



**THE ECONOMICS OF FORMALIZATION:
POTENTIAL WINNERS AND LOSERS
FROM FORMALIZATION IN EGYPT**

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Abstract

This paper contributes to the ongoing debate about formalization in Egypt and makes the case for adopting reforms to integrate the informal sector into the mainstream economy. It first attempts to explain why Egyptian entrepreneurs choose to stay informal, and then assesses the likely welfare impact of formalization on different economic agents using a partial equilibrium model. The paper concludes that under the current regulatory framework, formalization is not socially desirable. However, with reforms, the potential net benefits of formalization are positive and substantial, with gains accruing to entrepreneurs, workers, consumers, and the government. At the level of the economy, formalization would also lead to higher economic growth, poverty alleviation, and an improved business environment.

ملخص

تساهم هذه الورقة في الحوار الدائر حالياً حول إدماج القطاع غير الرسمي في الاقتصادي المنظم، مع التركيز على أهمية تبني الإصلاحات اللازمة لإدماج هذا القطاع في مصر. وتبدأ الورقة بتوضيح لماذا يفضل بعض أصحاب الأعمال حالياً الاستمرار في القطاع غير الرسمي، ثم تقدر أثر الرفاهة المحتمل من الإدماج على مختلف الفاعلين الاقتصاديين وذلك باستخدام نموذج **Partial Equilibrium Model** توازن جزئي.

وتخلص الورقة إلى أنه بدون اتخاذ الإصلاحات اللازمة، فإن عملية الإدماج لن تؤدي إلى النتائج المرجوة وقد تنعكس سلباً على المجتمع. أما في حالة تبني الإصلاحات المقترحة، فإن الإدماج سيعود بمكاسب كبيرة على كل من أصحاب الأعمال والعمال والمستهلكين والحكومة، فضلاً عن أنه سيؤدي إلى زيادة معدل النمو الاقتصادي ودعم محدودي الدخل وتحسين مناخ الأعمال.

I. INTRODUCTION

The case for formalization, or converting extralegal entities and activities to the legal sector, does not go uncontested. The arguments for “leaving the informal sector alone” rest on the belief that formalization would force entrepreneurs to move from a low cost mode of operation most suited to small and micro enterprises to a restrictive and costly formal environment. There is concern that it would deprive the economy of a “shock absorber” in times of difficulty, and negatively affect those who cannot afford to be unemployed. Finally, there is a widespread misperception that formalization is merely an effort to raise funds for the treasury and offers little benefit to anyone else.

The case in favor of formalization is much more compelling, however.¹ It represents an opportunity to create a positive sum game, in which both marginalized workers and entrepreneurs and society at large can be made better off. At the most basic level, it would lead to better protection of property rights, which would enable entrepreneurs to secure inputs at lower costs, have access to infrastructure services and credit, take advantage of expanded markets, and avoid unofficial payments to stay informal. It would equip and motivate entrepreneurs to expand their businesses, reorganize themselves internally, and benefit from specialization and division of labor. For society, these changes would contribute to more rapid economic growth and poverty reduction, especially in light of the growing empirical literature showing a positive association between the rule of law and economic growth (e.g., Barro and Sala-i-Martin, 1995; Knack and Keefer, 1995) as well as between economic growth and poverty reduction (e.g., Dollar and Kraay, 2001).

But even if one accepts the merits of formalization in principle, three key questions remain unanswered: How large are the expected benefits from formalization in a given society? Who are the likely winners and losers from formalization? And what does it take to achieve these gains? Without satisfactory answers to these questions, policymakers may not take the actions necessary to persuade entrepreneurs to voluntarily shift to the legal sector and stay there. After all, policymakers face competing demands on their political capital, and the case for paying more attention to formalization than other reforms needs to be made. Furthermore, policymakers do not

¹ De Soto (2002) makes the most persuasive case in favor of formalization.

necessarily attach equal weights to different groups in society, which makes it essential to identify the potential winners and losers from formalization. Finally, policymakers need to develop a reform package that would effectively persuade entrepreneurs to formalize. This paper attempts to answer this set of questions, although the last question is only covered briefly.²

More specifically, the paper does two things. First, it attempts to explain why some Egyptian entrepreneurs choose to stay informal under the current legal and regulatory framework. Second, it estimates the welfare gains from formalization and identifies the potential winners and losers if pro-formalization reforms are adopted. The methodology used to estimate the magnitude and distribution of welfare follows a partial equilibrium model previously applied to evaluate the welfare impact of privatization (Galal et al., 1994). This methodology is in the tradition of applied welfare economics and project evaluation. The firm level information and regulatory parameters used to assess the impact of formalization in Egypt were obtained from the extensive fieldwork carried out by the ILD/ECES team.

Throughout the paper, the expressions “extralegal” and “informal” are used interchangeably to refer to entities or activities that do not comply with the legal rules governing entry and/or operation. Extra-legality means that economic agents are lacking the legal basis to make the best use of their assets. However, it does not cover illegal activities, such as narcotics trafficking. Nor is it limited to small and medium enterprises (SMEs), as even medium and large size firms could be partially formal (e.g., having a license but not complying with social insurance rules). As such, the analysis in this paper is broader than and distinct from the literature on SMEs. The central focus here is on informality, whereas the central focus of the literature on SMEs is on firm size.

The rest of the paper is organized as follows. Section II outlines a framework for understanding why entrepreneurs prefer to stay informal under the current formal business environment, and for identifying the likely winners and losers from formalization under a reformed business environment. Section III applies the framework to the Egyptian case. Section IV offers some concluding remarks.

² For details regarding the proposed reform package, see the ILD/ECES report (2004).

II. A FRAMEWORK FOR ANALYZING THE FORMALIZATION DECISION AND ITS WELFARE IMPACT

Why do so many street vendors, bakeries, hairdressers, retailers and artisans of all kinds opt to stay outside the formal economy? What would it take to convince them to shift to the formal sector and stay there? What are the welfare implications of both decisions? This section addresses these questions under three headings: intuitive answers, more formal answers, and application.

Intuitive Answers

From the perspective of entrepreneurs, the decision to stay informal is often interpreted mistakenly as a mere reflection of the high cost of entry into the legal sector. Equally erroneous is the view that informal entrepreneurs find it too costly to abide by the formal rules and regulations governing taxation, labor, contract enforcement, securing inputs, and selling outputs to different buyers. Along the same line, there is the misinterpretation that informality is the result of the costly exit procedures of the formal sector.

A more comprehensive and convincing view of the phenomenon of informality is that entrepreneurs feel the total costs of entry, operation and exit associated with joining the formal sector are greater than the potential benefits from being formal. They are willing to forgo the benefits of better protection of property rights and bear the cost of extralegality (in the form of bribes, costly finance, and low protection) because it is more beneficial to remain informal. The only way to convince entrepreneurs to formalize is for the government to introduce reforms that reduce costs and enhance revenues to the point of tilting the balance in favor of formalization.

Implicit in the above discussion is what is called “the difference principle.” That is, what matters for entrepreneurs is not whether the government simply reduces the cost of entry, operation or exit, or simply takes measures to enhance revenues through tax exemptions or subsidized credit. Rather, it is the difference in the net benefits under the two states (formal versus informal) that makes a difference. Also implicit in the above discussion is the notion that reforming the business environment of the formal sector is key to attracting entrepreneurs.

From society’s perspective, entrepreneurs are only one group among many. The government also cares about workers, consumers and its own budget. Accordingly, the policymakers’ decision to promote formalization hinges upon its impact on all of these actors.

Formalization could of course impact certain groups positively and others negatively, just like other policy reforms. However, as long as the net benefits to society are positive, the decision to formalize is socially desirable. In the meantime, mechanisms could be found so that the winners compensate the losers. These mechanisms do not have to entail explicit transfer of funds, but can be built into the reform package itself, for example, through taxation provisions.

More Formal Answers

From the entrepreneur's perspective, he/she chooses to be in the informal sector because:

$$V_p(\text{informal}) > V_p(\text{formal without reform}) \quad (1)$$

where V_p (informal) is the private (as opposed to the social) value of the firm under continued informality. V_p is the discounted stream of profits over the lifetime of the firm. V_p (formal without reform) is the private value of the same firm, also expressed in net present value, under the assumption that the firm is formalized into the existing legal and regulatory framework.

Observing a particular firm in the informal sector suggests that the above inequality holds. This could be explained by three factors. The first is the high cost of entry (obtaining and renewing a license), operation (paying social insurance, corporate and value-added taxes, and enduring various factory and product inspections) and exit (costly procedures for liquidation or bankruptcy) relative to the cost of staying informal. The second is the expectation of low benefits from the formal sector under the current regulatory regime, especially with respect to obtaining credit from the financial sector at reasonable rates, accessing efficient infrastructure, or receiving fair and efficient contract enforcement. Finally, it could be explained by the ingenuity of entrepreneurs in the informal sector, who are known to be able to find extralegal practices (even if sub-optimal) to protect their property rights, make informal contracts, and avoid payment of stiff penalties.

Aside from the interpretation of observed informality, the question is: What will it take to make entrepreneurs change their mind and move to the formal sector? The answer to this question depends on whether the government adopts sufficient reforms to reverse the inequality in equation (1). More specifically, if the government adopts reforms such that:

$$V_p(\text{formal with reform}) > V_p(\text{informal}) \quad (2)$$

where entrepreneurs in the informal sector would shift freely to the formal sector. The most important implication of this statement is that partial reforms of the regulatory regime governing entry, operation or exit may not be sufficiently attractive for entrepreneurs to formalize. Partial reforms are desirable in their own right, but they will not be effective unless they collectively satisfy the inequality in equation (2).

So far, the formalization decision has been discussed from the perspective of individual entrepreneurs. From society's perspective, the decision is more complicated. It depends on the likely impact of formalization on key economic agents, namely entrepreneurs, workers, consumers and government. That is, reforms will be socially desirable if the social value of the firm in the formal sector (V_s formal, with or without reform) is greater than the corresponding social value of the same firm in the informal sector (V_s informal). Or:

$$V_s (\text{formal}) - V_s (\text{informal}) > 0 \quad (3)$$

where V_s is the discounted stream of benefits (losses) to all economic agents who are affected by the operation of the firm. The change in welfare (W) is the difference between the two values. This change in welfare, also expressed in net present value, can be disaggregated into its major recipients as follows:

$$W = V_s (\text{formal}) - V_s (\text{informal}) = \text{change } P + \text{change } L + \text{change in } C \quad (4)$$

where the change in P , or profits, represents the shares of entrepreneurs and government in W (divided among them on the basis of the taxation regime), L represents the share of workers, and C represents the share of consumers.³ Without pro-formalization reforms, the change in welfare may not justify formalization socially, and the arguments for "leaving the informal sector alone" will hold. With appropriate reforms, the social value of the firm can be increased enough to justify the formalization decision.

In principle, the two social values are not expected to be equal if a package of pro-formalization reforms is adopted. On one hand, formalization would lead to the expansion of

³ For the sake of simplicity, no attempt is made here to attach different weights to different components of welfare. But that need not be the case. Different welfare components could carry different weights for the purpose of income redistribution. Also, a profit of one Egyptian pound may be worth more than the consumption of one pound. In addition, one pound in the hands of government may be worth more to society if it were to be used to reduce taxes, thus reducing the distortionary effects of taxation and deadweight loss.

firms, improved productivity, and realignment of prices (e.g., selling prices, interest rate, and wages). On the other hand, it would entail some expenditure of real resources to cover the costs of creating a new organization to handle the formalization process, maintaining a minimum set of books for the purpose of taxation, and contract enforcement for a larger number of contracting parties. However, on balance, and without taking into account any general equilibrium effects, the net benefits from formalization are expected to outweigh the cost of its implementation.⁴

From a distributional perspective, formalization is expected to affect different groups unevenly. Entrepreneurs and government are likely to be better off. The expected increase in profits will be shared between the two of them, depending on the taxation regime for newly formalized firms. Workers are also expected to gain from formalization because they will benefit from enrollment in social insurance, higher wages from improved productivity, and new employment opportunities due to expansion. These gains will be offset in part by the sacrifice they may have to make (in the form of lower take-home pay) in return for the acquired benefits.⁵ Conversely, the impact of formalization on consumers is uncertain. It depends on the price they paid for the product in the informal sector, the price they will have to pay after formalization, and the incidence of the value-added tax. What seems certain is a likely improvement in product quality.

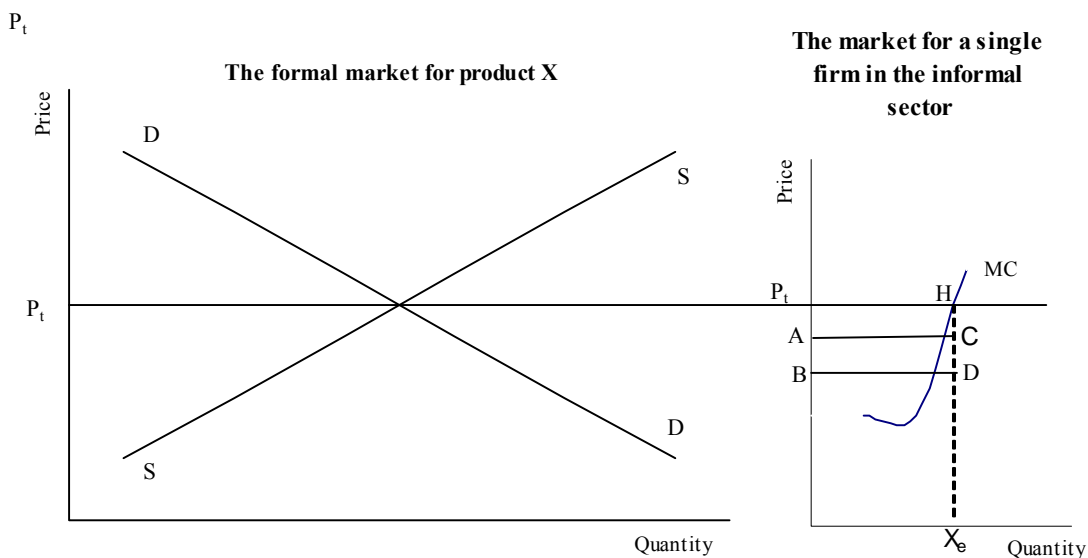
Figure 1 provides an illustration of the likely impact of formalization on consumers. On the left, P_t is the market-clearing price (inclusive of value-added tax) for a particular product in the formal sector. The price is determined competitively because of the multiplicity of producers and consumers. This price is the maximum a firm in the informal sector could charge; hence the demand curve it faces is perfectly elastic (on the right). Before formalization, it is assumed that the firm charges consumers a price equal to A , which includes half the value-added tax even if that amount is not transferred to government. The quality of the product is assumed to be lower than that produced in the formal sector, but consumers are willing to make a compromise on

⁴ Examples of possible general equilibrium effects include lower inflation as a result of increased supply of goods, higher wages due to an increase in the demand for labor, and higher interest rate due to increased demand for credit. Taking these effects into account requires a general equilibrium framework and more data than available at the micro level.

⁵ Following Assaad (1996), it was assumed that take-home pay in the formal sector is about 9 percent lower than the take-home pay in the informal sector.

quality in return for lower prices. Following formalization, the informal firm maximizes profit by selling at P_t and producing at X_e . Quality is improved due to better surveillance and inspection. Entrepreneurs and consumers bear the value-added tax (area P_tBDH) and money is transferred to government. Consumers are worse off due to the additional increase in price (area P_tACH), though they receive improved product quality in return.

Figure 1. The Likely Impact of Formalization on Consumers



From the above discussion, it is clear that the distribution of welfare gains is not even across different groups. However, the sum of the welfare gains (losses) originating from the improvements (deterioration) in firm performance should be equal to the sum of the benefits (losses) accruing to (or incurred by) different economic agents. Also, it is important to note that not all gains from formalization are pure gains to society. For example, while improved productivity is a real saving of scarce resources, the payment of taxes is merely a transfer from entrepreneurs and/or consumers to government. That is not to say that transfers are not important; they involve important redistribution among different actors in society. The point is that transfers are netted out in our calculation of the welfare impact of formalization.

An additional caveat is in order. It is of course possible that a particular individual can be simultaneously a worker and a consumer or an entrepreneur and a consumer. In either case, the

net impact on that particular individual will not be the same as that stated in the above analysis. The losses to that individual as a consumer will be offset by his/her gains as a worker or as an entrepreneur. The rationale for maintaining the classification of the groups is thus, purely analytical.

Application

Applying the above framework to explain why entrepreneurs choose informality over formality and to estimate the likely impact of formalization on different economic agents may seem difficult. But the task was not as demanding as it seems in the case of Egypt, given that data were available from the fieldwork on the operation of a “typical firm” in the informal sector, as were a set of parameters related to the cost of extra-legality and the cost of entry, operation and exit under the current legal and regulatory regime, and a set of reform measures to make formalization rewarding to entrepreneurs.

Equipped with these data and parameters, the simulation exercise was carried out in five steps. The *first step* was to estimate the value of the typical firm in the informal sector under the assumption that it would continue to operate extralegally.⁶ To this end, projections were made on the basis of past trends of all revenues, costs (including extralegal costs) and profits. The information about the typical firm was compiled by the ILD/ECES research team from in-depth interviews with 100 firms in various sectors and locations where informality is known to be prevalent. Projections were necessary for the same reason they are routinely made in project evaluation; namely, that the benefits and costs of the investment or formalization decision are spread over time and need to be discounted.

The *second step* was to estimate another value of the typical firm, under the assumption that it would be formalized into the current legal and regulatory framework. Under this scenario, the firm no longer bears the cost of extralegality, but is obliged to pay the cost of entry, operation and exit associated with being formal. The two sets of cost estimates were derived from a careful

⁶ Whether the information about the typical firm is as “typical” as it should be is not likely to entail a significant margin of error in the estimation of the welfare impact of formalization. The reason for this assertion is that the same data were used to construct alternative values of the firm under different assumptions. Since the results are obtained by subtracting these alternative values of the firm from one another, errors in specific values or projections tend to be cancelled out.

analysis of existing rules and regulations, interviews with firms in the formal and informal sectors, as well as interviews with lawyers and accountants familiar with the current business environment in Egypt. By comparing the value of the firm under continued informality and the value of the firm under formalization under the current regulatory regime, it is possible to explain why that particular firm is currently operating informally.

The *third step* was to estimate a third value of the typical firm, under the assumption that it would be formalized into a reformed regulatory environment. The reforms, spelled out in detail in the main study (ILD and ECES, 2004), were translated into an increase/decrease in revenues, a reduction/increase in costs, or a redistribution of resources among different groups. In making the projections under this scenario, a conservative approach was adopted to avoid inflating the impact of formalization. For example, it was assumed that the firm would only expand by 3 percent annually during the first 5 years, followed by 5 percent thereafter. These growth rates do not involve any big jumps and are in line with the potential growth rate of GDP in Egypt. Similarly, it was assumed that productivity would improve by 1 percent annually, although larger improvements are possible as firms currently face severe constraints. It was also assumed that selling prices would be equal to those in the formal sector, although overall prices could go down because of increased supply. Finally, it was assumed that wages would increase by 26 percent to cover social insurance and that workers would capture the improvement in their productivity, but they would accept a 9 percent cut in take-home pay in return for acquired benefits. These assumptions suggest that the welfare impact of formalization presented in the next section represents a lower bound projection and the actual welfare gains could be even larger.

The *fourth step* was aggregation. The above three steps were performed at the level of one firm. To estimate the welfare impact of formalization of the entire informal sector on the economy, it was necessary to aggregate the results across all firms. This was done using straightforward linear aggregation; multiplying the values obtained at the firm level by the number of firms in the informal sector assuming that it would take 5 years to complete the formalization process. To simplify the exposition and normalize the results, all values were expressed in relation to GDP (adjusted by the value-added of formalized firms).

The *fifth and final step* was to conduct a sensitivity analysis, which was necessitated by the

uncertainty about the future and the possibility that some people may be unwilling to accept the assumptions made to estimate alternative values of the firm. In particular, the sensitivity analysis was performed under two sets of assumptions. Optimistic assumptions were made regarding the rate at which formalized firms would expand, the rate at which productivity would improve, and the income tax rate at which revenue would be enhanced. Under the second set of assumptions, a more pessimistic view was adopted regarding all of these variables.

III. SIMULATION RESULTS FOR EGYPT

This section presents the simulation results of formalization in Egypt with and without reform, following the above framework. This discussion is preceded by a brief characterization of the informal sector in Egypt.

The Informal Sector in Egypt

There is no agreement about the exact size of the informal sector in Egypt or elsewhere. By definition, entrepreneurs in the informal sector operate in the shadow and do not report their activities accurately or at all. However, available estimates suggest that the size of the sector in the developing world is large, ranging between 30 to 70 percent of GNP (Jagannathan, 1987). The size of informality is lower in countries like Hong Kong or Singapore and higher in countries like Peru, the Philippines, Egypt and Morocco. It seems that the level of development and the degree of informality are negatively correlated. Even if 30 percent is used as a benchmark, nearly one-third of the economy is operating sub-optimally at great cost to the country.

In Egypt, while information about the contribution of the informal sector to GDP is debatable, there is some information to indicate that the sector engages a large number of entrepreneurs and workers to justify the formalization effort. According to government survey data (CAPMAS, 1997), independent analysts and the ILD team, the informal sector absorbs 1.4 million extralegal entrepreneurs, or 82 percent of all entrepreneurs in Egypt (Figure 2). The informal sector is the largest employer in Egypt, providing work for about 8.2 million workers, compared to 6.8 million workers in the formal private sector and 5.9 million in government. The characteristics of the informal sector in Egypt are similar to those observed elsewhere.⁷ More

⁷ For an estimate of the informal sector in Egypt and its characteristics, see El Mahdy (2000) and Kamel (2003).

than 90 percent of extralegal firms in Egypt are sole proprietorships, the majority of which employ less than 5 workers and operate with limited capital. Their activities tend to be concentrated in the services sector. The average lifetime of a firm is approximately 10 years, and the production techniques employed tend to be labor-intensive.

Figure 2. Extralegal Entrepreneurs and Workers in Egypt



Source: ILD and ECES (2004).

In short, the size of the informal sector in Egypt is large enough to justify the formalization effort. The characteristics of the sector suggest that it operates sub-optimally. Therefore, formalization is expected to generate significant benefits to the Egyptian economy as well as to underprivileged members of society. Before presenting an estimate of these potential benefits, the rationale for the persistence of informality in Egypt is explained.

The Rationale for Informality in Egypt

Comparing the estimated private value of the “typical firm” in the informal sector under continued informality (V_p informal) and the corresponding value of the same firm under formalization into the current regulatory framework (V_p formal without reform) demonstrates clearly why informality exists in Egypt on a large scale. According to the results reported in Table 1, formalization under the prevailing regulatory framework would make the entrepreneur worse off by as much as LE 149,000 over a period of 10 years (Table 1), or LE 14,900 annually.⁸

⁸ At the time of this writing, the exchange rate of the Egyptian pound to the US dollar was LE 6.15/\$.

Given that the formalization decision lies in the hands of the entrepreneurs, it is not surprising to observe widespread informality in Egypt. Indeed, without reforms to sufficiently make it rewarding for them to shift to the formal sector, informality will persist.

Table 1. Welfare Impact of Formalization under No Reform (in LE unless specified otherwise)

<i>Economic agents</i>	<i>Vs (informal)</i>	<i>Vs (formal with no reform)</i>	Firm level change (Vs formal - Vs informal)	Economy level change (Sum Vs formal - Sum Vs informal)	Economy level annual change (Sum Vs formal - Sum Vs informal) / GDP
	<i>1</i>	<i>2</i>	3 = 2 - 1	4 = 3 * # of firms in the informal sector (LE billions)	5 = (4 /GDP) *100 (Percent of GDP)
Entrepreneurs (Vp)	356,426	207,664	(148,762)	(15.5)	(2.5)
+ Employees	207,897	219,276	11,378	1.9	0.3
+ Consumers	(127,980)	(255,960)	(127,980)	(8.2)	(1.3)
+ Government	27,195	176,698	149,502	15.2	2.4
= Total	463,539	347,677	(115,862)	(6.5)	(1.0)

Source: Calculated from data obtained from the field survey.

The results in Table 1 further suggest that formalization under the current regulatory framework is not socially desirable. At the level of one firm, formalization would earn the government additional revenues of LE 149,500 (primarily from value-added tax) and employees an extra LE 11,400 (primarily in the form of social insurance) over a 10-year period. The problem is that the losses to the entrepreneur (LE 148,800) and consumers (LE 128,000) are greater than the sum of these benefits, leading to a net loss to society of LE 115,862, or LE 11,586 annually if formalization is adopted without reform.

Aggregating the results across all firms in the informal sector reaffirms the above conclusion. In addition, it gives an order of magnitude of the potential benefits and losses at the level of the economy. The results given in columns 4 and 5 of Table 1 indicate that formalization without reform would lead to a loss of resources to society equal to LE 6.5 billion, or 1.0 percent of GDP every single year. Government would collect additional annual revenues of 2.4 percent of GDP and workers would earn LE 0.3 percent of GDP, but entrepreneurs and consumers would lose 2.5 and 1.3 percent of GDP, respectively. Society would be worse off, validating the argument for “leaving the informal sector alone.”

Why does formalization under the current regulatory framework generate such negative results? An important part of the story lies in the cost of abiding by the legal and regulatory procedures in the formal sector regarding entry, operation and exit. Although these costs vary from one district to another, in-depth analysis of 10 cases shows that the incorporation of a sole proprietorship could take up to 91 steps over 232 days and involve 43 entities.⁹ The cost of the entire process is LE 8,039, which is above the average per capita income in Egypt. Corroborated by additional interviews with lawyers and accountants, the cost of operation is even more significant, especially with respect to social insurance and tax administration. As for exit, the fieldwork suggests that bankruptcy procedures could take up to 53 steps over 635 days and involve 14 entities, costing entrepreneurs about LE 9,000 in cash and LE 19,000 in opportunity cost.

To be sure, Egypt is not the only developing country with high costs to access and operate in the formal sector. Loayza (1996) surveyed a number of studies, assessing the cost of access to and operation in the formal sector in a large number of developing countries. Citing De Soto (1989), he reports that it took 10 months to register a small firm in Peru, costing \$195 to obtain the license and \$1,037 to secure utilities, both of which add up to 32 times the minimum monthly salary. In other Latin American countries (i.e., Bolivia, Brazil, and Guatemala), Tokman (1992) found that access to the formal sector took about 10 months and cost 10 percent of annual profits. In a sample of 50 small manufacturing firms in Peru, De Soto (1989) found that simply staying formal took about 348 percent of after tax profit. Tokman (1992) points out that the largest cost of staying formal was related to labor regulation, which increased labor costs by an average of about 20 percent.

This does not mean that staying informal is not costly. It is, whether in Egypt or elsewhere, even if entrepreneurs were able to invent extralegal practices to circumvent the constraints they face. Examples of such practices in Egypt include using licenses obtained for a particular business in a particular location to conduct other types of business in other locations. They also

⁹ Given the limited size of the sample, these estimates cannot be used for "prediction" of the cost in all cases, but they are very useful for "prescription." In other words, the merits of the case study approach adopted here is that it helps to identify all obstacles, thus making it possible to devise ways to deal with them. The constraint is that these results cannot be generalized to all cases, which would not be the case when using econometric techniques.

include signing checks to lenders to ensure repayment, thus risking imprisonment for 6-36 months if they fail to meet their obligations. The problem with such practices is that they do not allow entrepreneurs to take full advantage of market opportunities. Fearing detection, they tend to keep a low profile, resort to temporary closure of business, or make unofficial payments. For the same reason, they do not enjoy the full protection of the law. Therefore, while extralegal practices enable them to survive, these practices are poor substitutes for operating formally.

Potential Benefits from Formalization

Assuming that the Egyptian government adopts the proposed reforms, briefly mentioned below, to make formalization rewarding to entrepreneurs, what are the likely gains and who will be the winners and losers? For a typical firm in the informal sector and for society, the potential net benefits are positive and large (see Table 2).

Consider the entrepreneur first. Formalization under a reformed environment would increase the private value of the firm from LE 356,423 to LE 450,667, a net increase of LE 94,244 over a period of 10 years. This is equivalent to an additional income after tax of LE 9,400 per year. This amount is approximately 1.5 times the per capita income in 2002, which is a significant motivation for the entrepreneur to willingly shift to the formal sector and stay there. If this information were made known to most entrepreneurs, formalization would take hold.

For society, the net present value of the gains from formalization of just one firm is estimated at LE 66,000. These gains accrue in part to workers, who will make LE 46,100 in higher wages and social security than without formalization. Government would earn additional revenue of LE 93,000 from value-added and income taxes.¹⁰ Consumers would benefit from improved product quality, but at the expense of paying the value-added tax.¹¹

Aggregated across all firms in the informal sector, formalization is expected to generate an annual increase in GDP of LE 8.6 billion over 10 years, or 1.3 percent of GDP, every single year. The distribution of the change in welfare is as follows. Entrepreneurs would gain 1 percent of

¹⁰ Income taxes are calculated as 1 percent of total firm sales to reduce the cost of bookkeeping and make tax treatment simpler and less arbitrary.

¹¹ It is difficult to model quality improvement in measuring consumer satisfaction, which is traditionally measured by the area under the demand curve.

GDP, workers 0.7 percent of GDP and government 1.3 percent of GDP. Consumers will be worse off by 1.7 percent of GDP, but the loss is mitigated or even reversed by the benefits from improved product quality and of being either workers or entrepreneurs. The cost of formalization to taxpayers (citizens) is estimated at no more than 0.04 percent of GDP.

Table 2. Welfare Impact of Formalization under a Reformed Environment (in LE unless specified otherwise)

<i>Economic agents</i>	<i>Vs (informal)</i>	<i>Vs (formal with reform)</i>	Firm level change (Vs formal- Vs informal)	Economy level change (Sum Vs formal - Sum Vs informal)	Economy level annual change (Sum Vs formal - Sum Vs informal) / GDP
	<i>1</i>	<i>2</i>	3 = 2 - 1	4 = 3 * # of firms in the informal sector (LE billions)	5 = (4 /GDP) *100 (Percent of GDP)
Entrepreneurs (Vp)	356,423	450,667	94,244	6.4	1.0
+ Employees	207,897	254,014	46,117	4.9	0.7
+ Consumers	(127,980)	(295,341)	(167,361)	(11.4)	(1.7)
+ Government	27,195	120,156	92,960	9.0	1.3
+ Citizens (cost of formalization)				(0.3)	(0.04)
= Total	463,535	529.496	65,961	8.6	1.3

Source: Calculated from data obtained from field survey.

The benefits from formalization will follow from the adoption of the comprehensive reform package proposed by the ILD/ECES team. These reforms include the simplification of all rules and procedures regarding entry, operation, expansion and exit of firms. They also include the creation of an independent organization to carry out the formalization process. The proposed reforms would reduce the cost of establishing and operating businesses by 90 percent, access to mortgage by 91 percent, and enforcement of pledges by 77 percent. All relevant laws will be consolidated into one law and all interaction will be handled by one agency.

Before concluding this section, it is important to ask: How sensitive are the above results to alternative assumptions? The welfare impact of formalization is reported in Table 3 under two sets of assumptions in addition to the results of the basic case scenario. Under more favorable assumptions of firm growth rates (6 percent annually), rates of productivity improvement (2 percent annually), and higher income tax rates (3 percent of sales), the net annual gains to society

are as high as 3.7 percent of GDP. Entrepreneurs, workers and government are much better off, while consumers experience a cost increase. Under less favorable assumptions regarding firm expansion (3 percent annually), productivity (only 0.5 percent annually), and income tax rate (zero percent), formalization still leaves the economy better off by close to .5 percent of GDP every year. The distribution of the gains and losses does not differ from other scenarios.

Table 3. Sensitivity Analysis: Annual Change in Welfare Relative to GDP under 3 alternative Scenarios (%)

Economic agents	Basic Scenario	Optimistic Scenario	Pessimistic Scenario
Entrepreneur	1.0	2.2	0.6
+ Employees	0.7	1.1	0.7
+ Consumers	(1.7)	(2.1)	(1.7)
+ Government	1.3	2.5	0.8
+ Citizens (taxpayers)	(0.04)	(0.04)	(0.04)
= Total	1.3	3.7	0.4
Assumptions			
• Productivity	1.0	2.0	0.5
• Output growth rate	3% for 5 yrs, 5% thereafter	6.0	3.0
• Taxation (% of sales)	1.0	3.0	0.0

Source: Author's estimates.

In sum, the simulation results indicate that formalization is likely to be beneficial to society even under more conservative assumptions than those assumed in the basic case scenario. Perhaps equally important, because the exercise is carried out *ex ante*, the results could be altered by policymakers. One key instrument for changing the distribution of the gains is the taxation regime for formalized firms.

V. Concluding Remarks

The case for "leaving the informal sector alone" is justified only if the government takes no action to reduce the cost of entry, operation and exit for firms in the informal sector and if no steps are taken to expand the opportunities for all entrepreneurs in Egypt. Acting in accordance with this view will only deprive the economy of the huge potential benefits from formalization.

In contrast, the results of the simulation in this paper offer solid grounds for moving ahead with pro-formalization reforms in Egypt. With a coherent set of reforms, formalization would benefit entrepreneurs, workers and government. Although consumers will likely pay higher

prices, they would be assured that the goods they consume are checked for safety and health concerns. The economy would grow faster and poverty would be reduced. Very few reform efforts would do as much to enhance development in Egypt as formalization.

The case for formalization may be even stronger than the one just stated. The paper did not account for the positive externalities resulting from improved business environment for medium and large size firms, the possible benefits from a more developed financial system, or the benefits from greater respect of law enforcement. Also, the model adopted does not take into account possible general equilibrium effects on prices, employment, and investment. Such indirect benefits are difficult to measure accurately, but cannot be ignored altogether.

To achieve the benefits from formalization however, the paper makes it abundantly clear that partial reforms are not likely to be effective. All too often, broad measures to promote SMEs or investment tend to focus on relaxing one constraint or another. The results are often disappointing. What is needed in the case of formalization (and also in other areas of reform) is a coherent set of reforms to persuade economic agents (in this case entrepreneurs in the informal sector) to change their behavior in the direction of socially desirable outcomes. The proposed reforms include simplifying the rules regarding access, operation, and exit; adopting measures to promote the expansion of firms; and creating an organization to oversee the formalization process. Such a reform package has worked in other developing countries. There is no reason why Egypt could not take the lead on formalization in the Middle East.

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