The ‘Art Of Recording’:
Creating The Base for Governance.

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ABSTRACT

All countries host informal economies, sometimes called 'black economies'. In certain countries the size of the informal economy might even exceed that of the formal economy. Living in the informal economy means for citizens that they themselves and their activities are invisible for the government. There might be good reason for citizens to hide for the government, but at the same time they do not participate in the formal society and don't enjoy benefits related to the law. On the other side, governments miss information about which people live in their country and what economically happens. As a result they miss relevant data to develop policies, to monitor implementation and to levy taxes for generating government budget. These governments have no opportunity for evidence based policy making. Therefore the lack of information hampers good governance and thus subsequent state building. This paper aims at analysing the problem, and argues that when surveyors would expand their capacity for administration of land to other recordable subjects and objects, they can substantially enhance their contribution to good governance and state building.

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1. INTRODUCTION

There is no clear definition of what the 'informal economy' is. In Section 2 we will mention various options, but a common factor in all definitions is that a part of the economic and social status of countries is not visible in official records. This suggest a link with the surveyors' profession, as surveyors are supposed to master the 'art of recording': initiating and maintaining records at quality standards. This paper applies a simple form of 'grounded theory', which allows us -while studying the topic- to be guided by our findings. Having said this, a conclusion of the paper is that -although surveyors normally focus on spatial and attributed data- surveyors can increase the leverage of their skills by expanding these skills to other relevant information domains.

The logical argument in this paper is organized as follows. First, in section 2, we will review some current definitions of 'informal economy' and find out about the estimated size of it. Then, in section 3, we address the question how experts value the existence of an informal economy with respect to the development of countries. Is it a good thing, a bad thing? As the informal economy is invisible for the government, a question is how it affects tax revenues. In section 4 we collect information about missing tax revenues, tax evasion and tax avoidance, all impacting the way a state can finance itself. The question then is how states with a (major) informal economy currently are financed. Although section 5 shows that other revenue sources as remittances, oil rents and aid sometimes appear to play a major role, a reality is that remittances can stop, oil rents can come down, and aid can be reduced. Therefore a challenge remains for governments to increase tax revenues, by broadening the tax base and enhance enforcement. To achieve this, the existence of adequate records is a prerequisite, which brings us to section 6 addressing the broader issue of on how governments can create an information fundament, which gives them the information and evidence needed to govern. Finally, in section 7 we will observe some links with the surveyors' profession, as information management is in their domain. Although surveyors have a focus on spatial and attributed data, these information management skills are applicable on other sorts of data too, we argue. By expanding their application, surveyors' skills might contribute significantly to the development of a country.

2. THE INFORMAL ECONOMY

What is the informal economy?

There are no clear and globally accepted definitions of what the 'informal sector' entails. The International Monetary Fund recognizes a variety of terms, such as 'hidden economy', 'shadow economy', 'clandestine economy', 'parallel economy', 'subterranean economy', 'unreported economy', 'cash economy', or 'black economy'. However, a much used terminology is that the word 'illegal economy' indicates an economy producing income in violation with the law, 'unreported economy' an economy that evade fiscal rules as codified in the tax laws, and 'informal economy' the economic activities that circumvent costs of legal regulation and don't enjoy the benefits of laws and regulations. The latter regards such benefits as property rights, commercial licensing, labour contracts, credit and social systems (Vuletin, 2008). Other well-known definitions are 'all market based production of goods and services whether legal or illegal that escapes detection in the official estimates of the GDP' (Schneider et al, 2002), 'unreported income from the production of legal goods and services which would generally be taxable were they reported to the state tax authorities' (Schneider, 2002), ' the share of the economy that remain outside the world of regulated economic activities and protected employment relationships' (Chen, 2007), 'all activities that are –in law or in practice- not covered by formal arrangements' (ILO, 2013).

This paper does not aim to develop a new definition, but just to be aware of some characteristics popping up from all these definitions, namely (a) it concerns economic activities that are unrecorded (Schneider, 2002), (b) which are not captured by official national accounts and statistics (ILO, 2013), (c) which are invisible for policy formulation (ILO, 2013), (d) which avoid payment of taxes and social security contributions (Feld et al, 2010), and (e) which employ labourers which are excluded from labour market standards such as minimum wages, safety, working hours and social security allowances (ILO, 2013). Specifically the elements of 'unrecorded', 'tax avoidance', and 'invisibility for policy formulation' are suggesting links with the surveyors' profession. Let's now see what the size is of the 'informal economy'.

The size of informal economies.

By consequence of lack of clear definitions, measuring the size of the informal economy is difficult (Vuletin, 2008). Nevertheless, professor Friedrich Schneider from the Johannes Kepler University of Linz (Austria) is a leading economist in this field, publishing reports on the size of the informal economy in 76 countries (Schneider et al, 2000), 84 countries (Schneider et al, 2002), 110 countries (Schneider, 2002), 145 countries (Schneider, 2007) and 162 countries (Schneider et al, 2010). These figures are mostly used in the global discourse. From the paper of 2007 we give 4 figures in the annex, and a summary hereafter (fig. 1). Schneider uses as his definition 'all market based legal production of goods and service that are deliberately concealed from public authorities for any of the following reasons: (a) to avoid payment of income, value added or other taxes, (b) to avoid payment of social security contribution, (c) to avoid having to meet certain legal labor market standards such as minimum wages, maximum working hours, safety standards, (d) to avoid complying with certain administrative procedures, such as completing statistical questionnaires of other administrative forms'.

% GDP	*OECD*	*ASIA*	*AFRICA*	*ASIA*	*COMMU-NIST*	*PACIFIC*	*TRANSI-TION*
Most	Greece 26.3%	Bolivia 67.2%	Zimbabwe 64.6%	Thailand 53.6%	Lao DPR 33.2%	Tonga 35.8%	Georgia 66.4%
Least	USA 7.9%	Costa Rica 26.3%	Namibia 32.4%	Singapore 12.6%	Vietnam 16%	Marshall Isl 27.9%	Slovak Rep 18.2%
Average % GDP	14.8%	42.2%	42.8%	29.8%	22.8%	32.1%	38.8%

Fig. 1: the countries with the highest resp. lowest informal sector, per region, and expressed as a percentage of the official GDP (Schneider 2007).

One might wonder how it is possible to provide figures of something which main nature is of being unreported, being hidden. There are several methods. According to (Schneider et al, 2000), (Fjeld, 2010) and (Heintz, 2012) one can estimate the size of the informal economy directly by surveys and auditing programmes, indirectly by comparing national expenditure vs. national income, official vs actual labour forces, currency demand, and transaction costs, or using physical inputs like energy consumption or households and businesses (thus using 'proxies'). In his calculations, Schneider applies a balanced combination these methods by the way.

How to understand the informal economy

What contributes to the confusion is that the informal sector can be understood as a continuum, in which it might occur that not everyone complies with everything, companies can be registered but avoid to pay taxes, companies pay taxes but are not registered, to name a few (USAID, 2005). This brings (Chen, 2007) to a classification of a) *dualism*: the formal and informal sector are distinct sectors, (b) *structuralism*: formal and informal sector are linked intrinsically (for example: formal companies buy input from informal ones), and (c) *legalism*: which relationship exist between informal entrepreneurs and the formal bureaucratic framework.

The informal sector is steadily increasing (USAID, 2005; Farell, 2004). This is in contrast with the general view of experts that economic growth will also move the informal economy to formalization. How that may be, the fact of a growing informal sector brings (Chen, 2007) to conclude that the 'the informal economy is here to stay'.

In sum, this section discussed what the informal economy is, gave various definitions of it, provided estimation of the size and how the size was calculated, took note that the informal economy increases. The next question is whether the informal economy, 'which is here to stay', is a development that should be accepted as it stands, or not, which would warrant public intervention. This is the subject of section 3.

3. EFFECTS OF THE INFORMAL ECONOMY ON DEVELOPMENT

There might be a reason to hide.

A large number of people around the world (likely 4 billion) attempt to make a living outside the boundaries of the formal economy (Banik, 2011). As we will see in this section, the general opinion is that the existence of an informal economy hampers the development of countries. However, a caveat is useful, namely that in countries were policies, justice and the monopoly of violence have traditionally been controlled by an economic elite, there might be good reasons for weaker groups to keep their assets out of the reach of public control (Granèr, 2005). Thus the desire to be invisible for a government might have a political connotation, and might be fundamentally different from hiding for economic reasons, where rationally the individual or corporate disadvantages of being in the informal sector apparently offsets the advantages of being in the formal sector.

Informality hampers decent work.

How that may be, the International Labour Organization knows a long tradition of having worries about the existence of an informal economy, where, 'half of the world's labour force' suffers decent work deficits, bad quality of jobs, poverty, low productivity, discrimination, exclusion, insecurity and vulnerability in the labour market' (ILO, 2013). Furthermore, it goes beyond individuals, ILO says, because it affects enterprises, state revenues and the development of adequate government institutions and policies. This 'decent work agenda', since 1999 encouraged by ILO, is once and again supported by the United Nations Economic and Social Council (e.g. UN/ECOSOC, 2012).
Thus existence of the informal economy has negative effects on achieving decent work. But, as ILO already assumes, also enterprises and the state might suffer. Enterprises operating in the formal economy have to fulfil legal and fiscal requirements, ranging from meeting quality standards (for example food products), copyrights, health regulations and intellectual property rights to meeting labour market obligations (minimum wages, working hours, sick leave) and fiscal obligation (taxes and social security payments). Because informal enterprises avoid paying taxes and securities, the tax base for the government is small and by consequence formal enterprises are disproportionately taxed (Farell, 2004). This adds to the observation that in many countries individuals are hardly taxed, so that the burden is fully on the business sector, sometimes up to 80% of the total (Farell, 2006).

Informality generated tax loss.

Tax evasion because of informal economies is severe. It amounts up to 3.1 trillion US$ annually, which is about 5% of the world's GDP (Tax Justice Network, 2011). Other figures are in support: an investigation for the OECD countries estimates a loss of 713 billion € in 2013 (7% of total tax) (Schneider, 2015), which is in line with an investigation for the EU countries that estimates a loss of 864 billion in 2009 (Murphy, 2012). (Tax Justice Network, 2011) calculates for Africa a loss of 80 billion (40% of total tax revenue, 6% of GDP); for Asia a loss of 665 billion (17% of the total tax revenue, 4% of GDP), and for the America's 828 billion (25% of total tax revenue, 4% of GDP). In a sense, these estimates are considered by their authors as a best guess, as precise data are absent (fig. 2). Apart from this, currently tax evasion by global companies using tax heavens is at the top of the agenda (losses estimated for developing countries at 212 billion US$ (Crivelli et al, 2015).

This is a matter of base erosion and profit shifting, all said to be legal, thus not so much a matter of black economies, though severe.

Tax loss (bill US$)	OECD	Africa	Asia	America's
nominal	713 (€)	80	665	828
% GDP	3	6	4	4
% tax revenue	7	40	17	25

Fig 2 Estimated tax loss because of informal economy
(Schneider, 2015)(Tax Justice Network, 2011) (Murphy, 2012)

Informality is unrecorded and hampers reliable information supply.

A third aspect, the invisibility of the informal sector because of not being recorded, raises the question how governments can govern their country without information. How can be claimed that a country shows economic growth when a major part of the economy is unrecorded? How can be spoken about GDP per capita when countries don't know the number of citizens? In general, governments are expected to aim at policy making and policy implementation based on relevant evidence, in line with the New Public Management movement (Sutcliff, 2005). In line with this, the delivery of public services is often a burden to citizens and businesses, partly caused of lack of information (World Bank, 2015; Economist, 2015). Poor public services is mentioned as a main reason why citizens are reluctant to pay taxes (Ali et al, 2014).

(Jerven, 2013) concludes that the informal sector sometimes is so large, that 'leaving informal economic transactions unrecorded is unsatisfactory'. Record keeping is a prerequisite for having knowledge about what happens in a society, he says, and for achieving good governance, both in the sense of transparency and accountability, and evidence based policy making. The starting point always is the population count, without which any per capita statistics is impossible. With large parts of the economy invisible, any new release on economic growth or alike (as we have seen a lot last years) is (at least) unproven and by consequence unreliable. It is remarkable that for example Africa shows strong economic growth figures, but a growing poverty and inequality at the same time (World Bank, 2013), although the Bank in the same report warns that reliable statistics are necessary to measure development progress and that currently Africa's statistics are 'wanting'.

In sum, the existence of an informal economy hampers governance. In this paper we addressed three aspects: hampering decent work, missing tax revenue and lack of information for policy making and service delivery. At the same time, publications show that the informal economy is a major provider of employment and is here to stay (Chen, 2007) and that there might be reason to hide for the government in certain political circumstances (Granèr, 2005). On the other hand, research shows too, that the informal economy threatens economic growth, sustained welfare and wellbeing. (Farell, 2006). Decisions made by the global community aim definitely in the direction of aiming at formalization of the informal economy (ILO, 2007; ILO, 2011; UN/ECOSOC, 20112; UN/GA, 2015). From the two elements described in the section, two are of main relation with the surveyors' profession, namely 'taxation' and 'information base'. So in line with the global course of decisions, the overall question is how to repair missing taxes, and how to enhance governance by better information.

In the next section we will go deeper into taxation as budget provider for governments to enable them to govern. In section 5 we will look at data- and information generation.

4. MISSING TAX REVENUES HAMPER GOVERNANCE

In section 3 we found that tax losses caused by the informal economy are severe. Let's see how much tax revenue countries are able to generate.

Based on statistics of the IMF (World Revenue Longitudinal Data 2015), the World Bank (World Development Indicators 2014, especially tables 3.15, 4.14, and 6.11) the CIA (World Fact Book 2015), and the 2015 Index of Economic Freedom (Wall Street Journal and the Heritage Foundation) we have an idea of the magnitude. Although those tables provide data by country, we just picked 10 countries more or less at random to get an idea (unfortunately the various statistics produce various numbers; only considered as a best guess and not as the absolute truth, we might use them): figure 3.

Billion US$	GDP at Purchase Power Parity 2015	GDP at Exchange Rate 2015	Tax as % GDP (PPP) 2015	State Expenditure as % GDP (PPP) 2015
Angola	130	138	5.6%	40.8%
Bolivia	59	33	22.9%	36.1%
Congo DR	50	33	14.5%	21.8%
Kenya	80	60	20.1%	30.5%
Nepal	42	19	13.9%	19.2%
Netherlands	700	879	38.6%	50.4%
Nigeria	479	568	3.0%	28.2%
Tanzania	79	79	14.4%	26.3%
Vietnam	359	186	19.6%	27.6%
Zimbabwe	10	14	26.3%	29.3%

Figure 3. Tax revenue and state expenditure as % GDP (datasets World Bank, IMF, Wall Street Journal, CIA)

In general the level of tax revenue as % GDP in developing countries is much lower compared with for example OECD countries, and for one reason or another there are little signs of diminishing the differences.
The World Bank calculates that tax collection in OCED countries is 33 % of GDP every years since 20002, while in the developing countries 10 % (Cunningham et al, 2015).

When collecting so few taxes, developing countries must have other resources. Indeed, they have: at least three sources, namely net export of natural resources (natural resource rent Table World

Development Indicators 2015 3.15), development aid (table WDI 2015 6.11), and income from remittances sent by emigrants to their families in the home countries (World Bank, 2016b): see figure 4.

When countries can export oil and gas, in most cases this is the single most source of expert earnings and government revenues. To illustrate this, oil and gas expert revenues as a percentage of total expert earnings generate 93% in Nigeria, 96% in Venezuela, 90% in Angola, 68% in Russia and 80% in Saudi Arabia. As a percentage of the total government revenue it forms 70% in Nigeria, 40% bin Venezuela, 79% in Angola, 30% in Russia, and 80% in Saudi Arabia (NRGI, 2015)

Remittances form a major source of income. East Asia and the Pacific received 125 billion US$ (of which China alone 64, the world's second receiver), Europe and Central Asia 42 billion, Latin America and the Caribbean 66 billion, Middle East and North Africa 53, South Asia 120 (of which India alone 70, the world's top scorer) and Sub Saharan Africa 33 million. The total remittances of 583 billion more than doubles the official aid (ODA) (World Bank, 2016b). However, the high dependency from natural resources (gas, oil) is risky (as we see with oil prices falling from 110 to 30 US$ per barrel Brent), the dependency on foreign aid (still stable but shrinking for the poorest countries), and remittances which might rise and fall dependent from economic shocks in the sending countries (remittances from for example Russia fell sharply) which make The Economist of 16t January 2016 say 'remittances are good except when they stop'.

Billion US$	GDP at Purchase Power Parity 2015	Tax as % GDP (PPP) 2015	State Expenditure as % GDP (PPP) 2015	Natural resource rent as % GDP (PPP) 2011	Nominal aid in *million* US$ 2013	Remittances in *million* US$ 2014
Angola	130	5.6%	40.8%	35%	288	11
Bolivia	59	22.9%	36.1%	16%	699	1,200
Congo DR	50	14.5%	21.8%	40%	2,572	23
Kenya	80	20.1%	30.5%	3%	3,236	1,565
Nepal	42	13.9%	19.2%	5%	871	6,594
Netherlands	700	38.6%	50.4%	1%	-	1,517
Nigeria	479	3.0%	28.2%	16%	2,529	20,771

Tanzania	79	14.4%	26.3%	8%	3.430	401
Vietnam	359	19.6%	27.6%	10%	4.085	12,348
Zimbabwe	10	26.3%	29.3%	11%	811	?

Figure 4: Sources of State income other than taxes (World Bank, IMF).

Looking specifically to Africa, the African Economic Outlook 2013 clarifies that -in general- states in Africa are financed both by external financial flows into the country and by tax revenue. It is reported that tax revenue counts for 27% (513 billion) of the GDP, namely 10% resource tax, 6% direct tax, 5% indirect tax, 2% trade tax and 4% other. Resource tax (revenue from upstream exploitation to processing activities in oil, gas and mining, thus royalties and corporate income tax) is in average 40% of the total tax revenue. Levying resource tax is relatively easy, which means that other forms of taxes get less attention, both because they might be politically demanding or statistics about the tax base are lacking. Compared with OECD countries, it is observed that -for example- there direct taxes on individual and corporate income generate 33% of the total tax revenue, indirect taxes 31% and property tax 5% thus substantially different from Africa. The importance of the revenue from oil, gas and mining is also observed by (Jerven, 2013) who found that in emerging economies individuals and enterprises are less likely to be officially registered and that formal records of their economic activities are likely not kept. In addition, in Africa, he argues, land has not been subject to private property rights historically and by consequence was not taxed. In general, as a consequence, states have been unable to collect taxes on land, income and production, and therefore tax collection was limited to levying taxes on imports and exports. Indeed, OECD countries levy 5% of their total tax revenue based on property tax, while developing countries achieve not more than 0.5% according to table 4.14 World Development Indicators 2014. Property tax revenue counts for 50% of local revenue, while 10% in Africa (Bird et al, 2006). Improved tax administrations might boost the revenue from 0.5% to 5% on average, based on realistic assumptions made by (Bahl et al, 2013): it might rise -for example- from 34$ to 136$ per capita in Chile, from 14$ to 139$ in Malaysia, and from 29$ to 158$ in Latvia. The constraints are: absence of property registers, valuation rolls and *street addresses* which make revenue collection weak (Fjellstad et al, 2012).

A question is why citizens-taxpayers try to avoid paying taxes. Nobody like to pay taxes and in some countries it appears to be a national sport. Nevertheless, one might consider paying taxes to be good when for example they offset what you get in return. Investigations in Africa show that main obstacles for paying taxes are citizens experiencing tax as unfair (10%), too high and unaffordable (53%), too poor public services delivered in return (13%), government wastes the money (10%), you will not be caught anyhow (2%) and others (10%) (Ali et al, 2014). The worries of tax payers are realistic: the Tax Justice Network reports that -for example- in Africa natural resource revenues create economic growth but at the same time create increasing income inequality; there is a sharp rise of income for the richest 5%, while the poor getting poorer. The role of taxation to redistribute income, is missing and taxpayers which do not belong to the elites are increasingly reluctant to pay any tax as long as there is a visible lack of equality and there are realistic questions whether the elites pay taxes at all (Tax Justice Network, 2014).

When it regards enterprise-taxpayers, it appears that there is willingness to pay taxes but that the time to comply (average 261 hours per year), the level of tax rate (48%) and the number of taxes to be paid (26) is a severe obstacle. Only 84 countries provide electronic filing and payment facilities and the picture is that despite an urgent need for reform, progress is slow (World Bank, 2016a). One negative effect of the existence of an substantial informal economy, is that it allocates the tax burden on a smaller part of the actors, namely only those in the formal sector, causing a relative high tax burden (Farell, 2004); she reports about a country where a certain tax rate was 18%, which could be reduced to 13% when the government succeeded in formalizing the informal sector regarding this taxation, while the total tax revenue remained at the same level as before. High costs of operating formally, red tape, high taxes, little enforcement, weak penalties and an ineffective judicial system are all recipe for creating informality (Farell, 2004). Overall, the performance of public service is statistically addressed in the annual Doing Business Reports. Although according to these report countries sometimes make good progress, still the time, costs, and number of procedures it takes in the encounters with the bureaucracy make complying cumbersome, which -as The Economist of 30 January 2016 says- 'make citizens see the bureaucracy as a problem to navigate, rather than as a source of help: citizens all over the world complain about red tape and pen-pushing bureaucrats'.

In sum, this section aimed at shedding some light on how states are financed. In OECD countries tax collection amounts to -say- 33% of the GDP, while in other countries it reaches a level not higher than 11%. By consequence, those countries are dependent from income from natural resources (if any), foreign aid and/or remittances. This makes them rather vulnerable for shocks, as currently can be observed worldwide. The point we like to make is that people and enterprises likely are willing to be tax-compliant, when the administrative burden is manageable, the tax rate is affordable, and they get something in return: redistribution of income, good policy and good service. Without making the invisible economy visible by recording, this is hardly to achieve as (Jerven, 2013) argues. When it regards making the informal sector visible by creating and keeping records we see a link with the surveyors' profession, because this is certainly a matter of information management.

5. MISSING INFORMATION HAMPERS GOVERNANCE

Governance has two sides of a coin: governments and civil society. The principles of good governance as developed by (UN/DP, 1997) should be supported by both. Thus one cannot expect a government to develop wise strategies (the 'direction' principle) when civil society doesn't want to be transparent and participative (the '*voice'* principle and '*accountability*' principle). Similarly, a government cannot be transparent and accountable (the '*accountability*' principle) when civil society is invisible for the government. Governments cannot create an efficient and effective governance (the '*performance*' principle) when civil society makes a sport of tax dodging (the '*fairness'* principle). A government cannot ask civil society to pay taxes (the '*fairness'* principle) when these taxes are neither responsive to society's needs nor create equality and inclusiveness (the '*performance*' and '*fairness*' principle). In other words: the government should be visible for the civil society, and civil society should be visible for the government.

Visibility means recording. (Jerven, 2013) links the availability of data with creating a knowledge base on one hand and with governance on the other hand. Recordkeeping is a prerequisite and the starting point is the population count, the popular census, he argues. This is because economic data often are calculated per capita (GDP per capita, health budget per capita etc.). So without knowing how much 'capita' live in a country, many figures remain meaningless. But it is broader.
First of all there is the human right aspect of being recorded. (Setel et al, 2007) observes that most poor people in Asia and Africa render unseen because of the lack of up to date civil registration systems. By consequence they are born and die without being counted. Since the Universal Declaration of Human Rights in 1948, the right to an identity is a human right and to have one's identity recognized and securely registered (Szreter, 2007). 'Everyone should count, by being counted', says Setel.
Secondly, we see a clear link with the need for policy making based on evidence (part of 'new public management'), where (Sutcliff, 2005) explicitly states that better utilization of evidence in policy making can help to save lives, reduce poverty, and improve development performance in developing countries. After all, how to apply the policy circle without relevant data? Without, it is impossible to set agenda's, to formulate policies and to implement them.
Thirdly, how can the civil society operate, especially the business sector, when basic information in society is missing, which is needed for appropriate product development, innovation and marketing, when -for example- the real estate sector lacks reliable data on persons and properties and thus cannot pursue secure transactions, where mortgage banks cannot record their loan to enjoy legal security.

By consequence, creating a sound base of relevant data is of a paramount importance. However, we are aware that it depends from the legal meaning of the record, whether it is an easy task or not. When making a geo-dataset based on spatial images, it might be a rather easy task, apart from the technological challenges, as the data which is generated is free for all and visualizes just what everyone sees in the reality. But in case making a cadastral dataset, there should be a regulation that explains which data should be recorded and what the legal meaning is of the recorded data: it means -for example- that the person whose name is attached to a parcel of land/house, is considered to be the owner, thus legally excluding all other people. Even more: when there is a conflict about ownership, the regulation should provide conflict resolution rules and enforcement (police force). To make it really complicated such a regulation can only exist when in society the way people can have a relationship with a land is somehow a shared value, that is confirmed in the constitution, the civil code or land law. By consequence, certain categories of records can hardly exist without being created and validated by law.

When it regards to recording the invisible informal sector the International Labour Organization developed proposals: we learn from (ILO, 2013) that -while recognizing the variety of country's contexts- there are still some common fields, such as business records, property records, tax records, labour records, embedded in overarching corporate-, property-, tax-, and labour laws. Extending this to citizens: civil registration, street addresses. We see this coming back in countries which are a bit further in installing a set of fundamental registers, often called 'base registers', to serve as the core information layer in their information infrastructures (see for example the EU project website on Interoperable Solutions for European Public Administrations ISA). Rather

common is a framework of interconnected datasets on (a) Civil registers, (b) Business Registers, (c) Property Registers and/or Cadastre, (d) Address Register, (e) Geographic Base Layer and (f) Building Register. Based on such core, other registers which gain an authentic status can be built, such as valuation registers, income registers, underground topography to name a few.
Such a framework is thus considered as a very core of wider system of interoperable datasets of which the source is defined, the keeper has responsibility for maintaining the data-quality, and compulsory use at least for government agencies. The latter should make it impossible for government agencies to create their own datasets (which they usually like to do), which at macro scale is a waste of government budgets and really killing for the users because of frequent and unavoidable data redundancies.

To help countries with appropriate record management, (ISO, 2001) provides for a standard, which is encouraged by the World Bank Public Sector Governance department, especially while supporting the objectives on strengthening client records and information management, all under the mission statement that 'records management is fundamental to all aspects of government and is essential for protecting citizens' rights'.

In sum, this section aimed at providing a rationale for recordkeeping. As we saw, records are a prerequisite for various governance aspects, both seen from the government and the civil society perspective. Overseeing what already happens worldwide on national data collection and information generation, the proposition here (that without data it is not an easy task to govern a country resp. to manage a business, resp. to survive with a family), is hardly a novelty, but for example (Jerven, 2013) and (Setel et al, 2007) show that despite this knowledge there is much room for improvement.

In section 6 we attempt to formulate elements of the way forward. In section 7 we reflect briefly on what surveyors can do.

6. THE WAY FORWARD

The existence of an informal sector ('black economy') hampers at least three important aspects of governance: safeguarding decent work for the about 4 billion of workers who currently work outside labour and minimum wage regulations, generating enough tax revenue to safeguard the funding of government policy to serve general interests, generate and managing records to safeguard knowledge, evidence based policy making, transparency and accountability.

Our starting point is that all countries aim at achieving sustained growth. Sustained growth requires good governance (World Bank, 1994; UN/DP, 1997; IMF, 1994). Governance requires an independent and fair government, not hijacked by ethnic or special interest groups, because 'such highly politicized administrations leave the government incapable of resolving collective problems': strengthening public institutions provided with adequate information is a priority (Bio-Tchané et al, 2007).Generating knowledge about society should be improved, including a wide range of data such as the characteristics of actors, tax collection, employment, working conditions, productivity (Ncube, 2013). When it regards the inclusion of the 'black economy', the UN provides a typology of necessary development data: census and civil registration, welfare, health, education, economic data, geospatial data etc. (Espey, 2015). Additionally, linking information to location is considered as being critical to development (Steudler, 2012; Onsrud et al, 2013). Having data in place, also facilitates counting down poverty and other objectives in the framework of the Millennium Development Goals resp. Sustainable Development Goals (Paris, 2007). Especially Africa's statistics are wanting, reason for the World Bank to double its efforts (World Bank, 2013).

Many publications aim at 'formalizing' the informal sector and they provide a longlist of actions to be taken. We don't believe in such an integral approach. Why? Because the weak institutional capacity of many developing countries does not allow for such an enormous task. Our intuition says that a suitable approach is to start with a little step: to create the absolute minimum system of core datasets, on which later can be built further. Bit by bit, the informal sector will integrate in the formal world as times allow.

Where to start? We believe that a first priority is the development of a sound civil registration (popular census, population count). (Jerven, 2013) in his seminal study regards this as a prerequisite, without which any statement on per capita trends in for example growth, education and health is meaningless. But we also value the human rights arguments of (Setel et al, 2007; Szreter, 2007). Creating a sound civil registration in every country is not a new idea: already in the '90 the United Nations started programmes to develop these kind of vital records. As most constitutions assign to legal bodies also corporate personality rights (so that they can act as were they citizens) a civil registration for legal entities ('business register') has also priority, but -seen the lesser human rights aspect here- second, after the civil registration, we argue. Although both registers likely will know their complexities, a general opinion is that if political will is there, both are relatively straightforward (USAID, 2005).

When civil registers and business registers are in place, and individuals and companies are identifiable by a registration number, they also provide basic information about taxpayers. Together with records on taxable objects, this provides a fundament for taxation. Many countries are unable to collect taxes on land, income, or production, therefore they rely (as we saw earlier) on taxes in import and export (oil). Although property tax is in not the main source of tax revenue anywhere (may be at local level it is), is might be wise to start here, and for the time being rely in taxpayers' declaration on income and profit, as that was the usual approach also in richer countries some time ago. The other side of the coin is of course enhancing deterrence through improved detection and having a penalty regime (World Bank, 2016a).

But how to create a register of properties as taxable objects? The global discussion on the property right regimes which followed (Soto de, 2000) and the myriad of publications pro and con land reform and formalization, indicates that it is still a sensitive issue, which does not easy come to a solution at national levels, although in general the matter is considered as an urgent one, as owners respectively users of about 60% parcels worldwide are said to lack legal security and 90% in Africa (Zimmermann, 2010). A full registration of properties requires a land law which defines the relationship between human and legal beings to a parcel of land. Many countries are currently in such a discussion, and some decided what to do (e.g. Rwanda: replacement customary by private tenure, Kenya: recognition customary tenure, Vietnam: replacement state ownership by private land use rights, China: replacement state and collective ownership by household use rights; Bolivia with replacing tribal ownership by 'titulos de tierras de comunitaria de origen'), but a reality is that a majority is not that far yet (if there is anyhow political will to put it on the agenda). Therefore, it might be better, when it comes to the purpose of taxation, to record taxable objects instead of properties. These taxable objects together with the identified taxpayers linked to the civil registers and business register form a robust tax base. In fact, this is what was done in western countries times ago when they created their 'cadastres': they were all of a fiscal nature, later evolving into legal ones. Recording taxable land objects instead of properties might take the sting out of potential property right controversies. For conceptual and technological aspects, the informed reader will know that the 'fit-for-purpose land administration' (FIG, 2014) and the 'land administration domain model' (Lemmen, 2012) are fully applicable and that the benefits of these facilities are fully enjoyable also when the relation between a person/entity and an object is a fiscal instead of a legal one. Simple geocoding might provide location parameters (a '*point cadastre*').

The next basis data is street addresses (World Bank, 2005). With appropriate street addresses one might catch two flies in one stroke. Without street addresses it will be difficult for a government to communicate with taxpayers. After all, how to deliver invitation to taxpayers to make their tax returns, to deliver tax assessments and tax distress warrants. By assigning addresses to houses, also location can be fixed, thus also a residential location component is safeguarded (Steudler, 2012).

This gives the most essential and most minimal core of a data infrastructure, which is first priority for all countries (fig.5).

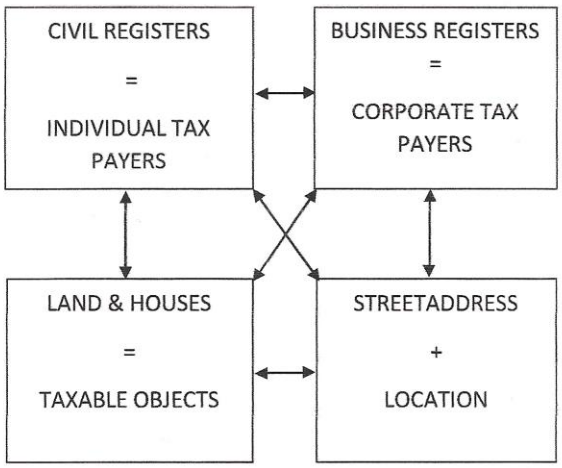

Fig 5 The minimal core for better taxation and governance.

When such a core dataset is present, and interoperability is guaranteed, it is easy to add -as times are appropriate- other datasets, as happened for example in the Netherlands, where based on a minimal core of (a) civil register, (b) business register, (c) addresses, (d) building codes, (e) property rights and (f) topography (so a bit more than the core presented in fig. 5) meanwhile national datasets are linked on vehicles, income, employees, non-residents, real estate values, subsoil (fig. 6). But the concept is the same: start with a robust core, and build on that (Bakker, 2011). In our proposal we give priority to (a) and (b), add (c), and replace the property register with a less sensitive taxable object register (e). Building registers (d) and up to date topography (f) is 'a bridge too far' for many countries. The reader might find solace in the idea that even a rich country such as the Netherlands, was able to realize a nationwide address register and a national building register quite recently.

Having these minimal core datasets available, a government must be able to make steps towards generating tax revenues and create knowledge about society, both contributing to better governance. Having information available, a government can also enhance those elements which make people otherwise avoid tax paying: low costs to comply, reduction of tax rates (because tax base is broadened), better enforcement, enhancement of deterrence and an increase of the benefits that taxpayers get in return. At a certain moment taxpayers experience that paying taxes offset the so called advantages of dodge taxes and compliance figures will grow (World Bank, 2016a).

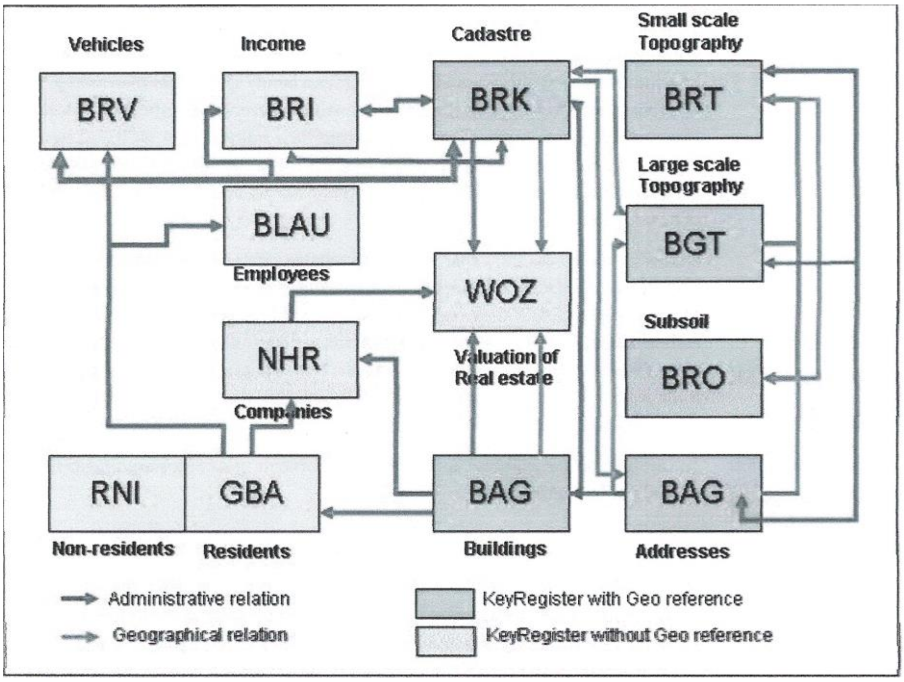

Fig. 6 Example of linked datasets as it can evolve when time allows.

What is a bit out of scope in this paper, but -as said- nevertheless is on top of the agenda, is the whole discussion on tax dodging by large multinational companies, which use attractive fiscal facilities offered by recipient countries to avoid paying tax in the country where they produce. This dodging (officially called 'base erosion and profit shifting') causes a loss of 212 billion US$

annually (Crivelli, 2015). When developing countries are successful in bringing back both such large sums of money to where they belong, then they generate funds, almost equal to the transmitted remittances, the mainstay of many countries today.

This is the way forward we would encourage: create the minimum of interoperable core- datasets and build on the fundament when time allows. But who are the professionals who can do that? In section 7 we believe that surveyors are pre-eminently capable to contribute.

7. THE ART OF RECORDING: WHAT SURVEYORS CAN DO.

Surveyors are professionals who can create and maintain information systems. Even huge information systems, like a nationwide cadastres: developing the data model, inventing the procedures to initially fill the systems with input, designing procedures to maintain and keep up to date, and creating procedures to deliver output. We might frame as 'surveyors possessing the art of recording'. To connect information systems in a coherent and interoperable infrastructure belongs to that art. Surveyors stood -in many countries- at the forefront of developing (spatial) data infrastructures. Of course, surveyors focus on spatial data. But makes it a difference whether to record spatial data or to record citizens, legal entities, taxes, or whatever? Not that much, we argue, but teaming up with domain experts appears to be recommendable, as with experts in information and communication technology. But how valuable these experts are, they all act within their specific domain, while the glue that binds their expertise together is information management, or the 'art of recording'. We don't argue that surveyors are the panacea: let's not overestimate surveyors but still they are the ones to provide the conceptual and procedural glue.

The requirements for creating and maintaining information systems are surely context driven. But there are many common features, as saw earlier. Simple procedures, preferably of an administrative rather than legal nature, up-to-date-ness, fairness, promoting equality, deterrence and enforcement, transparency and accountability, and attempting the blessings of ICT. Worldwide only 84 countries have a fully electronic system for filing and paying taxes. Why? Because many countries do not have developed their back office components i.e. records (Kettani et al, 2014). Creating the minimum core datasets we propose, is a step forward to electronic government.

Enhancing the tax base effects the level of tax revenue, so that taxes are not experienced as too high or unaffordable. When more countrymen pay tax, taxation will be considered as fair. When the government has access to more tax revenues, the chance for better public service grow. When deterrence and enforcement is increasing, tax dodgers will know that they have a fair chance to get caught. This enhances tax compliance, as 'high tax rate + low tax enforcement + poor public services' kill compliance, according to the Economist of 5th December 2015. In addition, simple and understandable procedures combat the current regulatory burden of complex procedures which cost time and money and make taxpayers believe life is just too complicated to comply. The Doing Business Reports cannot be misunderstood here: too much red tape, too much pen-pushing. And what to think about publications which indicate that countries which do not stop their overly burdensome laws and policies, will become 'losers' in the 'digital divide' (McKinsey, 2014; Pomfret, 2015)?

It would be effective and efficient to concentrate all records in a single government organization to maximize scarce expertise and information management, instead of creating datasets scattered all over the government structure (which is often the case) and every agency lacking quality expertise. Also a frequently reported unwillingness to share data because of competence reasons, can then be avoided. We recommend the Lithuanian State Centre of Registers in Vilnius as a shining example here (UN/WPLA, 2005).

In sum, we argue that surveyors should be aware of the role they can play in creating such a minimum core set of data, on which can be built further when time allows. Enhancing and fully exploiting their skills in information management enhances their contribution to the development of their country.

8. CONCLUSION

This paper discussed the effects of the existence of informal economies in countries. From literature review it became clear that at least three negative effects occur: (a) people in the informal sector lack decent work, (b) governments miss substantial tax revenue, and (c) government miss information to develop evidence based poly making. Also became clear that in countries with a substantial informal economy the lack of fundamental datasets hampers any development in these fields. We took a closer look into two of fields, namely taxation and information supply. It appeared that the worst missing dataset is the lack of a reliable civil register and reliable business register. We also found -in the literature- that it is even a human right for people to be registered: the Universal Declaration of Human Rights indicates that 'people should count for their government by being counted'. When it regards taxation, we argued that without a civil and business register also taxpayers are unknown. To start a development towards better governance, we proposed to develop a minimum core dataset, consisting of civil and business records, and records of taxable objects. The latter, because in the whole taxation system, taxes on income and business profit most likely still shall be pursued on declaration and checking mechanisms, while using land and/or houses is a solid and verifiable tax base. We argued that the discussion on property right regimes is sensitive to aim for a full property register, therefore it might be wiser to record the fiscal relationship between a human or legal being and a taxable object, than a property relationship. That can evolve over time, as it did in many western countries, where the 'cadastre' also started as a fiscal record. Based on analysis done in the literature why people and business stay in the informal sector, it became also clear that compliance is hampered by complex procedures, perceptions of unfairness and inequality, and poor public services, so that disadvantages of being informal offset advantages to be formal. When street addresses are attached to the records, a residential location component is safeguarded as well. With this minimum core of interoperable datasets, a country has the start of an evolving information infrastructure, which encourages good governance. A question is which professionals should feel responsible for the development of all this. Here we see a role for surveyors, who - similar to the 'cadastres'- have the capability to create and maintain (large nationwide) information systems. Our argument is that it makes not so much difference whether to record people, businesses, taxable objects or whatever, so surveyors should feel responsible to provide overall concepts and information management for the creation of procedures for data collection, data management and data output, while teaming up with relevant domain experts. Creating a single registration agency might maximize scarce professional resources instead of being dispersed.

Bio data

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ANNEX

THE SIZE OF THE INFORMAL ECONOMY (Schneider, 2007)

	Country	Shadow Economy (in % of official GDP) using the DYMIMIC and Currency Demand Method				
		1999/00	2001/02	2002/03	2003/04	2004/05
1	Australia	14.3	14.1	13.5	13.1	12.8
2	Austria	9.8	10.6	10.9	10.1	9.3
3	Belgium	22.2	22.0	21.0	20.4	19.6
4	Canada	16.0	15.8	15.2	14.8	14.1
5	Denmark	18.0	17.9	17.3	16.7	16.1
6	Finland	18.1	18.0	17.4	16.4	15.8
7	France	15.2	15.0	14.5	13.8	13.2
8	Germany	16.0	16.3	16.8	16.1	15.3
9	Greece	28.7	28.5	28.2	27.4	26.3
10	Ireland	15.9	15.7	15.3	14.8	14.1
11	Italy	27.1	27.0	25.7	24.8	23.2
12	Japan	11.2	11.1	10.8	9.4	8.8
13	Netherlands	13.1	13.0	12.6	12.0	11.1
14	New Zealand	12.8	12.6	12.3	11.6	10.9
15	Norway	19.1	19.0	18.4	17.6	16.8
16	Portugal	22.7	22.5	21.9	21.1	20.4
17	Spain	22.7	22.5	22.0	21.2	20.5
18	Sweden	19.2	19.1	18.3	17.2	16.3
19	Switzerland	8.6	9.4	9.4	9.0	8.5
20	United Kingdom	12.7	12.5	12.2	11.7	10.3
21	United States	8.7	8.7	8.4	8.2	7.9
Unweighted Average		16.8	16.7	16.3	15.6	14.8

No.	Country	Shadow Economy (in % of official GDP) using the DYMIMIC and Currency Demand Method				
		1999/00	2001/02	2002/03	2003/04	2004/05
1	Albania	33.4	34.6	35.3	35.0	34.3
2	Armenia	46.3	47.8	49.1	48.4	47.6
3	Azerbaijan	60.6	61.1	61.3	60.8	59.4
4	Belarus	48.1	49.3	50.4	50.5	50.8
5	Bosnia and Herzegovina	34.1	35.4	36.7	36.2	35.3
6	Bulgaria	36.9	37.1	38.3	37.4	36.5
7	Croatia	33.4	34.2	35.4	34.7	34.1
8	Czech Republic	19.1	19.6	20.1	19.2	18.3
9	Estonia	38.4	39.2	40.1	39.1	38.2
10	Georgia	67.3	67.6	68.0	67.3	66.4
11	Hungary	25.1	25.7	26.2	25.3	24.3
12	Kazakhstan	43.2	44.1	45.2	45.4	44.6
13	Kyrgyz Republic	39.8	40.3	41.2	41.4	40.6
14	Latvia	39.9	40.7	41.3	40.4	39.4
15	Lithuania	30.3	31.4	32.6	31.3	30.2
16	Macedonia, FYR	34.1	35.1	36.3	36.8	36.9
17	Moldova	45.1	47.3	49.4	49.5	49.1
18	Poland	27.6	28.2	28.9	28.2	27.3
19	Romania	34.4	36.1	37.4	36.2	35.4
20	Russian Federation	46.1	47.5	48.7	48.2	47.3
21	Serbia and Montenegro	36.4	37.3	39.1	38.2	37.3
22	Slovak Republic	18.9	19.3	20.2	19.1	18.2
23	Slovenia	27.1	28.3	29.4	28.2	27.3
24	Ukraine	52.2	53.6	54.7	54.9	55.3
25	Uzbekistan	34.1	35.7	37.2	36.3	35.4
Unweighted Average		38.1	39.1	40.1	39.5	38.8

Source: Own calculations.

No.	Country	Shadow Economy (in % of official GDP) using the DYMIMIC and Currency Demand Method				
		1999/00	2001/02	2002/03	2003/04	2004/05
1	Bangladesh	35.6	36.5	37.7	38.3	38.0
2	Bhutan	29.4	30.5	31.7	32.7	33.1
3	Cambodia	50.1	51.3	52.4	52.9	52.2
4	Hong Kong, China	16.6	17.1	17.2	16.4	15.6
5	India	23.1	24.2	25.6	25.9	25.1
6	Indonesia	19.4	21.8	22.9	23.6	24.0
7	Iran, Islamic Republic	18.9	19.4	19.9	20.2	19.7
8	Israel	21.9	22.8	23.9	23.2	22.6
9	Jordan	19.4	20.5	21.6	21.2	20.4
10	Korea, Republic	27.5	28.1	28.8	28.2	27.6
11	Kuwait	20.1	20.7	21.6	21.2	20.7
12	Lebanon	34.1	35.6	36.2	36.5	37.1
13	Malaysia	31.1	31.6	32.2	32.0	31.4
14	Mongolia	18.4	19.6	20.4	20.6	21.2
15	Nepal	38.4	39.7	40.8	40.2	39.3
16	Oman	18.9	19.4	19.8	19.2	18.6
17	Pakistan	36.8	37.9	38.7	39.2	39.5
18	Papua New Guinea	36.1	37.3	38.6	38.0	37.3
19	Philippines	43.4	44.5	45.6	45.1	44.3
20	Saudi Arabia	18.4	19.1	19.7	19.3	18.4
21	Singapore	13.1	13.4	13.7	13.0	12.1
22	Sri Lanka	44.6	45.9	47.2	48.3	48.8
23	Syrian Arab Republic	19.3	20.4	21.6	21.7	21.2
24	Taiwan, China	25.4	26.6	27.7	27.0	26.3
25	Thailand	52.6	53.4	54.1	54.3	53.6
26	Turkey	32.1	33.2	34.3	33.9	33.2
27	United Arab Emirates	26.4	27.1	27.8	27.2	26.5
28	Yemen, Rep.	27.4	28.4	29.1	28.2	27.3
Unweighted Average		28.5	29.5	30.4	30.3	29.8

Source: Own calculations.

No.	Country	Shadow Economy (in % of official GDP) using the DYMIMIC and Currency Demand Method				
		1999/00	2001/02	2002/03	2003/04	2004/05
1	Algeria	34.1	35.0	35.6	34.8	33.9
2	Angola	43.2	44.1	45.2	45.3	45.0
3	Benin	47.3	48.2	49.1	49.3	49.8
4	Botswana	33.4	33.9	34.6	34.2	33.8
5	Burkina Faso	41.4	42.6	43.3	43.8	43.1
6	Burundi	36.9	37.6	38.7	39.4	39.7
7	Cameroon	32.8	33.7	34.9	34.4	33.6
8	Central African Republic	44.3	45.4	46.1	46.3	46.9
9	Chad	46.2	47.1	48.0	48.4	47.8
10	Congo, Dem. Rep.	48.0	48.8	49.7	50.4	50.8
11	Republic of Congo	48.2	49.1	50.1	50.5	51.1
12	Cote d'Ivoire	43.2	44.3	45.2	45.4	44.7
13	Egypt, Arabian Republic	35.1	36.0	36.9	36.3	35.4
14	Ethiopia	40.3	41.4	42.1	42.7	42.0
15	Ghana	41.9	42.7	43.6	43.8	43.2
16	Guinea	39.6	40.8	41.3	41.7	41.0
17	Kenya	34.3	35.1	36.0	35.4	34.8
18	Lesotho	31.3	32.4	33.3	32.8	32.3
19	Madagascar	39.6	40.4	41.6	41.9	41.2
20	Malawi	40.3	41.2	42.1	42.7	41.9
21	Mali	42.3	43.9	44.7	44.0	43.2
22	Mauritania	36.1	37.2	38.0	37.4	36.8
23	Morocco	36.4	37.1	37.9	37.3	36.7
24	Mozambique	40.3	41.3	42.4	42.9	43.5
25	Namibia	31.4	32.6	33.4	33.0	32.4
26	Niger	41.9	42.6	43.8	44.1	44.2
27	Nigeria	57.9	58.6	59.4	59.6	59.5
28	Rwanda	40.3	41.4	42.2	42.4	41.6
29	Senegal	45.1	46.8	47.5	47.8	48.2
30	Sierra Leone	41.7	42.8	43.9	44.1	44.3
31	South Africa	28.4	29.1	29.5	29.0	28.2
32	Tanzania	58.3	59.4	60.2	59.1	58.2
33	Togo	35.1	39.2	40.4	40.6	39.4
34	Tunisia	38.4	39.1	39.9	39.4	38.3
35	Uganda	43.1	44.6	45.4	45.8	44.9
36	Zambia	48.9	49.7	50.8	50.2	49.3
37	Zimbabwe	59.4	61.0	63.2	63.9	64.6
Unweighted Average		41.3	42.3	43.2	43.2	42.8

Source: Own calculations.

Top left 21 OECD countries, top right 25 European countries in transition, below left 28 in Asia, below right 37 in Africa. The reference contains more: 21 countires in Latin America, 3 communist countries and 10 in the Pacific (not depicted here).