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THE PROS AND CONS OF FORMALIZING INFORMAL MSES IN THE PALESTINIAN ECONOMY

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Abstract

The objective of this paper is to explore the factors that affect the size of the Palestinian informal sector, including the costs and benefits associated with informality or formality, and the quality of government institutions. This paper identifies informal businesses as those with no tax records and no formal registration. Informal business covers all economic activities except agriculture, since most agricultural activities are exempt from tax under Palestinian tax regulations. The empirical analysis of this paper uses secondary data from a number of sources, including a 2008 mixed household-firm survey; a 2013 survey of Palestinian informal entrepreneurs on the local investment environment of the informal sector; the World Bank's ranking of countries on the Ease of Doing Business indicator; the World Bank's World Wide Governance Indicator; and the World Bank's enterprise survey. These sets of data are used for several purposes, including estimating the size and characteristics of the Palestinian informal sector, analyzing motives to join the informal sector, and analyzing linkages of informal sector activities to the quality of public institutions. The empirical findings of this paper lead to a number of policies for regulating the informal sector and enhancing tax compliance.

JEL Classifications: O1, E2

Keywords: Formal and informal MSEs, Palestine

ملخص

الهدف من هذه الورقة هو استكشاف العوامل التي تؤثر على حجم القطاع غير الرسمي الفلسطيني، بما في ذلك التكاليف والفوائد المرتبطة رسميا أو شكليا، ونوعية المؤسسات الحكومية. تحدد هذه الورقة الأعمال غير الرسمية وأولئك الذين ليس لهم سجلات الضرائب وأي تسجيل رسمي. ويشمل العمل غير الرسمي جميع الأنشطة الاقتصادية باستثناء الزراعة، لأن معظم الأنشطة الزراعية معفاة من الضرائب بموجب لوائح الضرائب الفلسطينية. يستخدم التحليل التجريبي لهذه الورقة البيانات الثانوية من عدد من المصادر، بما في ذلك مسح عام 2008-المنزلية الثابتة المختلطة. مسح 2013 لأصحاب المشاريع غير الرسمية الفلسطينية على البيئة الاستثمارية المحلية من القطاع غير الرسمي؛ ترتيب البنك الدولي للدول على مؤشر سهولة ممارسة أنشطة الأعمال. المؤشر الحكم واسعة للبنك الدولي العالمي؛ ومسح للشركات في البنك الدولي. وتستخدم هذه المجموعة من البيانات لأغراض عدة، بما في ذلك تقدير حجم وخصائص القطاع غير الرسمي الفلسطيني، وتحليل الدوافع للانضمام إلى القطاع غير الرسمي، وتحليل الروابط بين أنشطة القطاع غير الرسمي إلى نوعية المؤسسات العامة. النتائج التجريبية من هذه الورقة تؤدي إلى عدد من السياسات لتنظيم القطاع غير الرسمي وتعزيز الامتثال الضريبي.

1. Introduction

During the past few decades, economists have documented a significant contribution of informal activities to both output and employment. The size of informal activities varies widely across countries, depending in large part on the level of economic development. In 2005, the value added in the informal economy averaged 13% of GDP in high-income OECD countries, but was much higher – about 35% – in Latin America, central Europe and Sub-Saharan Africa (Schneider and Williams 2013).[1] The informal sector is also a main employment generator in many developing countries. OECD (2009) reports that informal workers average 57% of the work force across Latin American countries and about 70% in South and Southeast Asia.

Several researchers have emphasized noncompliance with government regulations as the main identifier of the informal sector (Castells and Portes 1989; Portes 1994). In this regard, informal firms generally include all employers and self-employed workers[2] who fail to comply with state regulations, including firm registration, tax rules, and labor law (Pratap and Quintin 2006). Therefore, the informal sector usually includes all economic activities that contribute to the Gross National Product but are not officially reported (Feige 1997; Schneider 1994). Nonetheless, the definition of the informal economy is not necessarily limited to noncompliance. As shown below, several researchers link informality to firm characteristics such as productivity and firm size, among other factors (see Perry et al. 2007).

The substantial size of the informal sector, mainly in developing countries, has sparked attention regarding its causes and its linkages to economic development ills. Economists have often highlighted effects such as a high or rising fiscal deficit, lower productivity, and negative externalities. Understanding these forces has paved the way for a strand of literature to discuss policy instruments for downsizing informal activities.

The informal sector in Palestine is large. In 2008, informal businesses represented about 43.5% of the total number of non-agricultural businesses. The large size of the Palestinian informal sector suggests that there likely is considerable tax evasion. The share of income tax in total government revenue has not exceeded 9% in recent years,[3] a rate that is substantially lower than in neighboring Arab countries with a similar level of economic development.[4] Low tax revenues surely inflated the budget deficit, which amounted to about 30% of total public expenditure[5] in 2012. This impediment has weakened government's ability to provide public services, hampering economic development. Consistently, since the establishment of the Palestinian authority (PA) in 1993, development spending by the PA has averaged just about 6% of total public spending.[6]

As explained below, a large informal sector tends to retard the rate of economic growth via other effects. These include lower productivity due to lack of economies of scale, and distorting policies conducive to growth due to extensive tax evasion and weak linkages with financial markets. In the same vein, government's ability to increase tax revenue, for instance by modifying tax rates, might be ineffective in economies with poor tax compliance. Operating informally is also associated with several societal concerns, including health and safety risks.

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[1] See also Pratap and Quintin (2006).

[2] See definition of employers and self-employed workers below.

[3] Based on an interview with the head of the income tax department, underreporting of taxable income by formal businesses is another factor that contributes to the low share of income tax revenue.

[4] In 2009, income tax revenue as a share of total tax revenue in Palestine was 5% as opposed to 16.9% in Jordan, 27.8% in Egypt, and 15.5% in Lebanon (Qabaja 2012).

[5] This figure is calculated without considering international donations.

[6] See below more discussion about the cost that informality imposes on the Palestinian economy, highlighting the impact on firm's productivity.

1.1 Research objectives

Understanding the reasons why entrepreneurs operate informally is crucial for policy makers to design effective policies that would control the size of the Palestinian informal sector. To this end, this research specifically aims to:

- Explore the factors that influence decisions by Palestinian entrepreneurs to join either the informal or the formal sector, based on the associated costs and benefits.[7]
- Explore linkages between the Palestinian informal sector and the quality of governance.
- Recommend evidence-based policies designed to increase the formalization rate in Palestine.

This paper is not the first to tackle the Palestinian informal sector. Massar et al. (2003) explore the economic and socioeconomic characteristics of informal enterprises, and the challenges that stand in the way of their growth as businesses (see also Malki et al. 2004). Other studies focus on specific informal industries, including handicraft, construction, and food processing (Makhol and Kattan 2006; Awad, Makhol, and Sarsor 2006; Abu Zaroor 2006). Yet none of these studies has identified informal businesses based on tax registration. More recently, Fallah (2013) linked entrepreneurs and workers' socioeconomic characteristics to the likelihood of joining the informal sector and analyzed wage inequality between formal and informal workers.

This paper makes several contributions. First, it comprehensively explores the motives for joining the informal sector, including the potential benefits and costs of operating in the formal or informal sector. The second contribution is to link quality of institutions to the size of the Palestinian informal sector, focusing on the effect of quality of governance and administration capacity. More significantly, based on the analysis presented, this research offers recommendations for policies that would ease the transition to the formal sector and enhance government capacity to enforce tax compliance.

1.2 Study structure and methodology

In what follows, section 2 surveys the literature to discuss determinants and consequences of the informal sector. Section 2 also discusses existing policies, derived from cross-country experience, designed to reduce the size of the informal sector. Section 3 analyzes the Palestinian informal sector, after defining informality and describing the data sources used. Section 3 provides estimates of the size of the Palestinian formal sector and discusses its economic and socioeconomic characteristics in comparison with the formal sector utilizing data from the PCBS mixed household-firm survey of 2008. It finds that the number of informal businesses is substantial, constituting 43.5% of the total number of non-agricultural businesses. The results also show substantial structural differences between formal and informal entrepreneurs, mainly related to human capital, firm size, and type of economic activities.

Section 4 discusses considerations in the decision whether to join the formal or the informal sector, focusing on the associated costs and benefits. The main benefit to formalization is the ability to expand business activities and increase sales of goods and services to the public sector. Section 5 discusses costs of formalization, including the cost of registration, annual fee payments, and tax payments. Interestingly, while the tax rate is lower than in many MENA countries, tax evasion remains the main motive for operating in the Palestinian informal sector. Moreover, section 5 extends the discussion on the cost of formalization to its impact on the rate of business registration. Costs of operating informally are further discussed in section 6, highlighting restrictions on access to credit and impact on labor productivity. The finding is that informality *per se* is not a main obstacle to obtaining loans from banks or

[7] The decision of entrepreneurs also extends to switch between formal and informal sector.

microfinance institutions. In addition, an empirical analysis of labor force data shows that on average, operating informally entails lower productivity, in which low scale economies are the driving factor.

Section 7 considers the quality of Palestinian institutions and their linkages to the informal sector. The results suggest that citizens' negative perceptions regarding the quality of governance probably expands the informal sector. Section 7 also links the large informal sector to the weak capacity of Palestinian tax administration. In particular, the main contributing factors are lack of coordination and information sharing between the tax authorities and business regulatory entities, low human and financial capacity, and an ineffective legal system.

Finally, section 8 utilizes the outcome of the analysis in previous sections to recommend policies designed to reduce the size of the informal sector. These policies include reducing the cost of formalization, simplifying the tax system, enhancing access to credit, enhancing government capacity to enforce tax compliance, and improving tax morale.

2. Literature Review

2.1 Consequences of the informal sector

A large informal sector usually reflects substantial government revenue losses as a result of tax evasion. This would likely lead to a lower level and quality of public services (Schneider and Enste 2000). Such a scenario might induce governments to increase the tax burden on the formal sector to compensate for tax losses. Poor public services and an excessive tax burden might therefore frustrate formal businesses and workers and decrease their trust in public institutions, as they see little benefit to paying taxes. The outcome of this repercussion decreases the incentive to join the formal sector, leading to a vicious circle of expanding the informal sector and low provision of public services (Torgler and Schneider 2007). Highlighting the negative economic impact of informality, Loayza (1986) provide empirical evidence that economic growth is lower in countries with a larger informal sector.

Other researchers highlight the negative impact of an expanding informal sector on productivity via the lack of economies of scale. When operating informally, firms are likely to maintain small-scale operations in order to decrease the probability of government detection (Pratap and Quintin 2006). In addition, lack of access to credit, usually due to insufficient collateral, tend to preclude expanding informal business operations (Straub 2005). A number of studies attempt to quantify the productivity loss driven by a large informal sector. For example, a World Bank (2010) report examines total factor productivity (TFP) differences between formal and informal Turkish businesses. They find that in manufacturing, the TFP for formal firms is 50% higher than for informal ones, and in services, formal firms have 40% higher TFP. In addition, Leal Ordóñez (2013) provides evidence that labor productivity in Mexico would increase by 17% under complete enforcement of formality (see also La Porta and Shleifer 2008).

In addition to lowering productivity, a larger informal sector might hamper growth by distorting economic policies. Specifically, a large informal sector might render monetary policy less effective as informal firms are less connected to the banking system. This is also true regarding the fiscal side: decreasing the tax rate might have a less stimulatory effect on economic growth, and increasing the tax rate might have a less restraining effect on growth or inflation, due to excessive tax evasion (Eilat and Zinnes 2002).

Furthermore, a large informal sector tends to impose social costs. In many developing countries, informal workers often operate in a poor environment with lower pay and inadequate workers rights and social protection (ILO 2002). In addition, a larger informal

sector raises concerns about safety, health and environmental measures that arise in economies with insufficient government monitoring (see Nastiti et al. 2012).

2.2. Determinants of formalization: costs and benefits

To explore the factors affecting entrepreneurs' decision about whether to join the formal or the informal sector, researchers have mainly focused on the associated costs and benefits. There are multiple costs to operating an informal enterprise. One is that expanding an informal enterprise may increase the probability of government detection. Informal businesses also are usually unable to expand their activities via exporting or reaching wider local markets. Specifically, an informal enterprise may find it risky to sell to the public sector or the formal sector, as such business transactions are often reported to tax authorities. Another cost of informality is lack of access to government support. Government services, including training, subsidies, or export facilities are often available only to formal firms. These benefits can be substantial in countries with high quality public institutions. This explains why the informal sector is small in developed countries with high tax rates (Djankov et al. 2002). [8]

One benefit to operating informally is that profitability may be higher, because one avoids paying direct and indirect taxes (mainly income tax and VAT), as well as social contributions (Schneider and Williams 2013). Cost savings from tax evasion may allow informal businesses to sell at lower prices, making them more competitive with formal sector businesses (Palmade and Anayiotos 2005). Therefore, economists often look at entrepreneurs' decision about whether to join the formal or the informal sector as rational profit-maximizing behavior. The informality rate is expected to be higher when the benefits from operating in the shadows outweigh the costs. Kenyon (2007) extends this argument by arguing that joining the informal sector is a strategic decision that also depends on competitors' reaction. He argues that the likelihood that an entrepreneur will formalize decreases if competitors tend to operate informally.

Several empirical studies have examined the influence of tax burden on the size of the informal sector. Loayza (1996), using data for 14 Latin American countries, finds that tax burden is positively associated with a larger informal sector.[9] Similarly, Cebula (1997) provides evidence of a similarly positive tax effect using U.S. data, finding that increasing the income tax rate by one percent expands the size of the informal sector by 1.4 percent (see also Schneider 1986; Trandel and Snow 1999).

However, the extent to which tax burden affects the size of the informal sector is basically related to the state's capacity to enforce tax compliance (Sandmo 1981). Empirical evidence shows that the size of the informal sector is negatively related to the expected risk of detection. Feld and Larsen (2009), using German data for 2004-2007, find that an increase in the probability of detection reduces the likelihood of working in the informal sector. This conclusion applies to other countries, including Denmark, Norway, and the Netherlands (Van Eck and Kazemier 1988; Pederson 2003). Closely related, Blackwell (2007) carries out a meta-analysis to explore determinants of tax compliance. He documents strong evidence that an increase in the probability of detection and the severity of the penalty leads to more tax compliance.[10]

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[8] See Jansson and Chalmers (2001) and Morrisson (1995) for more discussion regarding the benefits of formalization.

[9] While most of the related literature refers to increases in taxes (direct and indirect) as a main catalyst for expanding the informal sector, a few researchers identify an offsetting impact of increases in taxes. For example, Friedman et al. (1999) suggest that increasing tax rates might limit the size of the informal sector if a tax increase signals that regulations and the legal environment will be strengthened.

[10] For more discussion on the deterrence effect, see Schneider and Williams (2013).

Other researchers focus on the impact of the complexity of the tax system, which usually refers to the number of taxes, the ambiguity of tax laws, and the extent of tax exemptions (Gerxhani 2004). Documented evidence suggests that simplifying the tax system tends to increase the incentives of more informal firms to formalize (Schneider and Neck 1993; ThieBen 2003). Another strand of literature highlights the impact of the intensity of regulation on the size of the informal sector. Regulatory intensity is usually measured as the *number* of requirements and laws related to market and labor regulations such as a minimum wage, minimum working age, safety regulations, and regulations on number of hours worked (Schneider and Enste 2000). A greater intensity of regulations might increase the cost of compliance, and therefore some firms might find they would reduce costs by joining the informal sector (Krakowski 2005). Still, researchers often distinguish intensity versus enforcement of government regulations. The evidence shows that enforcement might matter more (Johnson et al. 1998).

Regulation intensity correlates closely with the cost of joining the formal sector, which usually includes registration and licensing costs. Registering a business often entails completing several requirements related to screening, health and safety, environment, and tax registration. However, the efficiency with which such procedures can be completed varies across countries. For example, the number of requirements needed to start a business ranges between one, as in New Zealand, and 13, as in Brazil. The burden of registration also includes the time it takes from start to finish. It takes an entrepreneur one day to register a business in New Zealand, but over a hundred days in Brazil. The cost of registration, measured as a percent of per capita income, also varies by country, ranging from 0.2% in Denmark to 364% in Haiti (World Bank 2014). Economists have often regarded costly and lengthy registration procedures as barriers to formalization (Schneider and Williams 2013).

Another factor that affects the size of the informal sector is the quality of public institutions. Governments that are effective in enforcing tax and market regulations are better able to reduce tax evasion and so limit the size of the informal sector. This, however, requires well-financed and well-trained officials, vital resources that many developing countries lack (see Tanzi 1983). Moreover, greater capacity to promote an efficient market economy, the rule of law, and guarantees of property rights and contract enforcement, might well increase the incentives to join the formal sector (Schneider and Williams 2013). Loayza (1996) finds that the size of the informal sector is lower in countries with strong and efficient government institutions.

Several studies have compared the impact of institutional quality with that of the tax burden. Utilizing data from 69 countries at varying levels of economic development, Friedman et al. (1999) show that a high tax rate has a smaller impact when the quality of a country's institutions is high; that is, differences among countries in the quality of their institutions are associated with differences in the size of the informal sector. These authors also suggest that their findings help explain how poor institutions decrease the tax base, and therefore tax revenues, via increasing the size of the informal sector. In addition, an emerging strand of literature links the level of corruption with the size of the informal sector. For example, Loayza (1996) finds that the informal sector expands with a greater level of bureaucracy and corruption, factors that are more prevalent in developing countries. Moreover, Johnson et al. (1998) confirmed this conclusion in a study of the size of the informal sector in 49 countries in Latin America, OECD, and the former Soviet Union (see also Bovi 2002).

Citizens' perceptions about the sociopolitical system and the quality of public institutions are also related to the size of the informal sector. Economists and psychologists usually link this perception to tax morale (citizens' intrinsic motivation to pay taxes). It is usually noted that citizens are more inclined to pay taxes if they believe that they benefit from public services

and that the government serves their best interest (Feld and Frey 2007). Empirically, Alm and Torgler (2006) utilize cross country (Europe and US) data and show that tax morale explains more than 20% of differences in the size of the informal sector and that high tax morale is associated with a smaller informal sector. The same conclusion also holds when considering transition countries like Russia (Martinez-Vazquez and Torgler 2006) and developing countries, mainly in Latin America (Torgler 2005).

Despite the growing literature on the linkages between the size of the informal sector, tax morale, and institutional quality, little research has explored whether such relationships are causal. It could be the case that a larger informal sector tends to decrease government revenue (the tax base), which in turn tends to undermine government institutions and the rule of law. Torgler and Schneider (2007) are among the few who address the causal effect of tax morale and the quality of institutions. Utilizing instrumental variable analysis, they provide robust evidence that a higher degree of tax morale and a higher level of institutional quality cause the informal sector to decrease. Torgler and Schneider (2007) further suggest that factors like tax evasion, registration cost, and enforcement of regulations explain only part of the differences among countries in the size of the informal sector.[11] They highlight the importance of citizens' perceptions toward governments, arguing that the informal sector is smaller in countries where political institutions act in the interest of their citizens and where governments are perceived as being helpful rather than wasteful.

2.3 Policies to reduce informality - international experience

The costs of a larger informal sector in terms of forgone tax revenue, public service deficits, and lower productivity have attracted a substantial policy discussion. Existing literature shows that formalization policies usually adopt both a "carrot" and a "stick" approach. The carrot is to reduce obstacles and increase benefits to formalizing; the stick is to increase the cost of remaining in the informal sector. The government's rationale for such policies is that a stick-only approach of just strictly enforcing formality might impose a prohibitive cost on small informal firms, pushing some of them out of business and so reducing output and increasing unemployment. The following discussion briefly reviews formalization policies adopted in several countries. These policies can be broadly categorized into reducing barriers to formalization, simplifying the tax system, enhancing enforcement, and building trust with the public.

As indicated in the previous section, regulatory barriers may well preclude transition to the formal economy. Therefore, easing registration procedures is usually looked at as a vital measure to combat informality. For example, Monteiro and Assuncao (2011) show that simplifying bureaucracy and reducing taxes increased the formalization rate for small Brazilian firms (see also D'Erasmo and Moscoso Boedo 2012). In the same vein, other studies highlight the impact of reducing the cost of registration by reducing either formalization fees, or time, or the number of licensing procedures (see Jansson and Chalmers 2001).

Cross country evidence shows that efforts to reduce formalization costs have been fruitful to some extent. For example, in 2002 Mexico introduced a new business registration program (Fast-track Business Creation System), which aimed at reducing the length of registration procedures from eight to two days. Empirical evidence shows that as a result the formalization rate increased by 4 to 8 percent (Kaplan, Piedra, and Seira 2007). Reforming business registration in Colombia is another example. Colombian chambers of commerce established "Business Service Centers" in several municipalities to ease registration burdens. The measures adopted included introducing a one-stop-shop registration to ensure that

[11] See also Feld and Larsen (2009).

registration procedures were completed in one place and in the same day at minimum cost. This kind of business reform seems to have been convincing to some Colombian entrepreneurs, raising business registration by about 5 percent (Cardenas and Rozo 2007). Other countries that have introduced one-stop-shop policies to facilitate formalization are Poland, Ukraine, and the UK (Oviedo 2009).

Other countries have adopted different instruments to foster formal registration. For instance, Finland introduced a single business ID that is shared by various regulatory bodies. The intended benefit of this policy is to ease the burden of bureaucracy and reduce administrative costs, as well as enhance tax monitoring. In Italy, more effort has been made to reduce tax burden; in fact, the Italian government provided a temporary amnesty to informal entrepreneurs in exchange for registering their businesses (Oviedo 2009).

In countries with a large informal sector, benefits to operating informally tend to substantially outweigh costs. Thus, just reducing the cost of registration or the obstacles to formalization might not be enough to have a substantial effect. The existing literature shows that successful policies are those that blend carrot and stick elements. In most OECD countries, enhancing benefits to formalization is accompanied by strengthening law enforcement, for example by boosting the frequency of inspections, enacting anti-corruption laws, improving the judiciary system, and enhancing information-sharing among business regulatory agencies, via automatic databases. These regulatory agencies include business registries, local municipalities, the social security administration, the health authority, and the tax authorities.

Enhancing enforcement can also be channeled via intermediary entities, such as business associations. Italy has adopted a model of this kind, in which only firms that are registered and tax-compliant are eligible to join producer associations that facilitate access to markets and credit. Criscuolo (2003) suggests that this approach works effectively, as it has created a culture of compliance in Italian industry. In addition, governments of many OECD countries have tackled informality through setting up educational campaigns, using workshops, TV commercials, and community visits. These campaigns also include cooperation with trade unions, especially targeting informal businesses (Oviedo 2009). Equally important is communication with the public about the reform efforts that governments are undertaking in order to restore their credibility and trustworthiness. Weak interaction with the public might be detrimental. For example, Tanzania's tax simplification program, introduced in 2001, failed to increase formalization because information was not adequately disseminated to entrepreneurs (USAID 2005).

Several countries have undertaken tax reforms to try to control the size of the informal sector. Tax reforms vary in nature across countries. Governments in advanced economies (Sweden, Belgium, France, and Hungary) often combat informality by reducing tax rates and giving tax exemptions. On the other hand, governments in developing countries generally try to accomplish a similar goal by simplifying tax regimes. Most famous is the presumptive income tax (PIT) system in which a single tax usually replaces other kinds of taxes, such as income tax or VAT. PIT is often employed in economies in which taxpayers frequently underreport income and resources for tax collection are scarce. The estimation of presumptive tax is based on several criteria, including type of economic activity, gross turnover, average profitability of certain sectors, or employment size. Section 8.3 further discusses the advantages of a PIT regime.[12]

[12] More background information on presumptive taxation is available at the World Bank website: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECTORANDGOVERNANCE/EXTPUBLICFINANCE/0,,contentMDK:20233950~menuPK:1747624~pagePK:148956~piPK:216618~theSitePK:1339564~isCURL:Y~isCURL:Y,00.html

In the last two decades, many Latin American countries, such as Argentina, Bolivia, Brazil, and Peru, have switched to a PIT regime, replacing the VAT, income taxes, and social contributions with a single tax (Oviedo 2009). In 1997 Brazil further simplified its tax system, allowing SMEs operating in the service, trade, manufacturing, and agricultural sectors to pay a progressive single tax levied on gross revenues. This tax scheme replaced six types of federal taxes and five types of social security contributions. Evaluating the success of this scheme, de Paula and Scheinkman (2007) showed that the rate of business registration rate had increased by 10-30 percent.

3. The Palestinian Informal Sector

3.1 Definition of firm informality

Understanding the causes and consequences of the informal economy represents a major strand in the economic literature. Yet the hidden nature of informal activities has posed a challenge for economists and sociologists to come up with a consensus definition of informality. Several views have been suggested (Oviedo 2009). Some researchers link informality to firm characteristics such as low productivity; small firm size; legal inseparability from the firm's owners; and hiring of unpaid family members (see Perry et al. 2007). Others have focused on the social protection dimension with special emphasis on employment. The concept of informal employment in the literature, however, is not limited to employment in informal firms, but includes all workers employed in firms – formal or informal – that violate government labor regulations, including regulations requiring firms to pay social security contributions, give paid vacations, and give severance pay upon termination of employment. Fallah (2013) discusses the issue of informal employment, but the focus of this paper is on informal enterprises.

This paper follows the path of a major strand of literature, which considers tax evasion, and lack of formal registration as the main identifiers of informal firms (Castells and Portes 1989; Portes 1994). This paper's analysis of the Palestinian informal sector covers all informal activities of non-agricultural businesses, but it excludes all agricultural activities, which are tax exempt under Palestinian tax regulations.

However, there need not be a distinction between businesses defined as either fully formal or fully informal. Depending on the degree to which firms comply with government regulations, there may be a continuum from formality to informality. Formal firms can be categorized into fully formal and semi-formal. Fully formal firms are those that fully comply with tax regulations while semi-formal firms are those that practice partial compliance. Semi-formal firms represent the majority of the Palestinian formal sector.[13] Such firms are officially registered at various tax departments (income tax, VAT, and property tax) and other regulating entities (see below). However, they tend to minimize their tax payments by under-reporting taxable revenues. Data are unfortunately not adequate for this study to distinguish semi-formal from fully formal firms. It therefore utilizes a definition of the formal sector that includes all firms that are formally registered and either fully or partially compliant with tax regulations.

3.2 Sources of data

To explore the structure of the Palestinian informal sector, this study uses data from a number of sources. The first is a mixed household-firm survey conducted by the Palestinian Central Bureau of Statistics (PCBS) during the fourth quarter of 2008. This survey is utilized to discuss the size and main economic characteristics of the informal versus formal sector. These characteristics include firm size and entrepreneurs' level of education, among other factors. The data collection process of the mixed household-firm survey was in two phases.

[13] Interview with the general director of income tax, Palestinian Authority's Ministry of Finance.

The first phase used a labor force survey to identify informal entrepreneurs. Respondents (employers, own account workers,[14] or workers) were asked whether they maintained tax registration. Based on identifying informal entrepreneurs in the first phase, the firm survey in the second phase collected data about their economic activities, including output, business size, and employee compensation.

This study also utilizes data from the 2013 survey of the local investment environment of the Palestinian informal sector. Administered by the World Bank in association with the PCBS, this survey provides vital data on the motives for joining the informal sector and on the market linkages of informal businesses. Other data sources include the World Bank's Ease of Doing Business rankings, which reports information about the cost of formalization across countries (World Bank 2014). In addition, data from the World Bank's Worldwide Governance Indicators is also utilized to present several indicators related to the quality of Palestinian public institutions.

A purposive sample of formal and informal entrepreneurs was also collected to shed more light on their decision whether to join the Palestinian informal or the formal sector, and on the underlying linkages with the quality of public institutions. Primary data were also collected via in-depth interviews with officials from governmental entities (Ministry of Finance, Ministry of National Economy, and Ministry of Health) and non-governmental regulatory agencies (municipalities, chambers of commerce, and professional associations such that license legal and medical personnel). The data obtained from these interviews is vital to understand the linkages between regulations governing formalization and the size of the informal sector. The remainder of this section discusses the size and main characteristics of the informal sector. First, however, subsection 3.3 describes the main economic indicators of the Palestinian economy so that the size of the Palestinian informal sector can be related to the level of economic development.

3.3 Brief overview of the Palestinian economy

The Palestinian economy can be described as less developed. At the end of 2013, real Palestinian GDP,[15] measured using prices of 2010 as the base year, stood at $11.9 billion. Over the last two decades, real GDP has grown at an average annual rate of 3.5 percent, just above the population growth rate of about 3 percent, so that per capita real GDP has stagnated, currently standing at $2,855. However, this average masks a stark difference between real per capita GDP of $3,647 in the West Bank, and only $1,706 in the Gaza Strip. The poor economic performance of Gaza is mainly attributed to the Israeli blockade that started in 2007 (Fallah 2013).[16]

With stagnating average income, it is not surprising that the unemployment rate is high. In 2013, the unemployment rate was 23.4 percent in Palestine, again with the unemployment rate in Gaza (27.8 percent) far exceeding that of the West Bank (18.6 percent).

In terms of the structure of the Palestinian economy, it can be characterized as a service-driven economy. Table 1 displays the distribution of real GDP and employment across the main economic sectors in 2013. The service sector produced 68.9 percent of real GDP and 61.7 percent of employment, while the manufacturing sector contributed just 16.3 percent of GDP and 12.2 percent of employment. The agriculture sector’s share of GDP was only 3.7 percent, although its share of employment was 10.5 percent.

[14] According to the PCBS definition, an employer is someone who owns an economic enterprise or engages in a profession or trade, and hires at least one worker. A self-employed person (or own account worker) owns an economic enterprise or engages in a profession or trade, and hires no workers.

[15] The GDP estimate excludes economic activities in east Jerusalem due to Israeli restrictions that preclude data collection.

[16] GDP data are from the *Economic and Social Monitor*, Volume 36, 2014. MAS, Palestine.

3.4 Size and characteristics of the Palestinian informal sector

Utilizing the mixed household-firm survey, the objective of this section is to estimate the size of the Palestinian informal sector and distinguish its economic and socioeconomic characteristics from those of the formal sector. It is worth noting that inferences from this exercise are based on employment rather than output data. The reason hinges on concerns related to data credibility. Most Palestinian informal businesses do not keep accounting records. Therefore, to the extent that entrepreneurs join the informal sector to hide their economic activity from the government, they are likely to understate their level of output. To obtain credible data, therefore, requires developing other techniques to estimate the size of informal output.[17]

The survey found that there were 42,830 informal firms, constituting 43.5% of all non-agricultural firms, during the fourth quarter of 2008. Regionally, informal businesses were disproportionately located in Gaza, making up 58% of total non-agricultural businesses there, as opposed to 38% in the West Bank. The overwhelming majority of informal entrepreneurs (88%) were self-employed (own account workers), while that share was 63% for formal entrepreneurs.

In terms of gender distribution, more female entrepreneurs operate in the informal sector with a share of 15% relative to about 3% in the formal sector. The data analysis also shows substantial human capital differences. Formal entrepreneurs were more educated, about 27% of them having at least 13 years of education relative to 12% for informal entrepreneurs.[18] In terms of age distribution, the data shows no significant differences between the formal and informal self-employed or employers. Specifically the mean age clustered around 40.

In terms of type of economic activity, the results also show interesting differences between formal and informal businesses (Table 2). Most notably, the construction sector is disproportionately informal, constituting around 12% of the informal sector but only about 4% of the formal sector. See also Appendix Table A.1, which shows the formal vs. informal distribution for each economic sector. At the other end of the spectrum, businesses operating in the transportation sector are mainly formal and represent about 20% of all formal businesses. As for the manufacturing sector, the majority of informal manufacturers operate in the wearing apparel and stone cutting industries. Formal manufacturers, on the other hand, produce mainly metal products and furniture.

In addition, Table 2 shows that wholesale and retail is the largest economic sector in Palestine. Yet, the formal vs. informal distribution within this sector differs markedly within this sector. In particular, businesses operating in the wholesale subsector as well as in sale, maintenance, and repair of motor vehicles are disproportionately formal. As for the retail subsector, two-thirds of informal retailers operate in non-specialized retail stores (mainly groceries) and retail trade not in stores (street vendors). In contrast, about half of formal

[17] Economists have developed indirect approaches to estimating the size of the informal sector. These include the currency demand approach, which measures the size of the informal sector as the value of the increase in the country's currency over and above the level attributed to conventional factors such as changes in payment and money holding patterns, opportunity cost of holding money, and per capita income. Another method is identified as the physical input method, which is based on using electricity consumption as a measure of all economic activities in the formal and informal sector. This method estimates the size of the informal sector using the difference between the growth of formal GDP and the growth of electricity consumption. As an alternative approach, other researchers estimate the size of informal sector based on GDP estimate differences that are driven by using the income versus expenditure approach (see Schneider and Enste 2000).

[18] Differences in economic and socioeconomic characteristics between formal and informal businesses are well documented in the literature. Specifically, Porta and Shleifer (2008) used cross-country surveys to compare the characteristics of formal and informal sectors. In their findings, they document a distinct difference between these two sectors. Particularly, they find that formal firms are more productive, even when controlling for the firms' size. They also document sharp differences in human and physical capital accumulation. Particularly, informal entrepreneurs are usually less educated and that informal firms utilize less capital.

retailers operate in specialized retail stores, selling textiles, clothing, footwear and leather goods, household appliances, or other specialized wares.[19]

As discussed below, the differences in type of economic activities that firms engage in signal differences in market demand linkages; a matter that is directly related to why entrepreneurs choose to operate in the formal or the informal sector. In fact, the main customers for informal businesses are households, and their business transactions are carried out without invoices. On the other hand, specialized retailers often engage in import activities in which tax registration (formality) is mandatory. This helps explain why specialized retailers are typically formal, and non-specialized retailers are disproportionately informal. The same reasoning explains why the construction sector is largely informal. [20]

Nonetheless, the probability of government detection is another determinant that explains differences in the distribution of economic activities. This is especially the case for the land transportation sector, in which operating informally exposes entrepreneurs to a high risk of detection.

4. Benefits to Formalization for Palestinian Enterprises

The decision to voluntarily join the formal sector is largely a profit maximization decision (see Schneider and Williams 2013). Arguably, entrepreneurs are more likely to formalize if the expected benefit exceeds the cost. To shed light on the benefits of formalization, a purposive sample of 60 formal and informal entrepreneurs was selected from three major cities in the West Bank: Ramallah, Nablus, and Hebron. The entrepreneurs selected operate in various economic sectors, mainly in services and manufacturing. Interviewees were asked about the extent to which formalization affects their business operations.

The analysis indicates that there are clear benefits to joining the formal sector. These are basically related to expanding business opportunities for businesses with close linkages to the formal sector. Tax and formal registration are considered prerequisites for expanding economic transactions with the public sector, NGOs, large formal firms, or international firms, as these business transactions require invoices. Moreover, formal registration is also essential where unregistered businesses face a high risk of government detection, especially for transportation businesses and businesses that trade goods among cities.

Another benefit from formal registration is that it eases access to legal services needed to enforce business contracts and property rights. It also decreases the risk that a business will be shut down in adjudicated disputes, which is a consideration mainly for manufacturing, restaurants, and food processing. These business activities face government monitoring regarding health and safety concerns. Furthermore, joining the formal sector is also essential to obtain business licenses in various economic sectors, including transportation, energy (gas stations), telecommunications, pharmaceutical activities, developers, and real estate contractors.

5. Formalization Costs in Palestine

5.1 Cost of formal registration

Formalization costs are mainly of two types. The first type is the costs of registration, which refers to both the cost of time spent and the fees that entrepreneurs incur to complete business registration procedures. The second type is costs of operating in the formal sector, including direct and indirect tax payments and periodical (often yearly) licensing fees.[21] Table 2 displays 2014 data on costs and procedures to start businesses in Palestine and other

[19] To save space, data on the retail and wholesale subsectors are not reported in Table 2. They are available upon request.

[20] This assertion is based on an interview with the head of the Palestinian contractors union.

[21] Noteworthy, saving these costs is considered the main benefits for entrepreneurs to join the informal sector.

comparison countries (MENA and OECD countries). The data are from World Bank's annual Doing Business report that ranks countries according to several business regulatory indicators, among other measures of business activity.

To establish a company, a Palestinian entrepreneur is required to undergo different procedures, consuming an average of 45 days. The cost of business registration amounts to about 86% of Palestinian per capita income. Combining these factors into a starting business ranking shows that starting business in Palestine is more difficult than in 142 countries (Palestine's rank is 143). Table 2 shows that Palestine performs more poorly than neighboring countries at a similar level of economic development (Egypt, Jordan, and Lebanon). In fact, registration cost and time to get the procedures completed are what make opening a business relatively more difficult.

Table 4 describes the procedures and cost to officially start a company in Palestine. In terms of cost, the lawyer's fee is the most significant, constituting about 80% of the total registration cost. The attorney's fee is even more expensive than in Israel, a developed economy, where it costs about $600. Moreover, some countries, like Jordan and Egypt, do not require hiring a lawyer to register a company at all. As shown below, the growth rate of registered companies in Palestine is negatively associated with the high attorney's fee. Nevertheless, the cost of registering a sole proprietorship is substantially lower than that of a company as hiring a lawyer is not mandatory. It is worth noting that the registration procedures listed in Table 4 are all mandatory except for registering at the chamber of commerce. Still, many entrepreneurs, mainly those trading with Israeli counterparts, choose to do it in order to obtain a permit to cross borders with Israel.[22]

Since 2009, the PA has undertaken a number of reforms aimed at making it easier to start a business. These include full operationalization of the information management system project at the commercial registry in 2009, which resulted in a substantial reduction in registration time from 92 to 45 days. Also, in 2013, establishing a company was made less costly by eliminating the requirement for minimum paid-in capital. On the other hand, at the beginning of 2010, fees paid to hire a lawyer increased to $1000. The net outcome of these reforms was to improve Palestine's rank from 182 to 143.

While Palestine performs poorly on the starting business rankings, the natural question is to what extent formalization costs and procedures affect the rate of formal registration. Data from the investment environment survey are used to address this issue. The respondents (informal entrepreneurs) were asked whether registration time, high cost, and lengthy procedures together affected their decision to remain in the informal sector. Of the sample, 32% said yes. Consistently, this result accords with the perception of the formal businesses regarding registration burden. Data from the World Bank's enterprise survey (2013) shows that 29% of Palestinian formal businesses think that business licensing and the need to obtain permits constrain their operations.[23]

5.2 The impact of changing registration policy on business registration

To further explore how registration cost and procedures affect the rate of formal registration, a simple regression model is utilized, which tracks monthly changes in the rate at which companies are registered in response to changes in the registration requirements in West Bank between 2007 and 2014. The source of data is the Ministry of National Economy's commercial registry for the West Bank.[24] Consistent with Ramey and Vine (2006), the regression model is specified as:

$$logy_t = a + b_1 trend_t + b_2 \mu_t + b_3 \tau_t + b_4 trend_t * \mu_t + b_5 trend_t * \tau_t + b_6 z_t + q_t + e_t \qquad (1)$$

[22] For more information about business registration procedures see West Bank and Gaza's 2014 Doing Business report: http://www.doingbusiness.org/data/exploreeconomies/west-bank-and-gaza/~/media/giawb/doing%20business/documents/profiles/country/WBG.pdf.

[23] see http://www.enterprisesurveys.org/Data/ExploreEconomies/2013/west-bank-and-gaza#regulations-and-taxes.

[24] Registration data for Gaza is not readily available at the Ministry of National Economy.

where $logy_t$ is the logarithm of the number of companies registered monthly.[25] A trend ($trend_t$) is included to capture linear growth or decline in the rate at which companies are registered.[26] Three policy dummy variables are added to equation (1) in order to capture the effect of regulatory changes. Specifically, μ_t takes a value of one for the period that followed the increase in attorneys' fees in February of 2010, and zero before that. The dummy variable τ_t takes a value of one for the period that followed March 2013, when the minimum paid in-capital requirement was eliminated, and zero up to that date. Another dummy variable (z_t) is added to control for the decrease in registration time from 92 to 45 days. It takes a value of one for the years that followed the full operationalization of the commercial registry in 2009 and zero before that. In addition, q_t is a set of quarter dummies to capture the seasonality effect.

To examine whether the registration growth rate increased or declined following changes in attorneys' fees and the minimum paid in-capital regulation, μ_t and τ_t are separately interacted with the trend variable. Note that the model specification of equation (1) does not rule out the possibility that other omitted factors, related to economic shocks or political uncertainty, might mask the effects captured by the policy dummies and interaction variables. However, including trend and quarter dummies should to some extent mitigate this concern.

Model (2) is estimated using OLS. To ensure that the error terms are not serially correlated, a Durbin-Watson test is conducted. The result shows that the test statistic value (2.27) is greater than the upper critical value (1.77), indicating that the error terms are not serially correlated. The results[27] presented in Table 5 substantiate the linkages between the registration burden and the rate at which companies register per month. The estimated coefficient of $trend_t*\mu_t$ is negative and statistically significant at 1%. This indicates that rate at which companies were registered monthly declined by 3% following the increase in attorneys' fees. However, the estimated coefficient of $trend_t*\tau_t$ is positive but not statistically significant even at the 10% level. This result provides slim evidence that eliminating minimum paid in capital is positively associated with encouraging company registration. As for the other results, the coefficient of the dummy variable z_t shows that the rate at which companies registered monthly increased by 26% after the commercial registry became fully operational in 2009.

5.3 Cost of operating formally in Palestine

In addition to costs of business registration, formal entrepreneurs usually incur annual fees that are charged by business regulatory entities. These include an occupation fee (a type of business property tax) amounting to 17% of the property rental value. Annual payments also include municipal fees: a business license fee (an average of ILS 200, or about $58 at the time of writing), a banner fee (an average of $7 per m^2), and a sanitation fee ranging between about $30 and $140 or more, depending on the type of business activity.

Operating in the formal sector entails other costs, namely, payment of taxes. A mounting literature, as discussed above, shows that the greater the burden and complexity of taxation, the larger is the informal sector. To understand the extent of the tax burden in Palestine, this study compared Palestinian tax rates with those of other countries, using the World Bank's doing business report (2014), which includes a ranking of countries by the complexity of their tax systems. The index used to make these rankings is calculated based on tax payments (rates) and mandatory labor contributions that a medium size company ought to pay. The

[25] The analysis in model (1) excludes firms that exit the market, or those with frequent exit/entry status. Such data is not readily available.

[26] In a separate model, I included the squared term of the trend variable to control for nonlinearity effect. The results, not reported show that its effect is statistically insignificant.

[27] The regression model is estimated utilizing the Cochrane-Orcutt-AR(1) technique to account for serial correlation concerns.

index (and hence the ranking) is also based on measuring the administrative burden of paying taxes, assessed by the number of annual payments and the time needed to complete tax reporting. Palestine is ranked number 62 out of 189 on the indicator of the ease of paying taxes.[28] For comparison, Jordan's rank is 35 and Lebanon's is 39. Yet Palestine ranks higher than Egypt (148) and slightly higher than the average of all MENA countries (64).

Table 6 decomposes the ranking on the ease of paying taxes into several indicators: the number of tax payments per year; the time it takes to prepare and report taxes, and others. The number of tax payments that a Palestinian entrepreneur has to complete per year (39) exceeds the average for both MENA and OECD countries. However, the time needed to prepare and report taxes (income tax and VAT) are less burdensome; it is slightly less than in the average for OECD countries, and much lower than in MENA countries, except for Jordan.

As for tax payments, the profit tax rate (16.2%) is similar to that of OECD countries, but greater than in neighboring and other MENA countries. Still, no labor tax or contribution is levied on companies in Palestine, making the total tax rate as a percent of profit the lowest regionally and internationally. As for indirect taxes, the current VAT rate is 16% with 12 payments a year. The PA's ability to adjust the VAT rate is limited as it is linked to the Israeli VAT rate. According to the Paris Protocol,[29] signed by the government of Israel and the Palestine Liberation Organization (PLO) in 1994, the prevailing VAT rate in Palestine is not permitted to be lower than Israel's by more than two percentage points.

Despite the relatively low tax rate, tax evasion remains the main motive for a large section of the Palestinian informal entrepreneurs. Of the informal entrepreneurs sampled by the local investment environment survey, 47% indicated that they had not registered their business due to the tax burden. Plausibly, for businesses that would enjoy little benefit to formalization, because they do not sell to the public sector, NGOs or to large formal firms, it is not surprising that they might prefer to evade taxes by operating informally. Further support for this "weak market linkage" argument also comes from the local investment environment survey: about 93% of the informal entrepreneurs surveyed indicated that their main customers were households and individuals. Since business transactions with such customers are mostly free of invoicing, there is little benefit to tax registration for these entrepreneurs. Consistent with this argument, 64% of the informal entrepreneurs surveyed said they saw little benefit in formalization.

6. Costs of Operating Informally in Palestine

Conceptually, costs of informality represent the forgone benefits that businesses reap when joining the formal sector. As indicated above, operating in the informal sector usually comes at a cost of limited business expansion and limited access to legal services. The aim of this section is to investigate other possible costs of operating in the Palestinian informal sector, namely restricted access to credit and lower productivity.

The first section explores the extent to which informality *per se* restricts access to credit in Palestine. The second investigates whether productivity is lower for informal businesses, highlighting the impact of formal/informal differences in economies of scale.

[28] A higher rank indicates a more complicated tax system; see Doing Business 2014, Economy Profile: West Bank and Gaza:http://www.doingbusiness.org/data/exploreeconomies/west-bank-and-gaza/~/media/giawb/doing%20business/documents/profiles/country/WBG.pdf

[29] The Paris Protocol articulates procedures and regulations that govern the economic relations between the government of Israel and the PA; see http://www.pipa.gov.ps/paris_protocol.asp for more overview.

6.1 Palestinian informality and restricted access to credit

Naturally, access to credit is vital to businesses. It is necessary to finance day-to-day business activities, expand to new markets, help sustain long-term investment, and facilitate exchange via short-term credits (Straub 2005). Several studies show that informal businesses tend to have less access to credit (see Massenot and Straub 2011). Informal entrepreneurs might find it hard to borrow from financing institutions, which entail providing credible documentation about business operations, financial statements, and business licenses, as well as possibly information about suppliers and clients.

Informal entrepreneurs in Palestine seem to be struggling with business financing. About half of them, according to the investment environment survey, indicate that limited access to finance or loans limits their business operations. Still, informal entrepreneurs have weak links with financial services. Specifically, only 12% of them have bank accounts; the large majority (80%) uses their own funds to finance daily operations. Only 6 percent have applied for loans either from banks or microfinance providers. Nonetheless, the following discussion explores the extent to which informality *per se* restricts access to credit in Palestine.

Low access to credit is not limited only to informal businesses. The World Bank's enterprise survey of 2013 shows that among Palestinian formal businesses, only 6% have obtained loans. A report by the World Bank (2008) also shows that relative to population size, the number of loans in Palestine (10 loans per 1,000 person) is quite low, even with reference to other developing countries.

The main constraint on obtaining bank loans is providing collateral. The value of bank collateral in Palestine is considered among the highest worldwide, ranging between 130-150% of the loan value (World Bank 2008).[30] Makhol et al. (2005) show that over 70% of the Palestinian SMEs that applied for loans indicated that the collateral requirement was the main reason that led to denial of their applications. In addition, Makhol et al. suggest that providing collateral is more problematic for SMEs than for large enterprises due to differences in the business legal structure. The majority of SMEs are family businesses with a complicated structure of ownership and lack of registered property.

In their research, Makhol et al. also link other factors to limited access to credit, including high interest rates, which usually range between 8 and about 11% for business loans that are paid in Israeli Shekel.[31] Moreover, religious beliefs seem to play vital role that reduces demand for bank loans, as indicated by about one-third of their SME sample. Conservative Muslims consider that obtaining loans in return for paying an interest rate is *Reba*, which violates Islamic *Shari'a*. Conservative religious belief paved the way for dramatic expansion in offerings of Islamic finance products and of Islamic banks over the past two decades.

Access to finance can also be granted by microfinance institutions (MFIs). A number of microfinance creditors are currently operating in Palestine. Often, collateral requirements are less restrictive than in banks, probably due to lower loan values, amounting to a maximum of $25,000 in some MFIs (Makhol et al. 2005). Yet high interest rates and conservative religious beliefs also reduce demand for loans from MFIs.

The majority of banks and MFIs that operate in Palestine require some form of business registration as a prerequisite to obtain bank loans. Evidence of formal registration is often obtained from the Ministry of National Economy, local municipalities, or chambers of commerce. Still, as far as credit access is concerned, formal entrepreneurs tend to gain little

[30] The strict lending policies adopted by commercial banks in Palestine can be mainly attributed to the weak judicial system and the uncertain political environment and its linkages to economic repercussions (Makhol et al. 2005).

[31] Interest rate for loans paid in dollar currently ranges between 5.5 to 6%.

advantage. The collateral burden and high interest rates remain the main restrictive factors, affecting both formal and informal businesses.

6.2 Informality and Impact on Productivity

A growing literature emphasizes low productivity as a main characteristic that distinguishes informal firms (Leal Ordóñez 2013; La Porta and Shleifer 2008). The underlying mechanism basically hinges on the linkage between firm size and limited access to broader markets as well as probability of government detection.

Although most Palestinian businesses are small (less than 10 workers), Table 7 shows clear size differences between formal and informal businesses. About 70% of informal businesses employ only one worker, while the remaining establishments employ less than 5 workers. On the other hand, about 20% of formal businesses hire more than 5 workers, 40% hire 2-4 workers, and about 40% have just one worker.

To empirically examine whether informal businesses are less productive, researchers often utilize output data to conduct labor or multifactor productivity comparisons (see World Bank 2010). Undertaking this kind of analysis is beyond the reach of this paper as output data at the firm level are not readily available for formal or informal firms. Nevertheless, following existing literature (see Wheaton and Lewis 2002), it is possible to estimate the wage differential between formal and informal workers, utilizing data from the mixed household-firm survey, to draw inferences regarding labor productivity differences. Under a perfectly competitive labor market in equilibrium, the wage level equals the marginal product of labor. Therefore, it is expected that higher wages are associated with greater labor productivity.

The wage difference between formal and informal workers is estimated using Mincer's (1976) wage model in which a worker's wage is related to the worker's socioeconomic and labor market characteristics:

$$Logwage_i = b_1 + b_2 Informal + b_3 Size_i + b_3 Education_i + b_4 Age_i + b_5 Age_i^2 + b_6 Gender_i + b_7 Industry_i + b_8 Occupation_i + b_9 Emp\_stat_i + b_{10} Place\_of\_residence_i + b_{11} District_i + e_i. \quad (2)$$

The dependent variable $Logwage_i$ is the logarithm of the daily wage for worker i, measured after taxes. $Informal_i$ is a dummy variable that takes a value of one for workers who are working in informal businesses, or zero for workers in formal firms. To investigate the impact of firm size (economies of scale) on labor productivity, model (2) includes a set of dummies that categorize businesses according to the number of persons employed (one worker, 2-4 workers, 5-9 workers, 10-19 workers, and 20 or more workers) in which the one worker category is the reference group. The model also controls for a worker's observable characteristics, including level of education (measured in number of years), gender, age (to reflect experience), and age squared (to account for the life cycle wage differential effect).

Model (2) also controls for the wage differential across economic activities by including two sets of 2-digit level industry and occupation dummies. Moreover, an employment status vector (*Emp_stat*) with three dummy variables is included to control for wage differentials between regular, part time, and seasonal workers. Model (2) also includes district and place of residence dummies (cities, rural towns, and refugee camps) to control for spatial wage differences. Descriptive statistics of equation (2) is presented in Table (A.2) in the appendix.

The estimates of model (2) are presented in Table 8, column (2). To emphasize the extent to which firm size explains productivity differences between formal and informal workers, column (1) presents the estimate of model (2), excluding firm size dummies. The results in column (1) show that the estimate of the informal dummy is negative and statistically

significant at the 1% level. The magnitude of the wage differential is about 0.08.[32] This indicates that, on average, informal workers earn 8% less than formal workers, *ceteris paribus*.

Nonetheless, column (2) shows that when the firm size dummies are included, the formal vs. informal wage differential is halved and becomes statistically insignificant. This finding indicates that operating in the informal sector penalizes firms via lowering labor productivity in which the firm size effect is the driving factor, *ceteris paribus*. The estimates of the firm size dummies in column (2) confirm this prediction. Workers employed in businesses with 10-19 workers and 20 or more workers are more productive, respectively earning an average of 21% and 25% more than those working in businesses with one worker. To sum up, it can be argued that operating informally comes at a cost of lower productivity. However, to the extent that the estimated productivity loss is modest, savings from tax evasion and avoiding other formalization costs might substantially offset this effect.

It is important to note that the estimate of the informal dummy ($Informal_i$) captures the informal wage differential effect, holding observed worker characteristics constant. In other words, the model compares the average wage between formal and informal workers employed in the same industry or occupation, with the same level of education, and living in the same governorate and same type of locality (urban/rural/camp), among other factors included in the model. Still, any observed formal wage premium might not only reflect innate productivity differences between formal and informal workers. It could also reflect unobserved worker characteristics, for example more able and productive workers might self-select to work in formal firms, leading to over estimation of productivity differential between formal and informal firms.[33] Nonetheless, the fact that the estimated informality coefficient turns insignificant when including the size dummies indicates that worker self-selection effect is minimal.

As for the results of the other control variables, they are consistent with those documented in the literature. The estimate of returns to education is positive and highly significant, indicating that the average wage increases by 2% for each year of education.[34] The results also show that employees earn a wage premium of 5% for each additional year of work. This effect, however, is non-linear; this premium decreases at rate of 0.05 percentage points for each additional year. The results also show that, on average, male workers earn 27% more than females, all else constant.

7. Quality of Institutions and Informality in Palestine

7.1 Quality of governance and tax morale

Generally, the quality of state institutions is directly related to the size of the informal sector. Empirical evidence shows that citizens are less motivated to comply with regulations in countries with deficient public services, a high rate of corruption, and a lack of transparency and rule of law, leading to a larger informal sector (Alm and Torgler 2006; Torgler 2005; Schneider and Enste 2000; Torgler and Schneider 2007; Loayza 1996).

[32] To address wage outlier concerns, the sample excludes the top and bottom 1% of wage earners. Specifically, the wage for the 1st percentile is 15 ILS and for the 99th percentile is 306.5 ILS. Following the norms of regression analysis when utilizing individual level data, the OLS Model is estimated using the sampling weights of the observations.

[33] It could be also the case that joining the formal or informal sector is based on the perceived impact of formality or informality on profit. Unless it is randomly distributed across formal and informal firms, not correcting for the profit perception effect might bias the productivity differential effect. However, addressing this issue requires longitudinal data at the firm level. Unfortunately, such data is not readily available. Thanks to the referee for raising this issue.

[34] The return to education in Palestine is lower than in other MENA countries. For example, in Turkey, it averages about 11% for each additional year of education. The same conclusion also holds for the return to experience, measured by age. Returns to experience in Turkey averaged 7% (Tansel and Daoud 2014).

This analysis utilizes data from the World Bank's Worldwide Governance Indicators to provide an overview of the quality of government institutions in Palestine. The following discussion focuses on three indicators that relate *citizens*' *perception* regarding quality of governance to size of the informal sector.[35] The first is *government effectiveness*, which reflects quality of public and civil services as well as quality of policy formulation and implementation. The second is *rule of law*, reflecting the extent to which "agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence" (Kaufmann, Kraay, and Mastruzzi 2010,4). The third indicator is *control of corruption*, measuring the extent to which public power is exercised for private gain as well as the extent to which elites and private interests capture the state.

Table 9 tracks changes in Palestine's governance ranking, measured as a percentile, for 2007-2012. The data show that Palestine currently performs very poorly on government effectiveness and controlling corruption, ranking around the lower 25th percentile. In terms of rule of law, Palestine's rank is higher and has improved, but remains below the international median level.[36] These findings clearly point to low tax morale.

The linkage between a larger informal sector and low tax morale is supported by data obtained from the purposive sample of informal and informal entrepreneurs[37] as well as business union representatives, including manufacturing and unions of engineers and medical professionals. The far-reaching message of the data analysis is that lack of tax compliance (a high rate of informality) is directly related to citizens' negative perceptions regarding the quality of public services and the seriousness of corruption. Many respondents justify full or partial tax non-compliance as a response to the current poor quality of education, health services, or infrastructure.

7.2 The informal sector and government capacity to enforce tax rules

Previous sections have discussed factors that potentially affect entrepreneurs' decision to voluntarily join the formal sector, mainly highlighting the costs and benefits of informality relative to formality, and the low level of tax morale. Nonetheless, factors, such as the government's capacity to enforce the rule of law and the deterrence level, play a major role in explaining the size of the informal sector. In particular, if tax and business regulations are not adequately enforced, perhaps because institutional capacity is insufficient, this will decrease the risk of operating informally and therefore lead to a larger informal sector (see Feld and Larsen 2009; Krakowski 2005; Johnson et al. 1998).

The institutional capacity to detect Palestinian informal entrepreneurs and enforce tax compliance is poor. Exploring the quality of measures that are currently utilized to enforce tax regulations can emphasize this. These include coordination and information sharing between tax authorities and business regulatory entities, detection capacity, government regulations, and deterrent measures. The following conclusions are based on reviewing registration procedures and conducting in-depth interviews with senior officials from business regulation entities (tax authority, Ministry of National Economy, municipalities, Ministry of Health, and chambers of commerce).

There is little effective coordination and information sharing between tax authorities and business regulatory entities in Palestine. Procedures to start a business are not linked with tax registration. For example, registering at the commercial registry can be completed without tax

[35]For more information on definition and measurement of these indicators, see http://info.worldbank.org/governance/wgi/index.aspx#home

[36] Notably, the rankings on these indicators vary significantly over time, perhaps reflecting political uncertainty and polarization in the aftermath of Hamas' military control of Gaza beginning in 2007.

[37] The use of a purposive sample is not intended to support inferences about the entire population of entrepreneurs. However, in the absence of a random sample, it provides some indicative information about linkages between tax morale and the size of the informal sector.

registration (VAT or income tax). This lack of coordination surely decreases the government's ability to identify tax evaders. An exception is businesses that engage in international trade, in which tax registration is mandatory so as to facilitate customs clearance through Israeli ports, the only corridor to the outside world. In addition, tax registration is a prerequisite for obtaining a business license for certain groups: construction contractors, real estate developers, pharmacists, and professions related to land transportation and driving schools.

Yet registration procedures listed in Table 4 do not apply to certain occupations, including law, engineering, and medical professions. For these, the Palestinian bar association, the union of engineers, and the Ministry of Health, respectively, issue licenses. As with many other business activities, issuance of these licenses is not conditional on tax registration. It is possible that these entities perceive lack of coordination with tax authorities as a strategy to maximize fee revenue. That is, if tax registration were linked to business licensing, this would entail getting tax clearance from VAT, income tax, or property tax authorities. Probably this would deter a large section of entrepreneurs, leading to decreased demand for licensing, and therefore lower fee revenues.

Further impeding the capacity to detect tax noncompliance is the lack of information sharing across tax authorities. For example, the registration processes for VAT, income taxes, and property taxes are completed independently. This has led to substantial differences in the total number of taxpayers by type of tax. However, introducing a new information technology system (the Management Revenue System) recently has allowed officials from income the tax and the VAT departments to share information about taxpayers.

Lack of human and financial capacity also hampers efforts to reduce the size of the informal sector. In fact, most resources available to tax authorities are devoted to assessing taxes on the formal sector, disproportionately targeting large firms, whose income tax payment represents a large share (70%) of total income tax revenue. As for inspection operations, most of the efforts are allocated to inspecting business transactions between cities. In fact, tax inspection checkpoints are located at the entrance to each city to ensure that business transactions are invoice-based and in accordance with health and safety regulations. Still, there are often not enough human and financial resources to carry out frequent inspections within cities or governorates to detect tax non-compliance. In addition, it might not be cost-effective to carry out frequent inspections of informal businesses. In particular, lack of information about unregistered, mainly low-income, businesses makes detecting them, less cost cost-effective.

The ability to detect informal businesses is also hampered due to the lack of Palestinian sovereignty over large parts of the West Bank. The Oslo peace accords, signed between Israel and the PLO in 1993, divided the West Bank into three distinct areas: A, B, and C. Area A, which mainly includes cities and major populated areas, covers about 18 percent of the West Bank. Area B consists of 22 percent of the West Bank, including large rural areas. Area C makes up the remainder of the West Bank, which is mostly rural and sparsely populated.[38]

What distinguishes the three areas is Israel's vs. the PA's level of security and civil control. Specifically, the PA assumes full control only over area A. In area B, Israel retains security control, leaving provision of public services to the PA. In Area C, however, Israel retains both full security control and responsibility for many aspects of public services. The limited security control over major West Bank areas reduces the ability of the PA to enforce tax regulation, and this lowers the risks for those joining the informal sector in area C.

[38] Israel has exclusively allocated this land to build and expand Israeli settlements, military activities, and infrastructure (United Nations Office for the Coordination of Humanitarian Affairs in the occupied Palestinian territories (OCHA 2011).

Consistently, a quarter of Palestinian informal businesses, as indicated by the investment environment survey, operate under Israeli civil administration.

Another factor that reduces the risk of operating informally and evading tax payment is the low level of legal deterrents. Palestinian law clearly states that tax evasion is a violation of the law and is punishable. For example, according to the income tax law of 2011, those who fail to report taxable income may be fined (between $300 and $3,000) and/or imprisoned for from one month to one year. Yet the absence of tax courts and the lack of legal tax experts complicate and prolong the litigation procedures, and so reduce the incentive for the tax authority to seek legal action against tax evaders.[39] To mitigate litigation concerns, tax evaluators often resort to tax reconciliation with tax evaders, yielding tax payments that are substantially lower than the outstanding amount.

To recap, the large informal sector in Palestine can be attributed mainly to weak tax administration and the poor capacity of the PA to effectively enforce tax law and business formalization. These deficiencies reduce the risk of operating informally and consequently reduce the cost of informality.

8. Policy Recommendations

This study suggests that the large size of the Palestinian informal sector can be attributed to a number of factors, including tax burden; benefit to formalization for businesses that have weak demand linkages; weak capacity of the system for tax administration, along with poor regulatory structure; and low tax morale. The design of effective policies to reduce informality must take these factors into consideration.

To the extent that joining the informal or formal sector is a profit maximizing decision, then a good strategy for containing the informal sector might be to increase the cost of operating informally by increasing the probability of detection and the severity of punishment (Bird 2008). Still, strict punitive measures might backfire on two fronts. The first is that, where administrative capacity is weak, it is challenging to enforcing tax compliance, and probably cost-ineffective as well. Second, using the stick of strict punitive policies without the carrot of increasing the benefits to formalization could crowd out many informal businesses. The main effect might be to increase poverty and unemployment in an economy that relies heavily on the informal sector to generate employment.

This paper advocates policies that strengthen incentives for MSEs to formalize, both by reducing the cost of formalization and by increasing returns to formality, as well as by reinforcing government capacity to monitor and enforce tax compliance. All these policies are needed, since they work together; if some are omitted, the remaining policy changes may not succeed in reducing the size of the Palestinian informal sector. For example, if the government remains weak in its monitoring and enforcement of tax compliance, some entrepreneurs may still find it optimal to operate informally even if the tax burden or cost of registration is reduced. The remainder of this section proposes a number of policy instruments to encourage MSEs to join the formal sector, utilizing the empirical evidence that this study documents regarding the causes of Palestinian informality.

8.1 Decrease the cost of registration

Since 2008, the PA has introduced a number of reforms to ease procedures for starting businesses, reducing the time to complete formal registration from 92 to 45 days and eliminating the requirement for a minimum level of paid-in capital. However, during this period, the attorney's fee for this process has increased, raising the cost of company registration. This study shows that these policy changes have affected the rate of business

[39] This information is based on an interview with the head of income tax department.

registration: while fully operationalizing the commercial registry has raised the rate of business registration, increasing the attorney's fee has lowered it. This finding has important policy implications. It is clear that reducing the attorney's fee would make informal entrepreneurs more likely to register their businesses.

8.2 Increase the benefits of formalization

Benefits to formalization largely depend on the extent of MSEs' market linkages. Formal businesses are better able than informal businesses to link with buyers from the public sector, NGOs, large formal firms, and international buyers. This largely explains why a disproportionate number of businesses that sell to these sorts of buyers voluntarily join the formal sector. However, this study shows that informal entrepreneurs fail to recognize this benefit, most probably due to the nature of their market demand in which the main customers are households and individuals, and their transactions can therefore be done without invoices. As explained above, another benefit to formalization is that it eases access to legal services and reduces the risk that a business will be shut down in adjudicated disputes. Raising informal entrepreneurs' awareness of the benefits enjoyed by formal businesses, especially the increased ability to expand their businesses, might help persuade these entrepreneurs to join the formal sector.

Several studies suggest that obtaining access to credit is one of the main benefits to formalization, as it allows financing expansion of a business. Still, this study shows that formal MSEs have little advantage over informal businesses in access to credit. In fact, for both, lack of access to credit comes from the same sources: lack of collateral, high interest rates, and religious beliefs that make non-Islamic lending unacceptable to many potential borrowers.

To try to overcome the problem of insufficient collateral, a few loan guarantee programs have been initiated in Palestine; most prominent are the Middle East Investment Initiative (MEII) and the European Palestinian Credit Fund (EPCF). The main objective of these programs is to ease MSE access to loans from banks and microfinance institutions by providing risk-sharing guarantees. Over the last 8 years, these programs have guaranteed over $280 million worth of loans.[40] Still, little data is available to comprehensively evaluate their impact on easing MSE access to credit.

An important challenge that faces these programs is weak linkages with Islamic banks, crowding out a large section of potential beneficiaries that reject non-Islamic bank loans. Expanding guarantee programs to cover Islamic loans might increase access to credit at a lower interest rate or *Murabha*[41] due to reducing the risk of default. Another factor that would decrease the cost of borrowing is reducing taxes levied on banks' returns from MSE loans. Closer to the policy implications of this paper, linking tax registration to guaranteed loans can be instrumental to enhance MSE incentives to formalize.

8.3 Reduce tax evasion

The data documented in this research shows that the tax rate in Palestine is substantially lower than in neighboring Arab countries and in the world. Yet tax evasion remains the main motive for Palestinian entrepreneurs to operate informally. Informal entrepreneurs probably reckon that cost savings from tax evasion outweigh benefits to formalization, especially for those with weak market linkages. It is well documented in the literature (Schneider and Neck 1993; ThieBen 2003) that decreasing the tax rate and simplifying the tax system has been

[40] This information is based on an interview with the head of MEII as well as the EPCF website: http://www.cgf-palestine.com/main.htm.

[41] According to Islamic law, *Murabha* is a profit margin that accrues to the lender from selling a good or service directly to the borrower (see DeLorenzo 1999).

frequently proposed to reduce the cost of formalization. Yet the PA's tax relief policies have been mainly directed toward medium and large firms (Abdullah and Hattawi 2014). Income tax exemptions apply to firms with investments exceeding $250,000 or with at least five employees.[42] These exemptions do not favor informal businesses, which mostly hire less than 5 workers (see Table 6).

Normally, enforcing tax compliance depends on the capacity of the tax authority (Blackwell 2007). Effective tax administration means collecting relevant financial information about businesses, identifying tax liabilities in accordance with tax regulations, properly assessing tax payments, and collecting taxes or otherwise penalizing tax evaders (Das-Gupta 2003). The ability of the Palestinian tax authorities to enforce tax compliance is impeded by weak tax detection and monitoring as well as poor legal structure. The cost of enforcing tax compliance is another contributing factor. With insufficient information available about informal businesses, particularly low-income businesses, inspecting them and assessing their taxes is probably cost-ineffective. [43]

A presumptive income tax (PIT) regime has been often utilized to control tax evasion in countries with large informal sectors and weak state capacity. Existing literature shows that designs and features of PIT are multifaceted (Memon 2010). Simplified PIT regimes are usually based on levying fixed tax payments in which its value depends on the type of business. More complex PIT regimes tend to rely on multiple proxies for income, such as value of assets, business location, or number of skilled workers. Economists and policymakers often devote considerable effort to designing PIT regimes to achieve the intended tax purpose. Cross-country experience shows that designing a PIT regime without regard to motives for tax evasion might fail to control the size of the informal sector (Engleschalk 2008). However, the choice of a simplified PIT versus a PIT with multiple proxies for income generally depends on the extent of administrative capacity and the availability of information about taxpayers.

In the Palestinian economy, a fixed PIT regime has been applied to a few occupations or types of businesses: taxi drivers, real estate developers, driving instructors, and driving schools. There is slim evidence that the existing PIT regime is intended to curb informality, as these businesses are mostly formal in nature, since they require licensing and there is a high probability of government detection. But expanding the use of a simple PIT regime with a low tax burden might well help to curb informality and broaden the tax base; and given the weak capacity of the Palestinian tax administration expanding the application of a simplified PIT regime with low tax burden can be instrumental to broaden the tax base (decrease informality) via various channels. The first hinges on reducing the cost to the state of tax inspection and tax collection for a large segment of low-income informal businesses. Second, a PIT regime can also increase incentives to formalize, as formalization would no longer entail full financial transparency. Moreover, it can help reduce the cost of tax compliance for low-income MSEs by cutting the cost of keeping tax based records.

Generally, enforcing a PIT or other simplified tax regime crucially depends on state's ability to effectively monitor, inspect, and impose sanctions on tax evaders; vital capacity ingredients that the Palestinian tax authorities currently lack. As indicated in section (7.2), this is because tax authority branches and other business regulatory entities do not share information; tax courts are lacking, the legal structure is poor; and human and financial resources for tax administration are inadequate. In the light of these findings, the following reforms are recommended to improve tax administrative capacity:

[42] According to the Palestinian Investment Promotion law of 1998, tax exemptions on fixed assets are independent of firm size. Yet the tax exemption is subject to the approval of the investment promotion board (Abdullah and Hattawi 2014).

[43] For more discussion on the cost-effectiveness of tax collection see Bird (2008).

- Enhance tax monitoring via implementing cross tax registration among the various tax departments (income tax, customs and the VAT, and property tax).
- Expand information sharing about taxpayers and registered businesses between the tax authorities and other business regulatory entities (including the Ministry of National Economy, municipalities, the Ministry of Health, and chambers of commerce).
- Make tax registration a prerequisite for business registration and licensing. The analysis of this paper shows that tax registration is often completed independently from business registration or licensing. This has weakened the capacity of tax administration to enforce tax compliance, mainly in professions that are licensed via their respected unions such as law and engineering, or via the Ministry of Health for medical professions (see Qabaja 2012).
- Increase the incentive to formalize by offering a temporary amnesty in exchange for formal registration.
- Enhance human resources in tax administration to the degree that optimizes tax collection. Another factor that hampers the capacity of the tax authorities is lack of human capital mainly with respect to tax inspection. The chronic budget deficit that has accumulated since the outbreak of the Second Intifada in September 2000 has recently hampered growth of tax personnel.[44] However, expanding the simplified PIT regime would allow redistributing human resources more toward tax inspection.
- Establish tax courts as a way of upgrading the legal system that handles tax matters. This is vital to controlling the informal sector. So far, the lengthy litigation process required to prosecute tax evaders has made it difficult to enforce tax regulations.
- Implement policies to control informality fully, not partially. While fully enforcing tax regulations is a challenging task given the legal and political structure in Palestine, policies to control informality (such as enforcing tax regulations) should be implemented as fully as possible, because partial enforcement might reduce the incentives for businesses to formalize. This could happen if complying with tax regulations forced formal entrepreneurs to sell the same goods or services at a higher price than their informal counterparts. Moreover, partially enforcing tax regulations might increase the culture of informality, as formal entrepreneurs might perceive uneven tax compliance as unjust.

8.4 Tax morale

Palestine performs poorly on controlling corruption and on the quality of public and civil services. As a result, citizens' negative perceptions regarding quality of institutions leads to low tax morale and weakens the incentive for informal entrepreneurs to join the formal sector. It appears that Palestine is trapped in a vicious circle, in which widespread tax evasion leads to low tax revenue, which in turns leads to low provision of public services and hence widespread tax evasion. The mutual causation between the large size of the informal sector and low provision of public services renders policy recommendation a tough task.

Another contributing factor to low tax morale may well be the low share of public spending on basic public services. Consistently, total spending on security, for instance in 2011, equals the sum of spending on health and education services. In fact, security spending consumes about 30% of total PA expenditure, far exceeding international standards.[45] Undoubtedly, redistributing public expenditure toward social services would improve the quality of public services and enhance tax morale.

[44] This information is based on interview with Officials from the Palestinian Income tax department.

[45] In 2009, security spending as share of total public spending amounted to about 20% in Jordan, 7% in Egypt, 14% in Lebanon, 4.5% in Germany, and 15% in Israel (Qabaja 2012).

With respect to controlling corruption, the PA has introduced a number of anti-corruption measures, including the establishment of the Anti-Corruption Commission in 2005. Yet citizen perceptions regarding controlling corruption have not improved. The governance indicator shows that citizens' perceptions regarding government's ability to control corruption has recently deteriorated (see Table 9). As a policy recommendation, upgrading the anti-corruption measures is warranted to enhance tax morale.

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Table 1: GDP and Employment Contribution, by Sector, in WBG

	GDP share (percent)	Employment share (percent)
Agriculture & fishing	3.7	10.5
Mining, manufacturing, electricity, & water	16.3	12.2
Construction	11.1	15.6
Services	68.9	61.7
Total	**100.0**	**100.0**

Source: *Economic and Social Monitor*, volume 36, 2014. MAS, Palestine.

Table 2: Distribution of Economic Activities: Differences between Formal and Informal Businesses

Type of Economic Activities	Sector total Informal share (%)	Sector Total formal share (%)	Informal Share (%)	Formal Share (%)
Manufacturing	**18**	**16**		
Manufacture of food products and beverages			2	2
Manufacture of textiles			2	1
Manufacture of wearing apparel; dressing and dyeing of fur			5	2
Tanning & dressing of leather; mfg. of luggage, saddles, harness & footwear			2	1
Manufacture of wood and of products of wood and cork			0	1
Publishing, printing, and reproduction of recorded media			0	1
Cutting, shaping and finishing of stone			5	0
Manufacture of structural metal products, tanks, reservoirs and steam generators			1	4
Manufacture of furniture			1	2
Construction	**12**	**4**		
Wholesale and retail	**50**	**45**		
Sale, maintenance & repair of motor vehicles & motorcycles; retail sale of auto fuel			4	6
Wholesale trade and commission trade, except of motor vehicles and motorcycles			2	6
Retail trade, exc. motor vehicles & motorcycles; repair personal & household goods			44	33
Hotels and restaurants	**3**	**1**		
Transport, storage and communications	**7**	**21**		
Land transport			5	20
Supporting and auxiliary transport activities; activities of travel agencies			2	1
Financial intermediation, real estate, and business activities	**3**	**4**		
Education, social and personal activities and activities of private households	**7**	**7**		
Education			1	1
Health and social work			1	2
Recreational, cultural and sporting activities			1	0
Other service activities			4	4
Total	100	100		

Notes: Components may not sum to totals due to rounding; a 0 entry means a share of less than 0.5%.
Source: PCBS Mixed household-firm survey, 2008.

Table 3: Starting Business Indicators: Cross Country Comparison

	Palestine	Egypt	Jordan	Lebanon	Turkey	MENA*	OECD
Starting Business Rank	143	50	117	120	93	-	-
No. of procedures	9	7	7	5	6	8	5
No. of days	45	8	12	9	6	19.8	11.1
Cost as % of income per capita	85.5	9.7	22.3	76.5	12.7	28.9	3.6
Paid-in minimum capital** as % of income per capita)	0	0	0	34.7	13.2	45.4	10.4

Notes: *Middle East & North African countries. **Refers to the amount of money that an entrepreneur must deposit in a bank or with a notary before registration (World Bank 2014)
Source: World Bank (2014)

Table 4: List of Procedures to Start a Company in Palestine

No.	Procedure	Time to complete	Cost
1	Reserve a unique company name (only for a company)	1 day	ILS 87**
2	Hire a lawyer to sign company documents	1-3 days	USD 1000
3	Register at the company registry	3-4 days	No charge
4	Pay registration fees	1 day	ILS456
5	Register for income and VAT tax	1-3 days	No charge
6	Register with the Chamber of Commerce	3-5 days	USD 158
7	Obtain business license from municipality	35 days*	ILS 120
8	Obtain approval from the Fire Department	1-3 days*	USD 0.15 per m^2
9	Obtain approval from the Ministry of Health	3 days*	No charge

Notes: * simultaneous with other procedures. **refers to Israeli Shekel
Source: World Bank (2014)

Table 5: Impact of Changes in Formalization Cost on Growth of Company Registration

Variable	Estimate
$trend_t$	0.02
	(2.71)***
μ_t	0.75
	(2.36)***
$trend_t*\mu_t$	-0.03
	(-3.52)***
τ_t	-1.55
	(-1.26)
$trend_t*\tau_t$	0.02
	(1.43)
z_t	0.26
	(2.10)*
Q	Yes
No. obs	86
Adjusted R^2	0.52
Durbin-Watson statistic†	2.27
F-statistics	7.46

Notes: The figure in parentheses is the t-statistic. The dependent variable is the logarithm of the number of companies registered monthly. *** reflects 1% significance level. * reflects 10% significance level

Table 6: Tax Burden Indicators: Cross Country Comparison

Indicator	WBG	Egypt	Jordan	Lebanon	MENA	OECD
Payments per year	39	29	25	19	18	12
Time (hours per year)	170	392	151	180	220	175
Profit tax (%)*	16.2	13.2	12.8	6.1	12.4	16.1
Labor tax and contribution (%)	0	25.8	13.8	24.1	16.3	23.1
Other taxes (%)	0.3	3.6	2.3	0	30.6	2
Total tax rate (% profit)	16.5	42.6	28.9	30.2	32.3	41.3

Notes: *The amount of taxes on profits paid by the business as a percentage of commercial profits.
Source: World Bank (2014).

Table 7: Differences in Firm Size between Formal and Informal Firms

	Formal Firms (percent of total)	Informal Firms (percent of total)
No. of workers, including self-employed		
One worker	41	69
2-4 workers	40	31
5-9 workers	13	0
10-19 workers	3	0
20 workers or more	3	0
Total	100	100

Source: The mixed household-firm survey (2008)

Table 8: Wage (Productivity) Differences between Formal and Informal Workers

Variable	Model 1	Model 2
Informal firms	-0.08 (-2.13)**	-0.04 (-1.1)
Firm Size		
2-4 workers		0.06 (1.04)
5-9 workers		0.09 (1.4)
10-19 workers		0.21 (3.07)***
20 workers or more		0.25 (3.88)***
Years of education	0.02 (4.71)***	0.02 (4.37)***
Age	0.05 (9.51)***	0.05 (9.4)***
Age^2	-0.0005 (-7.61)***	-0.0005 (-7.46)***
Gender – Male	0.27 (6.95)***	0.28 (7.31)***
Type of Industry	Yes	Yes
Type of Occupation	Yes	Yes
Type of Employment	Yes	Yes
No. of work hours/week	Yes	Yes
Governorate	Yes	Yes
Constant	2.49 (16.35)	1.98 (11.16)
No. of observations	1660	1660
Adjusted R-sq	0.59	0.58
F-statistics	11.04	10.97

Notes: The figure in parentheses is the t-statistic. The dependent variable is logarithm of workers' daily wage. * reflects 10% significance level. ** reflects 1% significance level

Table 9: Quality of Governance Indicators

Indicator	2007	2008	2009	2010	2011	2012
Government effectiveness	10	6	27	41	30	26
Rule of law	25	22	45	48	41	40
Control of corruption	21	8	45	46	21	24

Source: World Bank, Worldwide Governance Indicators- 2007-2012 (see http://info.worldbank.org/governance/wgi/index.aspx#home)

Appendix

Table A1: Share of Formal and Informal Businesses, by Economic Activity, in WBG

Type of Economic Activity	Informal Businesses as Share of Total	Formal Businesses as Share of Totals
Manufacturing	**53%†**	**47%**
Manufacture of food products and beverages	50	50
Manufacture of textiles	67	33
Manufacture of wearing apparel; dressing and dyeing of fur	72	28
Tanning and dressing of leather; manufacture of luggage, handbags, saddles, harness and footwear	67	33
Manufacture of wood and of products of wood and cork		100
Publishing, printing and reproduction of recorded media		100
Cutting, shaping and finishing of stone	100	
Manufacture of structural metal products, tanks, reservoirs and steam Generators	20	80
Manufacture of furniture	33	67
Construction	**75**	**25**
Wholesale and retail	**53**	**47**
Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	38	62
Wholesale trade and commission trade, except of motor vehicles and motorcycles	24	76
Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	57	43
Hotels and restaurants	**75**	**25**
Transport, storage and communications	**25**	**75**
Land transport	20	80
Supporting and auxiliary transport activities; activities of travel agencies	67	33
Financial intermediation, real estate, & business activities	**43**	**57**
Education, social & personal activities & activities of private households	**50**	**50**
Education	50	50
Health and social work	33	67
Recreational, cultural and sporting activities	100	
Other service activities	50	50

Table A2: Descriptive Statistics for the Variables Included Wage Model (2)

Variable	Mean	Std. Dev.
Daily wage (after tax)	73.65294	41.84352
Years of Education	10.94103	3.572103
Age	33.1059	10.80636
No. of hours worked	43.82669	14.06838

Type of Occupation	share	Type of Industry	share
Legislation and Senior Management	0.02	Manufacturing	0.23
Professional-Clerks	0.26	Construction	0.14
Services-Shop	0.17	Commerce-Hotels	0.28
Skilled-Agriculture	0.001	Transport-storage	0.08
Craft	0.18	Other services	0.28
Plant-Machine	0.14		
Elementary Occupation	0.23		
Total	1.001	Total	100

Type of Employment	share	Place of Residence	proportions
Full time	0.88	Urban area	0.58
Part time	0.065	Rural area	0.25
Seasonal	0.05	Camp area	0.17
Total	1	Total	1

Firm size (no. of workers)	share	sex	share
1 worker	0.02	Male	0.8227
2 to 4 workers	0.32	Female	0.1773
5 to 9 workers	0.23		
10 to 19 workers	0.12	Total	1
20 + workers	0.3		
Total	1		