provisions.

C. INVESTMENT BY CORPORATIONS IN CORPORATIONS

103. In most countries, companies often consist of many separately incorporated entities. Commonly, subsidiaries even have their own subsidiaries. There can be a variety of explanations for this complex form of organization. The main motivation is likely to be to provide clearer incentives and flexibility to components of a larger organization. As seen recently in the voluntary breakup of IBM, providing adequate incentives in a large organization is very difficult to do internally. Given the potential economic importance of corporate holdings of equity in other corporations, its tax treatment is of concern. We find that intercorporate lending is strongly encouraged but intercorporate purchase of equity is discouraged under Egyptian tax law.

104. What are the tax implications in Egypt if an existing corporation A buys securities issued by another corporation B which is undertaking the proposed project? Consider first the tax implications of intercorporate loans, in which corporation A borrows d from outside then lends the amount d to corporation B. Corporation B simply deducts the interest payments it makes to corporation A. These interest payments to company A are first subject to the tax on movable capital on the excess of these interest payments over those made on an equivalent Treasury Bill. As before, we assume that the resulting tax payments are minor. In addition, the loan is subject to the stamp tax at a .8% rate on its market value. Once these payments are received by corporation A, only 10% of the net payments are included in its taxable income, yet it can deduct in full the interest payments it makes on the amount it borrowed from outside. The result is a substantial net tax deduction for company A, in addition to that already taken by company
B. The tax savings from these additional deductions for company A provide a strong tax incentive encouraging intercorporate lending. In principle, given this asymmetric treatment of interest income and interest deductions, intercorporate loans can be used to wipe out all corporate tax liabilities without any net change in corporate debt.

105. The story is more complicated if company A issues equity itself and then buys shares in company B, rather than having individual investors buy shares in company B directly. The tax treatment of company B does not depend on who buys its shares. With two separate share issues, however, the stamp duty must be paid twice. In addition, company A is now receiving dividend income. If company B were a new firm, so that these shares were acquired at incorporation, then this income accrues to company A tax-free. Otherwise, company A is taxed on 10% of this income, regardless of the fraction of company B that it owns. In addition, if company A ever sells these shares, then it owes capital gains taxes.\(^29\) Yet divestitures are normally a common component of business activity. These tax penalties could have been avoided if company A merged with company B, but more indirect ownership may be preferable on nontax grounds.

106. There are potentially more important tax costs of this intercorporate ownership under the general income tax. If company B were in fact a new firm and eligible for a tax holiday, then its dividends would be tax free during the holiday period if received directly by the individual investor. If instead company A buys these shares and then issues new shares itself to finance this purchase, then this tax exemption for the individual shareholders is lost. In addition, shareholders receive a deduction equal to 10% of the face value of the equity they purchase from firm B once the tax holiday has expired, but receive no comparable deduction if they buy equity from firm A instead. Therefore, this deduction as well is lost when company A acts as an intermediary.

107. On net, intercorporate loans are highly subsidized under the Egyptian tax system if the lending firm has positive taxable income. Intercorporate purchases of equity are always

\(^{29}\)Capital gains on sales of physical assets can be avoided if the sales proceeds are reinvested within two years after the end of the year of the sale, but capital gains from the sale of financial assets are fully taxable.
discouraged, however, under the tax law. Mergers are therefore favored under the tax law relative to the establishment of corporate subsidiaries, thereby leading to excessively large companies.

D. **Taxation of Investments through Financial Intermediaries**

108. The main intermediaries in Egypt are: banks, insurance companies, pension funds and Law 146 companies that perform some of the roles of mutual funds. To understand their tax situation, we look at both the taxation of the payments that they receive from corporations and the taxation of the payments that they make to individuals and compare these with the taxes that an individual would have faced buying corporate securities directly.

**Investment Through Banks**

109. Rather than lending money to a firm directly, individual investors normally make use of the alternative of depositing money in a bank and having the bank then lend the money to the firm. Most small savers find saving through a bank far more convenient than buying corporate securities directly, and prefer the liquidity and transactions services that banks provide. These nontax advantages of banks may be an important part of the explanation for their important role in most economies. But to what degree does the tax system in Egypt alter the attractiveness of this form of intermediation? We find that banks are generally favored as a means of lending money to firms, except for the case of individuals who are in high tax brackets and who are investing in corporate bonds offered for public subscription. By contrast, banks are at a tax disadvantage when investing in equity.

110. As described above, if an individual investor purchased corporate bonds directly, then a movable capital tax is due on the interest payments. (If the bonds were offered for public subscription by a corporation, the individual lender can deduct the interest that would have been paid on an equivalent Treasury Bill before the tax is calculated.) Stamp taxes would also be due. In addition, general income taxes are due on what is left net of the tax on movable capital. For payments from corporations that are listed on the stock exchange, however, only half of the
residual amount is subject to tax. In this case, if the individual is paid a rate of return of 20% net of any tax on movable capital on this loan of L, then the general income tax liabilities incurred equal \(0.5m(2L)\), where \(m\) is the individual's marginal tax rate under the general income tax. In addition, however, most individuals would have been able to deduct the amount they invested when they purchased the bond.

111. How does the tax treatment differ if a bank acts as an intermediary? To begin with, no tax on movable capital is due at any stage. This exemption should make little difference if the bonds were offered for public subscription by a corporation, but is a major advantage otherwise.

112. Rates for stamp duties on bank credit vary, but they roughly correspond to the rate due if firms borrowed directly. In particular, the stamp duty on letters of credit is 0.5%, while on loans and advances it rises to 0.8% on amounts over LE 10,000. In the case of lines of credit, a tax of 1.0% is paid on the highest debit reached by the credit during its operation and the tax is paid both at the initiation of the line and on its renewal.

113. When the bank acts as an intermediary, the bank is itself subject to the corporate income tax on its income. In addition, it is required to put 15% of its deposits in a noninterest-bearing account, leaving it only 85% of the original deposits to lend out to firms. This is equivalent to a 15% tax on the income earned on this savings.

114. The main source of taxable income for banks is interest received on their loans, while their main deduction is the interest paid depositors. While other corporations can exclude 90% of the interest income they receive from their taxable income, most accountants claimed that banks do not qualify for this exclusion.\(^{30}\)

115. Individuals owe no general income taxes on interest earned from bank deposits. In spite of this, they can still deduct the amount they deposit in a bank, up to the minimum of 30% of income or LE 3,000, the same as with purchases of corporate securities.

\(^{30}\)One accountant claimed, however, that banks he advised did in fact exclude 90% of interest income. Practice may not be uniform here.
116. On net then, how do the total tax liabilities change when a bank acts as an intermediary? For corporate borrowers, the tax on movable capital and stamp duties should not be much affected. Assume as before that the interest rate charged by the bank on loans to firms equals 20%. If the individual saver initially deposited \( L \) with the bank, then \( .15L \) must be added to a noninterest-bearing account. This is equivalent to a tax of \( .15(.2L) \) on the income the bank could have received if it lent all the money out. In addition, if the bank pays depositors a rate of return of \( i \), then the bank's taxable income is \( [.85(.2L)-iL] \) and its tax payments equal \( .4[.85(.2L)-iL] \). The tax law then favors use of banks as financial intermediaries if

\[
.15(.2L) + .4 [.85(.2L)-iL] < .5m(.2L), \tag{1}
\]

where \( .5m(.2L) \) equals the individual's general income tax liabilities on loans to a corporation. Given that the bank is receiving only \( .85(.2L) \) on its loans, it has nonnegative profits only if \( i < .17 \). If \( i = .17 \), then Equation (1) implies that all individuals with personal tax rates greater than 30% prefer bank deposits to direct loans to corporations on tax grounds, and conversely.\(^{31}\) This tax advantage becomes very large for individuals in the top tax brackets. While normally, one would expect small savers to save primarily through banks and large savers to invest directly, the tax law encourages just the opposite savings choices.

117. The tax advantage to use of banks is much larger in financing loans to noncorporate firms. If an individual lent money directly to a noncorporate firm, the tax on movable capital must first be paid. If the interest rate on the loan were still 20%, then this tax equals \( .32(.2L) \). Then, general income taxes are due on the entire income, net of the tax on movable capital. These tax liabilities therefore equal \( m(1-.32)(.2L) \) implying total tax liabilities of \( (.32+.68m)(.2L) \). If the bank acts as an intermediary, the taxes due are the same as with loans to a corporation. For all plausible values of \( i \), using the bank as an intermediary dominates on

\( ^{31} \)From the individual's perspective alone, bank deposits are attractive only if they pay more net of tax than do corporate bonds. Since bank deposits are not taxable, this would be the case if \( i \geq .2 (1-.5m) \). If \( i = .17 \), individuals in the 30% tax bracket are indifferent between the two. In general, however, this condition must also be satisfied if banks are to be used. For values of \( i \) below .17, this condition will be more restrictive.
tax grounds. Banks also have a clear but somewhat smaller tax advantage when investing in bonds not offered in a public subscription by a listed corporation.

118. On net, therefore, the tax law favors use of banks as intermediaries in financing loans to both noncorporate firms and corporations that do not offer these loans for public subscription. For financing loans to corporations that do offer these loans for public subscription, banks are favored on tax grounds only if depositors are in a high enough tax bracket, and are disfavored on tax grounds for other depositors.

119. Tax regulations do, however, discourage banks from lending to firms for which there is a significant probability that the terms of the loan will not be met. The reason is that Egyptian tax treatment of bad loans is very unfavorable to the banks. First, banks are required to continue to include income that should have been paid but is not actually paid in their taxable income until the loan is legally declared to be uncollectible. They are, therefore, paying taxes on income that they may never receive if the loan remains non-performing. Second, banks are only allowed to deduct the loss of principal on bad loans up to 5% of their net income. Because banks have so little taxable income relative to their assets after deducting the interest they pay on their liabilities, this deduction allows them to have only a trivially small loss rate before they hit the ceiling on loan write-offs. These provisions discourage banks from lending to risky businesses, usually new, small businesses.

120. What are the tax implications if banks rather than individuals invest in corporate equity? When individuals buy equity directly, they are taxed on only half of the dividends, if the securities are listed on the stock exchange, and none of the capital gains. In contrast, if individuals instead deposit their savings in a bank and the bank invests in equity, then the resulting dividends and capital gains are fully taxable to the bank. Even though interest is received on the deposits tax free, net tax payments go up. Therefore, banks are at a tax disadvantage when investing in corporate equity.

121. In addition, use of banks for transactions purposes is discouraged under the tax law due to the many types of stamp duties assessed. In particular, there are some stamp taxes, calculated
as absolute amounts, on bank accounts other than saving accounts (LE 10 per year), on checks (LE 0.4 each), and on bank statements (LE 0.2 each). While these are not of much importance for large accounts, they do serve to discourage small accounts.

INVESTING THROUGH INSURANCE COMPANIES

122. Insurance companies are another common form of financial intermediary in most countries. If individual investors in Egypt buy insurance, and the insurance company then uses the funds to finance a firm's equipment investment, how do the tax implications differ from those that would result if the individual financed the firm’s investment directly? The tax statutes treat favorably the investments by individuals through insurance companies.

123. If the individual financed the project directly through loans or purchase of equity from the firm, the tax consequences have been described above. When individuals buy insurance instead, they are allowed a deduction under the salary tax for the payment of life insurance premiums of up to (1) 15% of income; or (2) LE 1,000, whichever is less. This deduction is more valuable than that available on direct purchases of corporate securities, since the salary tax as well as the general income tax is avoided on these premium payments. Investors are allowed a further deduction under the general income tax for the payment of any remaining life insurance premiums up to the minimum of (1) 15% of income; (2) LE 2,000; or (3) the difference between LE 4,000 and the individual's deduction for the purchase of corporate securities. On these premium payments, the tax deductions are the same as for direct investments in corporate securities. For wealthier individuals, however, taking full advantage of these deductions requires use of both forms of investment. Insurance benefits are not taxed, further favoring use of insurance companies as financial intermediaries. This tax savings is more important for investments in bonds than for investments in equity.

124. When insurance companies are used, however, there are in principle other tax consequences that must be taken into account. To begin with, there are no movable capital taxes due, again favoring use of insurance companies. This should make little difference in the case of investments in corporate bonds offered for public subscription, but would be a major
consideration in the case of other bonds. In addition, there is a 3% stamp tax on the payment of life insurance premiums and a further 0.8% tax on all premiums collected by insurance companies -- stamp duties are higher than in the case of direct investment. These fees are minor, however, compared with the savings in general income taxes. Other aspects of the insurance business pay much higher stamp taxes. The rate on automobile and other transport premiums is 15% and the rate on all remaining insurance is 20%, including such important categories as fire and theft. In addition, there is the 0.8% tax paid on all premiums. Even a 20.8% stamp tax is equivalent to only an 11.6% tax on the nominal return to the asset, if the investment is held for ten years.\footnote{If a 20.8\% tax is paid at the time of an investment, but the return is invested tax free earning a 20\% nominal rate of return for T years, this is equivalent to investing all the funds at some rate of return i where \(0.792e^{-0.2}e^{1.7}\). For T=10, i=17.7\%, implying an effective tax rate on the nominal return of 11.6\%. For T=20 years, the effective tax rate is only 5.8\%.} Even in this case, therefore, there should be some tax advantage to use of insurance companies when investing in bonds, though not when investing in equity since most of the return to equity takes the form of capital gains which are tax free anyway.

125. Under the corporate income tax, insurance companies are allowed to deduct 90\% of the income from interest, dividends and real estate that they receive, while also deducting the payments they make to their policy holders. Together these deductions should eliminate meaningful corporate income taxes on insurance companies, which indeed seems to be the actual experience. Capital gains from the sale of financial assets are, however, taxable in full to an insurance company though they are tax exempt to an individual investor. Therefore, there is a clear tax advantage to use of insurance except for investment in assets where capital gains taxes are a major consideration.

126. On net, there is a clear tax advantage to investing through an insurance company, particularly for investors in higher tax brackets under the general income tax. Regulations have restricted the net rate of return investors can earn on insurance, however, undermining the competitiveness of insurance companies. Given the rate of return in fact offered net of tax on insurance, few investors would find investing through an insurance company attractive were it
not for the benefits they receive through the insurance itself.

INVESTING THROUGH PENSION FUNDS

127. Investing through pension funds is extremely favorably treated under the tax law in Egypt. Businesses of all kinds can deduct up to 20% of wages to fund pensions. This is equivalent to allowing a deduction under the salary tax base, thereby saving both salary taxes and general income taxes on these contributions. This is more favorable than the deduction allowed for direct purchases of corporate securities. The income earned from such funds accumulates free of movable capital taxes or income taxes in the case of the private complementary pension funds. The income of the private supplementary funds are, however, taxed. Furthermore, payments to retirees are exempt from all taxes at the personal level under either type of plan. On net the tax subsidy to investing through a pension is dramatic.

128. As with all other investments, the individual has the opportunity to borrow to make the investment, lowering taxes even further through the deduction of interest paid.

MUTUAL FUNDS (LAW 146 COMPANIES)

129. In most mature economies, mutual funds play an important role since they provide investors the opportunity to diversify their holdings at less cost than would be possible if they have to own a diversified portfolio directly. They do not yet play such a role in Egypt. Tax distortions do not seem to be the cause of this situation because mutual funds are treated favorably.

130. If an individual investor were to invest in a Law 146 company, the tax treatment of the income the investor receives under the general income tax and the tax on movable capital is the same as for investments in any other corporation. As a result, Law 146 companies in Egypt are not exactly the same as pure mutual funds that act as pass through organizations. Pure mutual funds simply pool funds from investors and pass on the resulting income and any tax consequences to investors in exchange for fees and float to cover the expenses of the funds.
Instead, Law 146 companies are free-standing corporations, but subject to special regulations that give them some of the attributes of mutual funds, and so we refer to them as such. In particular, they must invest at least 90% of their assets in financial securities, and in exchange are exempt from corporate taxes and the tax on movable capital on the income they receive. Avoiding the tax on movable capital is an advantage primarily for investments in the debt of noncorporate firms.

131. This difference in regulatory treatment can have many tax consequences. For example, dividends they pay to investors are taxable even if the money they pay out is financed by dividends from firms still subject to a tax holiday. This makes income taxable to investors that would be exempt if a mutual fund had not been used as an intermediary. It appears, however, that a mutual fund can also simply reinvest earnings it receives rather than paying them out, thereby deferring any taxes owed by individual investors. This provides investors a tax advantage, particularly for investments in bonds. Investors could then avoid any general income taxes by selling shares in the mutual fund, realizing the accumulating capital gains tax free.

132. On net, the existing treatment of mutual funds in Egypt would appear to create the opportunity to lower substantially the general income taxes due on securities issued by firms no longer subject to a tax holiday.

E. INVESTMENTS IN EGYPT THROUGH FOREIGN FIRMS

133. Countries that attempt to impose heavy taxes on the return to savings are inevitably faced with the problem that investors attempt to shift their funds abroad in order to avoid these taxes. Most countries find it virtually impossible to stop such shifting of funds, though various controls may limit the amount that is successfully transferred. Once funds are abroad, the government has lost all ability to monitor the flow of income that results from them or tax this flow. This capital flight reduces the domestic sources of funds for domestic investment, forcing firms to seek funding abroad from foreign banks and foreign firms.

134. Various tax rules can be used to limit the amount of capital flight. Since investors have
nontax reasons to invest some funds abroad, e.g. to diversify the risks they face, the government would not want to prevent such flows of funds, but establish regulations which allow in practice a symmetric tax treatment of income from domestic and foreign sources. To what degree do the Egyptian tax rules accomplish this? The tax system in fact treats investment in foreign securities punitively, but investment in foreign exchange accounts in Egyptian banks are treated the same as other bank deposits.

135. If an Egyptian investor buys foreign securities directly, then income received from these securities is subject to both the tax on movable capital and the general income tax. For bonds, both interest payments and any capital gains on the principal due to exchange rate movements are subject to the tax on movable capital while the interest payments are subject to the general income tax. For equity, all payments are subject to tax. None of the deductions available on purchases of securities issued by Egyptian firms are available on purchases of foreign securities. Together these tax rules impose a virtually prohibitive penalty on investments in foreign rather than domestic securities.

136. The investor has the alternative, however, of maintaining an account with an Egyptian bank denominated in a foreign currency. The rate of return earned on these accounts has been roughly competitive with the rates of return available abroad, and this income is earned tax free to the individual investor. Any capital gain if the foreign currency appreciated relative to the Egyptian pound would also be tax free.

137. The bank, however, would normally hedge by investing these funds abroad itself — government regulations are now requiring banks to hedge these accounts. Since banks do not have to pay the tax on movable capital, and pay income taxes only on the difference between the income earned abroad and the amount paid depositors, any tax implications for the bank should be minor. Therefore, investing through a bank dominates lending abroad directly. Withholding taxes will still need to be paid to the government of the country where the money was invested, however, though here the rate will vary by country depending in part on the nature of the tax treaties that Egypt has with other countries. While investors have the third alternative of attempting to transfer funds out of the country and investing abroad without reporting the
resulting income to the Egyptian tax authorities, the tax free accounts at Egyptian banks should pay a virtually equivalent rate of return without the risks involved in illegal transactions.

138. If domestic firms then try to raise funds abroad to replace the domestic savings that were invested abroad, what are the tax implications? Foreigners investing in Egypt either in real or financial assets are subject to the same business income taxes as domestic firms, and have access to the same tax holiday provisions as domestic investors. Dividends paid abroad are exempt from further Egyptian taxes. Interest payments in principle are subject to the movable capital tax, but the tax rate in some cases is reduced by about half by tax treaty.

139. On net, investing abroad through foreign exchange deposits in Egyptian banks, and replacing the domestic savings with capital imports has relatively minor tax implications under the Egyptian tax code.

140. There are a number of tax implications abroad of these transactions, however, which make them somewhat less attractive. In particular, withholding taxes must be paid abroad on the income earned on foreign financial securities. In addition, foreign entities investing in Egypt may well owe further income taxes to their home country on the income earned in Egypt. While foreign entities normally can claim a tax credit against their domestic taxes for any taxes already paid to Egypt, the Egyptian tax liabilities may be insufficient to wipe out any tax obligations owed at home. In practice, however, multinationals normally pay very little in taxes on repatriated earnings, in part by using excess credits from investments in one country to offset any domestic taxes owed on investments in countries where credits are insufficient. In any case, these taxes are postponed until profits are repatriated, reducing their importance.

F. Summarizing the Efficiency of the Statutes

141. The existing statutes that specify the taxation of property income in Egypt create a variety of very large tax distortions, which may affect substantially the allocation and ownership of assets, thereby creating important efficiency costs. This section briefly summarizes the key distortions and their likely implications.
142. **Excessive corporate investment.** Under the existing tax law, investments in corporate assets qualify for large tax subsidies. Almost all individual investors can deduct the amount spent purchasing corporate assets from their taxable income, yet are taxed at best on only half of the resulting dividend income and none of the resulting proceeds from liquidating their ownership, implying large subsidies under the general income tax. Corporations qualify for a deduction equal to a normal rate of return on their paid-up equity. This in combination with nominal interest deductions and the use of tax holidays results in a large tax subsidy to new investment under the corporate tax as well, and should probably wipe out any corporate taxable income entirely.\(^\text{33}\)

143. **Tax penalties on noncorporate firms and smaller corporations.** Investments in noncorporate firms, in contrast, potentially face very high effective tax rates under both the tax on commercial and industrial profits and under the general income tax. In addition, corporations qualify for an important deduction on the taxes due on their interest payments under the tax on movable capital only if the debt is offered for public subscription. This important deduction is realistically available only for large companies. Existing companies receive major tax subsidies if they merge, encouraging the development of even larger firms. In addition tax holidays are clearly available only for large new firms, and are much more valuable for new investments by existing firms or by new subsidiaries of existing firms. The result is a sharp discouragement of market entry, which in most economies is a major source of innovation and potential competition for existing firms.

144. **Tax subsidy to debt finance.** Given the high inflation rate in Egypt, allowing deductions for nominal rather than real interest payments is enormously valuable for taxpayers/firms in a high tax bracket, and conversely enormously costly to the government in terms of foregone tax revenue. The result will be excessive borrowing by firms and wealthy individuals, making the economy far more unstable. Investment decisions of firms near bankruptcy can be very badly distorted, and the bankruptcy process itself imposes severe disruptions. The fear of default on loans will slow the development of the financial markets.

\(^{33}\)Owners of closely-held corporations can take advantage of these tax losses to shelter personal income within the corporation tax free, then realize the resulting capital gains tax free in order to consume the proceeds.
145. **Favorable tax treatment of financial intermediaries.** In almost all situations, tax considerations push individuals strongly to invest using one or another financial intermediary, particularly pensions and insurance companies. The concentration of control over the allocation of these funds limits competitive pressures to allocate these funds efficiently, and hinders individual investors who may have better information about profitable investment opportunities from pursuing those opportunities directly. Since small new firms would normally rely on direct loans from personal associates, this tax penalty again will inhibit entry of new firms.

146. **Sharp tax distortions to individual portfolio holdings.** Relative tax rates differ markedly by asset and by investor. The result is sharp distortions to the composition of individual portfolios. Those in high tax brackets would face punitive tax rates if they lent money to a noncorporate firm, yet they have access to a variety of tax exempt investment options, including pension contributions, bank deposits, government bonds, insurance, and stock in firms still subject to a tax holiday. If they borrow to make such investments, they can deduct the resulting interest payments, yielding large tax savings from this investment strategy and a correspondingly large loss of tax revenue to the government. Yet these individuals often have particular skill and knowledge enabling them to allocate funds efficiently among competing firms, or profit by going into business themselves. The tax law will prevent them from making use of these skills. Highly taxed assets will instead end up being owned by those in lower or zero tax brackets, such as pension funds or insurance companies.

147. At this point it seems appropriate to reflect, however, on the fact that casual information suggests that many of the financial arrangements that we find to be favored by the tax laws are not the ones that are widely adopted. Publicly-listed corporations are not the primary form of business activity. Individuals seem to shy away from insurance investments, and private pension plans are not widespread. Mutual funds essentially do not exist. Noncorporate firms play an important role in the economy, in spite of their tax disadvantage. We guess that these characteristics of the financial system reflect various regulations outside the scope of the tax system as well as discrepancies between how the tax system works in theory and in practice.
V. The Taxation of Income from Labor

148. The Egyptian system for taxing income from labor is considerably simpler than the corresponding system for the taxation of property income. Nonetheless, labor income is broken down into two main types, that from salaries and that from noncommercial professions, and is then subject to a number of taxes.

A. Taxation of Salary Income

149. Salary income is subject to a number of taxes: a social insurance tax, a salary tax, a social development tax, and the general income tax.

150. Under the social insurance tax, the employer pays 26% of salaries and the employee pays 14% of salary, until the salary reaches LE 3,000. On salary above LE3,000 up to LE 7,500, the employer pays 24% and the employee pays 11%. Salary above LE 7,500 is not subject to social insurance contribution. Salary is defined to include most types of employee compensation: wages, incentive and bonus payments, commissions, gratuities and tips, profit sharing (of some importance in Egypt because limited liability companies and some others must pay 10% of profits to employees), and some but not all allowances. As an offset to this tax, the employee receives the corresponding pension and other social insurance benefits, which are themselves untaxed. As a result of the benefit rules and the delay in payment of benefits relative to the contributions implicit in the social insurance tax, however, the present value of the benefits is small. Thus these benefits offset perhaps only a quarter to a third of the social insurance tax.

151. The employee's salary net of social insurance tax and net of several deductions is then subject to a salary tax. All pension contributions are excluded as is pension income received. Allowable deductions are: a representation allowance of LE 3,000 per year for representing the firm, production incentives (up to LE 3,000 per year, but not to exceed LE 4,000 per year in combination with the preceding deduction), a basic exemption (LE 720 for a single filer, LE 840 for married filers, and LE 960 married with children), premiums for life insurance (up to the
lesser of 15% of salary or LE 1,000), 10% of salary after all deductions except the basic exemption. The salary net of all these deductions is then taxed at progressive rates, beginning at 2% on the first LE 480 of taxable income and rising to 22% on amounts over LE 3,840. The salary tax is computed by the employer, deducted at source, and remitted monthly.

152. The *state resources development tax* is imposed on the same base as the salary tax, at a rate of 2% above LE 18,000. This tax is, however, to be paid by the salary recipient within two months of the end of the calendar year.

153. It is hard to tell exactly what the range of situations taxpayers may be in, because we do not have access to data on taxpayers and therefore the ability to build up a taxpayer profile. If one considers a married taxpayer who can take the LE 4,000 deduction for a combination of the representation allowance and production incentive pay, the 15% life insurance deduction, and the 10% deduction available to everyone, plus the basic exemption LE 840, then no tax will be paid until the gross salary payment is almost LE 5,000 per year. Furthermore, such a taxpayer’s marginal rate will not rise above 10% until gross salary exceeds about LE 8,000 per year. A very few taxpayers receiving very much higher salaries will be paying a combined salary and social development tax of 24% on the margin on 90% of their salary (after other deductions that will be inframarginal). Such taxpayers, however, will not be making any contributions to social insurance on the margin.

154. Income net of all the preceding deductions and taxes is then subject to the *general income tax*, along with income from other sources. Allowable deductions are: premiums for life insurance (up to the lesser of 15% of salary or LE 2,000 to the extent not already deducted under the salary tax), investments in most financial assets (up to the lesser of 30% of salary or LE 3,000, but not to exceed LE 4,000 in combination with the life insurance deduction), and all interest paid. Income after these deductions that falls below LE 3,000 is exempt. As noted in the section on the taxation of income from capital, however, the income from many types of financial investments is lightly taxed, so that it appears to be possible for the taxpayer to borrow and invest and thereby lower significantly the tax obligation on labor income under the general income tax. Without statistical information on taxpayer profiles it is hard to assess whether this
is an option that is widely adopted. The marginal rates of the general income tax rise from 9% for levels of taxable income between LE 3,000 and LE 4,000 to 65% on amounts of income above LE 200,000. Between LE 40,000 and LE 45,000, for instance, the marginal rate is 30%. The general income tax is not withheld.

155. Because we have no information on the deductions that taxpayers with different incomes actually take at each stage of the tax system, we cannot know the actual average and marginal rates from all these taxes taken together that are faced by taxpayers with particular gross incomes. We have tried some simulations of the rates taxpayers faced, based on different assumptions about their situations. These simulations, our discussions with others and our reading suggests that the following picture describes the impact of all these taxes taken together:

156. The average rate of all the provisions taken together is about 30% for incomes (before all taxes) between about LE 1,000 and LE 6,000 because the social insurance tax is relatively high, and there are no deductions against it. The average rate then actually falls to approximately 25% for incomes between LE 7,000 and LE 25,000 because the social insurance tax ceases to apply and other taxes have fairly liberal deductions. In fact, incomes around LE 8,000 to LE 9,000 appear to be subject to very low marginal rates, of perhaps only 15%. Average rates then begin to climb again, reaching perhaps 30% by LE 40,000, and 45% by LE 200,000.

157. These calculations do not take into account the opportunity that the general income tax gives taxpayers to borrow, deduct all the interest paid, and then invest the borrowed funds in tax-free or almost tax-free ways as discussed in the section on the taxation of property income. If this type of activity is widespread, tax payments on labor income under the general income tax may be very much reduced, with a corresponding lowering of the average rates, especially at higher incomes.

158. One special aspect of the Egyptian taxation of labor income is the taxation of salary payments by the public sector. Most importantly, there have been a series of decrees exempting various increases to the salaries paid to government employees. By now, perhaps almost 50% of government salaries are exempt from taxation. At first glance, there may not be any special
need to tax government salaries, because there would seem to be no difference between paying lower salaries that are tax exempt and higher salaries that are taxed.

159. There are, however, some further issues raised by exempting government salaries. On the one hand, if government salaries are untaxed, it becomes more difficult to decentralize decision making in the public sector. Decision makers in this sector must be instructed to use the wage inclusive of the taxes that are foregone rather than their actual labor costs to guide their hiring decisions; otherwise decisions will be inefficient. For instance, consider a public enterprise producing the same commodity as a private enterprise. The public enterprise will face lower labor costs than the private enterprise, because its workers have tax exemptions, and the public enterprise will therefore tend to use more labor in production.

160. On the other hand, there is the possibility that not all public entities will remit all taxes due the government including withheld salary taxes, something that has certainly happened in other countries. In such cases, the wages paid by these entities, from the entities’ viewpoint, are effectively tax exempt regardless, and the central government will want to avoid basing any budget allocations to such entities on the presumption that such taxes will be paid, making the net of tax wage unavoidably the one that will guide decision makers in the public sector.

161. A minor aspect of the special tax treatment of public sector salaries is that these salaries are subject to a special stamp tax. This tax rises from 0.6% on payments from LE 50 to LE 250 to 0.8% on the increment from LE 5,000 to LE 10,000 and then falls to 0.3% on amounts over LE 10,000.

B. TAXATION OF NON-COMMERCIAL PROFESSIONS

162. The tax on non-commercial professions substitutes for the salary tax in the case of these professions. The tax starts at 18% on the first LE 1,000 and rises to 30% on all amounts above LE 4,500. Allowable deductions are: 10% against professional depreciation (15% for various artists), up to 10% for actual pension contributions, premiums for life insurance (up to the lesser of 15% of salary or LE 1,000), and a basic exemption (LE 720 for a single filer, LE 840 for married filers, and LE 960 married with children).
VI. **Tax Administration**

163. While the tax statutes specify who is taxed on which transactions and at which rates, the enforcement of the system is determined by the tax administration. It is here that a gap can emerge between what should happen according to the law and what does actually happen. Without adequate administration, there is erosion of the revenue base, and the actual effects of the tax system on efficiency and equity can be very different from what would be inferred from the statutes.

164. Adequate administration requires: a systematic audit of tax returns for the various taxes, the capability to assess taxes due, specification of a penalty structure for non-compliance, mechanisms of collection and enforcement. Taken together, these features of the administration of a tax system must ensure that taxpayers do not find it generally desirable not to comply with the tax system. In particular, the magnitude of the penalty in combination with the probabilities of detection and enforcement must ensure that the benefits that evaders can expect are less than the penalties that they expect to pay. The penalty structure should also induce timely filing of returns and remittance of taxes due. At present, there is generally little or no financial incentive to pay taxes in a timely fashion in Egypt.

A. **Principles of Administration**

165. As an organizing framework, it is worthwhile to consider the three types of tax administration regimes: self-assessment, source withholding, and presumptive.

166. Under **self-assessment**, the tax liability is based on information provided by the taxpayer. The accuracy of the self reports is monitored by random audits of taxpayers' returns, ideally supplemented by cross checks against other information provided to the tax authorities by third parties such as employers and financial institutions. This kind of system places important responsibilities for providing information on the taxpayer, but provides minimal constraints on the statutory design of the tax system. For example, the successful operation of a progressive
tax on comprehensive income requires a self-assessment system because it is generally impractical for anyone but the taxpayer to make the first calculation of income received from all sources.

167. Under a withholding system, the remitter of the tax is separated from the person or firm who bears the ultimate legal liability. This system economizes on information by placing the informational burden on enterprises which are relatively efficient in collecting and remitting information, and who are more easily monitored. By its nature a withholding system operates most cheaply when the rate of tax does not differentiate according to the ultimate taxpayer; thus it can implement a proportional tax system. It can, though, be combined with a self-assessed tax system to produce a progressive tax system; in this case only those whose tax payments exceeded the flat amount withheld at source would be required to submit a return.

168. Under a presumptive tax, tax liability is remitted by the ultimate taxpayer, but is based not on a direct measurement of the tax base itself, but rather on a set of more readily measurable items such as fixed assets, number of employees, or (in the case of an income tax) sales. A more or less explicit formula may be applied to these items to generate a presumed tax base. This becomes the tax liability in lieu of the taxpayer’s producing documentary proof of a lower tax liability.

B. ADMINISTRATION OF THE INCOME TAXES IN EGYPT

169. All modern tax systems combine elements of the three pure types of enforcement regime, and the Egyptian system is no exception. It is in practice predominantly a combination of withholding and presumptive elements, with some unique aspects that have important incentive effects.

SELF-ASSESSMENT

170. For the most part taxpayers will volunteer accurate information to the tax authority only to the extent that there are effective incentives for so doing, i.e., there are effective penalties for underreporting of tax liability.
171. The current Egyptian penalty structure does not provide a significant incentive for providing accurate information. The penalty for late filing of a return is 20% of tax liability, reducible to 10% if the taxpayer accedes to an administrative reassessment without recourse to an appeals committee. For late payments, there is a penalty imposed only on January 1 of the year following assessment equal to a nominal interest rate times the unpaid tax liability. The penalty for underreporting is 5% of underreported taxes for non-corporate taxpayers, and 10% of underreported taxes for corporate taxpayers, subject to a maximum penalty of LE 500 for non-corporate and LE 1,000 for corporate taxpayers. There are much stiffer penalties for fraud, including possible imprisonment, but in practice the fraud law is rarely invoked.

172. In the context of a self-assessment system with infrequent random audits, this kind of penalty structure is very unlikely to be adequate to induce compliance. For large taxpayers the maximum underreporting penalty makes it ineffective at the margin. Even for smaller taxpayers, the low percentage underreporting penalties make noncompliance a low-risk, high-payoff strategy.

173. In practice the system is not one based on self assessment. Virtually every income tax filing is challenged by the tax authority, and in most cases the eventual tax liability is determined by a court of law with very little input from the information provided by the taxpayer, and instead based on information collected independently by the tax authority.

**Presumptive Elements**

174. Because of the poor quality of the information volunteered by firms, the Tax Department almost never accepts the stated tax liability of a firm, and makes an independent assessment of tax liability. This assessment must be based on readily observable characteristics of the firm such as, in descending order of observability, fixed capital stock, number of employees, and sales. These variables are converted into a presumptive value for income by applying rule-of-thumb factors that differ from sector to sector. The formula used to determine these presumptive taxes are not part of the tax law, and may not be uniformly applied throughout the country.
175. The actual tax liability becomes the presumptive liability, except if the information provided by the firm is of sufficient quality to justify basing the liability on it. Most firms therefore face a presumptive system.

176. To the extent that the ultimate tax liability is determined presumptively, it is the presumptive formula which determines the economic effects of the tax system. For example, if the taxable income is, presumptively, equal to a linear function of fixed assets, number of employees, and sales, then rather than a business income tax there is effectively an assets tax, an employee tax, and a sales tax with implicit rates determined by the particular formula in use. In this case many of the incentives discussed in earlier chapters are not relevant, and a whole host of new issues arise. For example, firms have an incentive to reduce monitorable assets, employees, and sales and the tax collection authority ought to have in place a system to ensure accurate measurement of these factors. For more readily monitorable items such as sales, the issue of uniformity becomes important. The goal of uniform treatment with regard to the explicit sales tax system is meaningless if for presumptive reasons the taxes on business income operate as though they are taxes on sales. The sales tax rates implicit in the presumptive business tax are not uniform and they will cascade fully as there is no provision for creditability as with the explicit sales tax.

WITHHOLDING TAXES AND ESTIMATED TAX PAYMENTS

177. A conceptually separate issue from how tax liability is established for tax filers is the timeliness of the payments actually remitted. If the interest rate assessed on late payments is inadequate, then delayed remittance of taxes erodes the present value of tax collections; this is especially true in high inflationary environments.

178. The pattern of withholding taxes and remittances is quite different in Egypt than in Western developed countries. For the latter case, the business firm withholds personal income tax on behalf of its employees and remits funds directly to the government, usually with some small delay allowed as compensation for the trouble of acting as withholding agent. The tax liability of the business firm itself is remitted as income is accrued through a series of regular
estimated tax payments; when estimated tax payments fall short of the eventual tax liability, interest and, in the case of large under-remittance, penalties are assessed.

179. The Egyptian system is quite different. First of all, the personal income tax is of limited importance, and firms do not withhold personal (general) income tax liability on behalf of their employees. Second, and most important, firms do not remit estimated tax payments based on a forecast of their eventual business income tax liability. Instead, there is a complicated system of levies on various transactions, known as the system of additions and discounts, which the firms subsequently offset against their business income tax payments, and are thus similar to withholding taxes on business income taxes.

180. At present there are four different rates for discounts, with rates from 1.0 to 10.0% and there are six rates for additions, ranging from 0.5 to 5%. The rates may be set to approximate some beliefs about the relationship between the firm’s income tax liability and the amount of the transaction. From this perspective the withholding taxes can also be viewed as presumptive income taxes.

181. The analysis of section IV, however, suggested that for many businesses the tax provisions taken together should make for no tax liability under the statutes. If this is so, then the withholding system of the additions and discounts withholds more than what is due. It is widely claimed, however, that the tax administration rarely accepts the tax filings of firms, nor does the tax administration rebate excess amounts withheld. The same situation appears to hold for the taxation of the profits of non-commercial partnerships, when the system of additions and discounts actually operates, as in the case of large professional partnerships whose clients are large firms that do withhold. In this case, the business income taxes are replaced by the withholding taxes, which are in turn based on sales. The business income taxes then operate in the same way as a cascading sales tax, with all the problems discussed in section III.
VII. Bibliography


