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ECONOMICS *of* PROSPERITY

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# In the Shadows:

## How the Financial Crisis has Affected the Shadow Economy

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# THE SHADOW ECONOMY

The shadow economy, generally defined as the economic activities hidden from authorities, affects every country, developed and emerging. It can disincentivise entrepreneurship, hamper investment, undermine broader private sector development and reduce social protection —throttling economic growth and prosperity. But the shadow economy can also lead to positive "side effects": it can provide an outlet for economic activity (mainly small and medium firms) that would otherwise fail to flourish in the formal sector because of excessive barriers (Loyoza, 2010). Incomes generated in the informal sector, assuming that they would not have been generated otherwise, are spent in the formal sector and, thus, may provide a boost for the formal economy (Frey and Schneider, 2000). The shadow economy, in other words, can be the symptom of a problem, rather than its cause.

Assessing the size of the shadow economy is vital to better understand its causes; its impact on the economy and society; and to design effective policies. Current measurement strategies however are flawed (Andrews 2011) although new approaches are constantly being developed. Of these, the one recently introduced by the Center for Economic Research and Graduate Education (CERGE-EI) (Lichard 2013) marks an important break-through (see Box 1).

'In the Shadows: How the Financial Crisis has Affected the Shadow Economy' is an attempt by CERGE-EI, the European Bank of Reconstruction and Development (EBRD) and the Legatum Institute to take stock of the shadow economy, particularly in the countries of Central and Eastern Europe. With better measurement, and a better understanding of what encourages businesses to remain informal, we can devise policy solutions to bring more economic activity into the light.

Shadow economy activities typically fall into two categories: undeclared work and businesses underreporting income (Figure 1).

The first, which accounts for roughly two-thirds of the shadow economy, includes wages that workers and businesses do not declare to the government to avoid taxes or documentation. It is widespread in construction, agriculture, and household services (such as cleaning, babysitting, elderly care, and tutoring) but extends also to small firms in other sectors. The other one-third comes from underreporting income, which is when businesses—primarily those that deal heavily in cash, such as small shops, bars, and taxis—report only part of their income to avoid some of the tax burden (Schneider, 2013).

Figure 1: Shadow Economy—Definition

| | Sector | | | |
|---|---|---|---|---|
| | **Formal** | **Household** | **Informal** | **Criminal** |
| **Type of activity** | Legal | Legal | Legal | Illegal |
| **Type of work** | Declared | Not declared | Not declared | Not declared |
| **Profit** | Declared | Non profit | Not reported | Not reported |
| ***Example*** | *"Normal economic activity"* | *Neighbourly help; housework etc* | *Moonlighting: not declared housekeeper; not declared sales in bars etc* | *Burlary, robbery, drug dealing, prostitution etc* |
| | | | SHADOW ECONOMY | |

Source: Krampe, J. 'The Shadow Economy in Turkey' BSEC Tax Forum, 23 November 2012

## BOX 1: Measuring the Shadow Economy

The shadow economy comprises activities that are not observed or registered, and may be treated differently in national legislation: this makes it difficult to measure. Different methods exist which could be classified into two groups: indirect and direct methods. Indirect methods depend on strict identifying assumptions and involve using proxies (such as the share of self-employed people or multiple job-holders) or the discrepancies between economic indicators which are officially measured (such as national accounts both at macro and micro level, electricity consumption, cash transactions, tax revenues). These methods often over-estimate the phenomenon and say little about its socio-economic characteristics. The indirect method which is most frequently used is the Multiple Indicators-Multiple Causes (MIMIC) technique used by Schneider, Buehn and Montenegro (2010) which estimates the size of the shadow economy using different macroeconomic indicators. More recently CERGE-EI has introduced a new methodology based on household surveys; by using sophisticated/advanced econometric analysis it allows for the estimation of the shadow economy (undeclared work) without imposing any strict assumptions (Lichard 2013). In this respect the technique developed by CERGE-EI marks an improvement over previous approaches.

Direct methods, on the contrary, are based on statistical surveys (such as the Business Environment and Enterprise Performance Survey implemented by the EBRD in partnership with the World Bank Group, and Euro Barometer Survey) that ask individuals or firms whether they or their peers are engaged in informal activities. They have the advantages in term of comparability and detail, but tend to under-represent the size of the shadow economy. Moreover, quite often, both methods capture only the undeclared work or the underreporting income aspect. For example if one uses tax records to measure the shadow economy then implicitly it is being modelled as underreporting activity (ex. Christie and Holzner, 2004). On the other hand if employment surveys are used then the shadow economy comes to mean workers who are unregistered for tax and benefit purposes.

These estimates generally suffer from a number of common shortcomings (Andrews 2011):

» Limited country coverage;

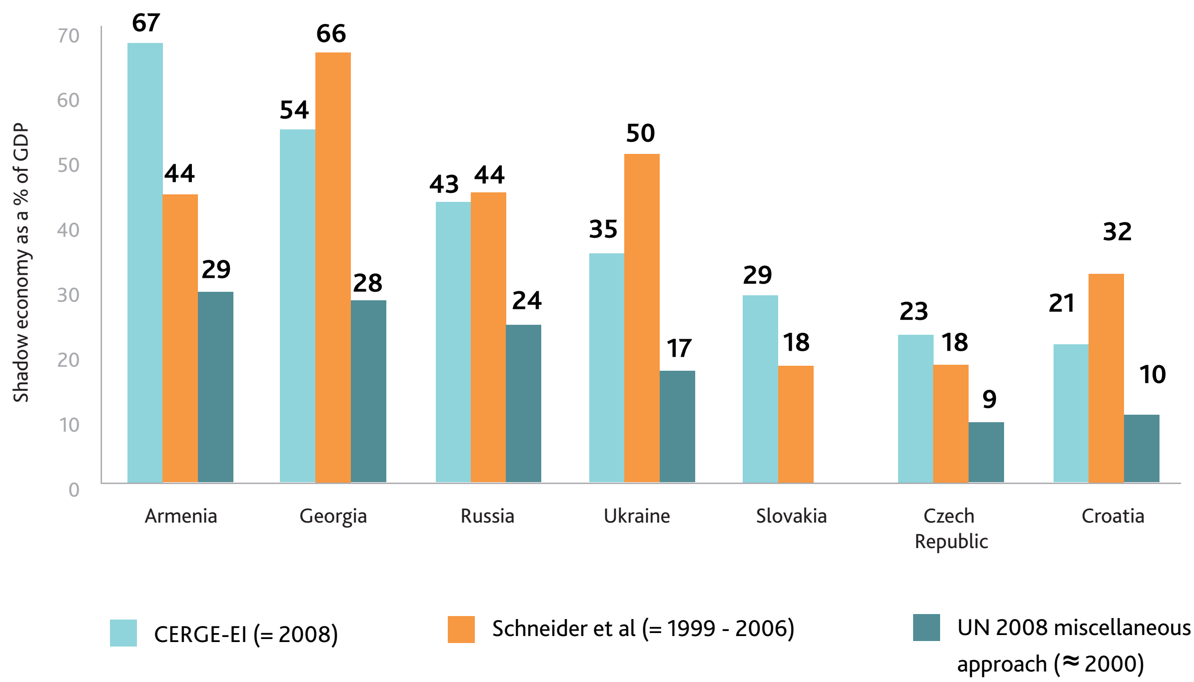
» Lack of time dimension;

» Inaccurate or incomplete measurement since they may include some formal activities; don't account for intensity of participation and suffer of serious statistical problems;

» Lack of consistency across different measures.

As Figure 2 shows, the results of available estimates differ a lot depending on the methodology applied.

Figure 2: Estimates of the shadow economy using three different indirect approaches




Source: CERGE-EI (forthcoming), Schneider, Friedrich, Andreas Buehn, and E. Claudio Montenegro. *Shadow Economies all over the World. New Estimations for 162 countries from 1999 to 2007, 2010 & UN, Non-Observed Economy In National Accounts. Survey of Country Practices, 2008*

Although differing in their magnitude, a result is constant across methodologies: in Eastern and Southern Europe the shadow economy is much larger in relation to the size of the official economy than in Western Europe. Identifying the correct measurement tool is critical since, by affecting our understanding of the drivers the shadow economy, they have an effect upon what actions policy-makers take.

# THE DRIVERS OF THE SHADOW ECONOMY

The available evidence shows that the shadow or informal economy is related to the business environment, the tax burden and enforcement, quality of government and social capital (Andrews 2011): countries that perform poorly in these dimensions are usually characterised by a larger shadow economy. The shadow economy also tends to flourish in countries characterised by the lack of a "guilty conscience" in hiding activities from the public authorities (due to a low trust in state institutions); and where cash is widely used. It is also affected by the economic cycle (F. Schneider 2013): the shadow economy usually shrinks during economic booms and expands during recessions. This result makes an assessment of the shadow economy in the wake of the financial crisis particularly important.

Moreover, there is a common concern among policy makers that a number of new factors/trends may contribute to an expansion of the shadow economy (European Commission 2013):

1 Growing demand for household and care services as a result of socio-demographic changes;

2 Larger diffusion of smaller and less hierarchical working relationships that are based on more flexible pay systems or time accounting;

3 Increasing share of self-employment, sub-contracting, on-call consultancy works;

4 Growing ease of settling up cross-border enterprises which could easily avoid reporting workers and profits.

**BOX 2: The Shadow Economy and the Financial Crisis**

The effect of the financial crisis on the shadow economies of the countries affected has not been extensively researched. However, in line with the economic cycle pattern described above, Schneider (2013) shows that the shadow economy in Europe increased from 19.4% of GDP in 2008 to 19.9% in 2009, halting a decline which had been ongoing since the turn of the millennium. Furthermore, while the shadow economy resumed its decline between 2009 and 2013, it was at a slower pace than before (Schneider 2013).

In those countries most affected by the financial crisis progress has been slowest since 2009. Spain's shadow economy has remained flat at around 18.6% of GDP and Portugal's also remains static at around 19%.

Exactly why the economic cycle affects the shadow economy is unclear. Schneider (2013) suggests that:

> "During times of economic downturn, (higher rates of firms closure/bankruptcy) rising unemployment, lower disposable income, and fears about the future, more individuals tend to drift into 'shadow activities' where by avoiding complying with labour market standards, facing the bureaucratic and tax burden, and paying social security contributions they decrease their costs and can run profitable activities".

In addition the financial crisis, ensuing recession and austerity programmes have brought disillusionment to many European countries and increased the distance between citizens and government. People increasingly do not trust politicians, causing an erosion of social capital and faith in governmental institutions—two forces likely to make informal work more attractive.

Pushing in the opposite direction however are the efforts of governments to bring more economic activity into the formal economy. A pressing task at a time when governments are cutting spending and seeking to preserve and increase income from taxation.

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# THE IMPACT OF THE SHADOW ECONOMY

The majority of existing studies show that economic activity occurring in the informal rather than formal economy is bad for a country. Similarly, studies suggest that workers employed in the informal economy are worse off, both financially and psychologically, than their counterparts in the formal sector (Krstic and Sanfey 2006). However, such findings have an important caveat; that economies and individuals would be worse off if the economic activity in the informal sector did not occur at all (Frey 2000). The upshot is:

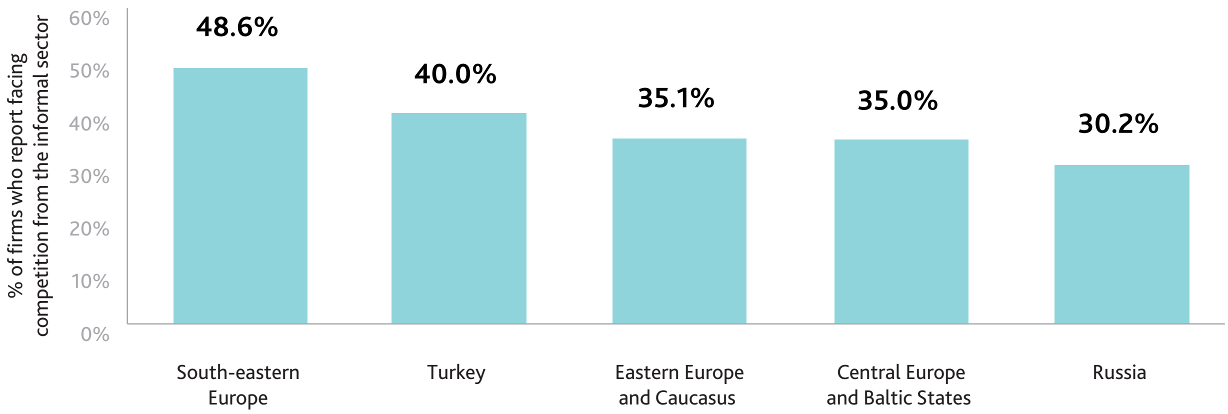
> "…while the informal sector may represent a vital coping strategy for many, the formal sector provides much better prospects for prosperity and well-being"
> (Krstic and Sanfey 2006)

The OECD (Andrews 2011) details a number of specific problems that individuals, firms and economies face as a result of informal economic activity:

» **BUSINESS ASPECTS:** Firms in the informal sector may be less efficient than their peers in the formal sector, innovate less and are less productive. This may be because they intentionally limit their size to avoid regulations or because they are unable to access credit and so invest in human and physical capital. Formal sector firms are also worse off if they must compete with firms that enjoy cost advantages because of tax avoidance or regulatory non-compliance. The result is bad for the growth and productivity of the economy as a whole. The results of the fifth round of the Business Environment and Enterprise Performance Survey (BEEPS) implemented by the EBRD in partnership with the World Bank Group indicate that competition from the informal sector/shadow economy is a key obstacle to doing business as perceived by company managers and entrepreneurs in the EBRD region. In particular, practices of informal sector competitors were named as one of the three most binding constraints in 21 out of the 30 surveyed countries, and in the first place in 10 of them. According to the results of the same survey (European Bank for Reconstruction and Development 2014), competition from the informal sector has also been found to be a greater constraint for innovators than for non-innovators (innovative firms appear to be generally more sensitive to the quality of the business environment). Figure 3 further demonstrates the extent of the issue as it shows the relative number of companies reporting that they face competition from the informal sector (based on BEEPS).

» **SOCIAL ASPECTS:** Informal workers do not benefit from social protection and insurance. They may be denied social insurance, such as a pension or unemployment benefits. Where they do benefit from social insurance, they have not contributed taxes to pay for such benefits, increasing the tax burden on formal sector workers. This may adversely affect their income prospects and have broader consequences for poverty and inequality. There is evidence that those working in the shadow economy are more likely to suffer from poverty and report lower levels of life satisfaction (Krstic and Sanfey 2006). Furthermore the shadow economy is marked by greater levels of earning inequality and lower wages (Krstic and Sanfey 2010).

## Figure 3—Share of firms facing competition from the informal sector




Source: EBRD-World Bank Business Environment and Enterprise Performance Survey *(BEEPS) V*

- **FISCAL ASPECTS**: A large and growing shadow economy can result in a spiral of ever-higher tax rates and steadily diminishing public investment. As the informal sector grows, taxes have to be raised to raise the same revenue from a smaller tax base and so more businesses choose to operate in the informal sector. Moreover, informal economic activity can erode trust in public institutions. If some individuals and firms have the motive and the ability to operate informally then this may discourage others from entering the formal sector. The decline in social capital and generalised trust may have a pernicious effect upon economic development (Bjornskov 2012).
- **POLICY ASPECTS:** The shadow economy makes official economic statistics inaccurate—the greater the size of the shadow economy the more so. This makes it harder for governments and firms to take informed economic decisions and may undermine the public support for otherwise desirable policies.

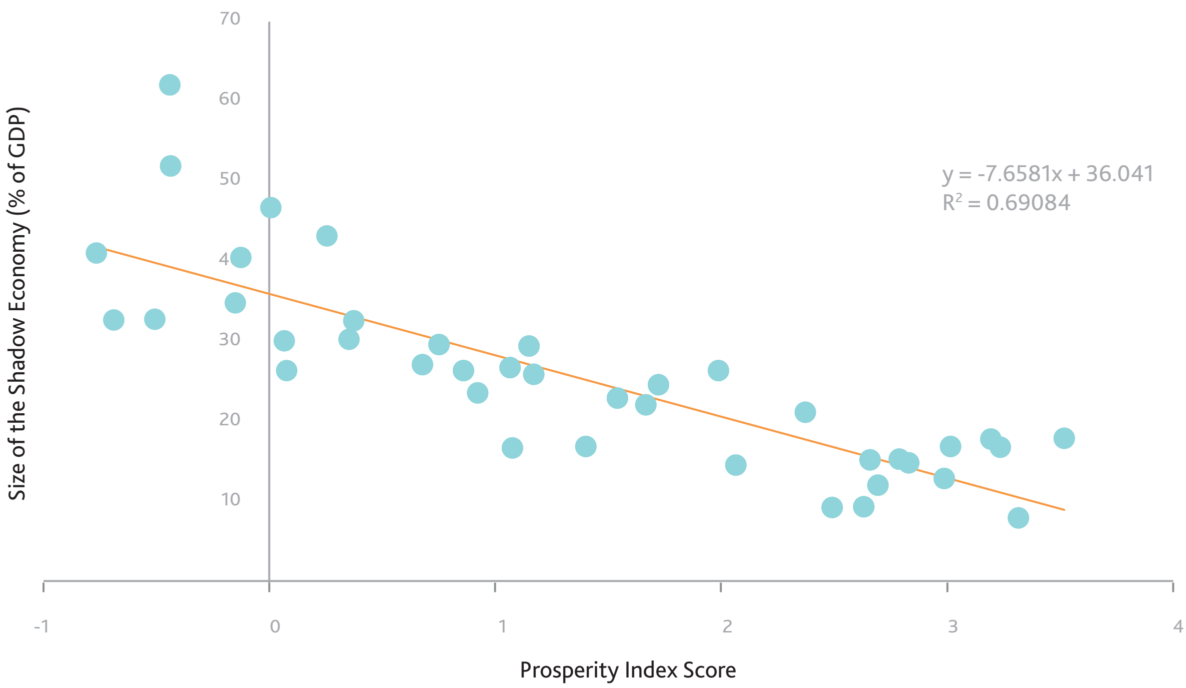
## Figure 4: Prosperity Index Rank and Size of the Shadow Economy


Source: CERGE-EI (forthcoming) and The Legatum Institute, *The 2014 Legatum Prosperity Index 2014™*.

*The Legatum Prosperity Index*™, which estimates the prosperity of 142 countries across the globe, shows that the four aspects listed above have a relationship with societal success. Analysis of the results of the *2014 Legatum Prosperity Index*™ indicate that more prosperous countries are those in which people can cultivate their entrepreneurial talents, businesses are not hamstrung by regulation and social capital facilitates economic exchange (The Legatum Institute 2014). Not surprisingly, countries with larger shadow economies are also less prosperous.

This pattern is clear from the two charts. Figure 4 uses the estimates of the shadow economy from the new CERGE-EI methodology; Figure 5 is based on the estimates from Schneider (Schneider, Buehn and Montenegro 2010) alongside the results of the most recent Prosperity Index (The Legatum Institute 2014).

Figure 5: Relationship between Prosperity & Shadow Economy in Europe




Source: Schneider, Friedrich, Andreas Buehn, and E. Claudio Montenegro. Shadow Economies all over the World. New Estimations for 162 countries from 1999 to 2007, 2010, The Legatum Institute. *The 2014 Legatum Prosperity Index™*.

For these seven countries in Central and Eastern Europe, except for Croatia, the size of their shadow economy is closely related to their rank on the Prosperity Index. Armenia is ranked lowest on the Prosperity Index (95th) and has the largest shadow economy (67% of GDP). Conversely, the Czech Republic is ranked 29th on the Prosperity Index and its shadow economy is only 21% of GDP.

The same relationship is found across all European countries (Figure 5). Those that score higher on the Prosperity Index have smaller shadow economies. The scatter plot shows that there is a strong relationship between the two.

A great deal of literature suggests that addressing the shadow economy would make economies more productive and people happier, the evidence that less prosperous countries have larger shadow economies makes combating the shadow economy imperative.

# COMBATING THE SHADOW ECONOMY

The shadow economy tends to flourish in environments with a combination of at least some of the following factors: poor institutions, weak law enforcement, high taxes and other costs of participation in the formal economy, and high reliance on cash payments (Schneider 2013).

A number of policy responses, based on both punishments and incentives, could reduce the size of the shadow economy:

» Reducing the tax burden: by reducing the tax burden, costs for firms and individuals would decrease and thus provide higher incentives to move from the informal to the formal sector. For example Russia, Czech Republic and Hungary introduced flat tax rates for individuals and corporations and reduced social security contributions to discourage tax evasion. According to Forbes, when Bulgaria did this in 2008, tax revenues rose 5.24 per cent in the first year. Turkey has recently introduced a VAT discount for retail purchases paid by cards.

» Simplifying the regulatory environment: though some people join the informal economy opportunistically, many do so because taking up work in the formal sector is too onerous. Reducing the cost of compliance with regulations may help to decrease the shadow economy. Germany has attempted to address this issue through its 'mini-jobs' reform which has simplified red tape and taxes for lower-wage workers. The number of employees taking on such 'mini-jobs' reached 2.6 million in 2012, three times more than in 2003 (Schneider 2013).

» Strengthening surveillance and sanction mechanisms: Turkey has recently introduced a new VAT system and recruited 1,500 new tax officers to clamp down on tax evasion. The early evidence is that such measures have helped move more people into the tax system with 360,000 new tax contributors in 2012 (Schneider 2013).

» Reducing the cash economy: Much informal economic activity involves cash transactions. An extension of electronic payment systems, by encouraging POS use as in Italy in 2008 and Netherlands in 2010 or by increasing card acceptance and online payment as in Romania in 2010, would make it more difficult to shield wages or profits from the tax authorities (Schneider 2013). Imposing caps on the maximum amount that can be paid by cash, is another effective measure to reduce cash use (see for example Italy, Bulgaria and Greece after 2010) (Schneider 2013).

» Improving human capital: many individuals are forced to work in the informal economy because of a lack of appropriate skills. The evidence is that more educated people are less likely to be employed informally (Lichard 2013) (Krstic and Sanfey 2010).

» Campaign to increase social awareness: providing more information about risks and costs linked to the shadow economy and the benefits of legal activities could dissuade people who join the informal economy opportunistically. For example, in 2011 a campaign was ran in Italy with the message that "tax repays everyone"; in 2013 Turkey initiated training in elementary schools to teach children about the importance of paying taxes; and Denmark in 2006 ran a campaign to show what would happen if everybody did undeclared work.

The current economic situation, by heightening budgetary pressures, has motivated many governments to look for ways to increase fiscal revenues without hampering economic growth, wages and employment.

***'In the Shadows: How the Financial Crisis has Affected the Shadow Economy' provides an opportunity for experts and practitioners to take stock of what we know about the shadow economy, how we can learn more, and how we can formulate effective policies to address the issue.***

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