

Towards an African e-Index:
Small & Medium Business Survey
Wireless Opportunities and Solutions: A regulatory perspective
LIRNE Expert Meeting and International Workshop

7 - 9 March 2007

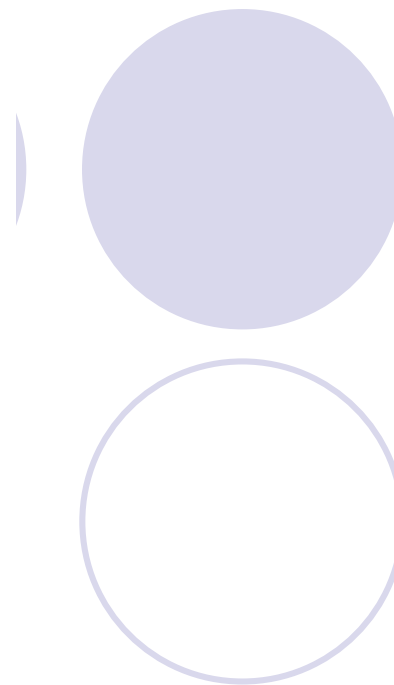
Dr Godfred Frempong
CSIR, Ghana

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Outcome of the research - copies available



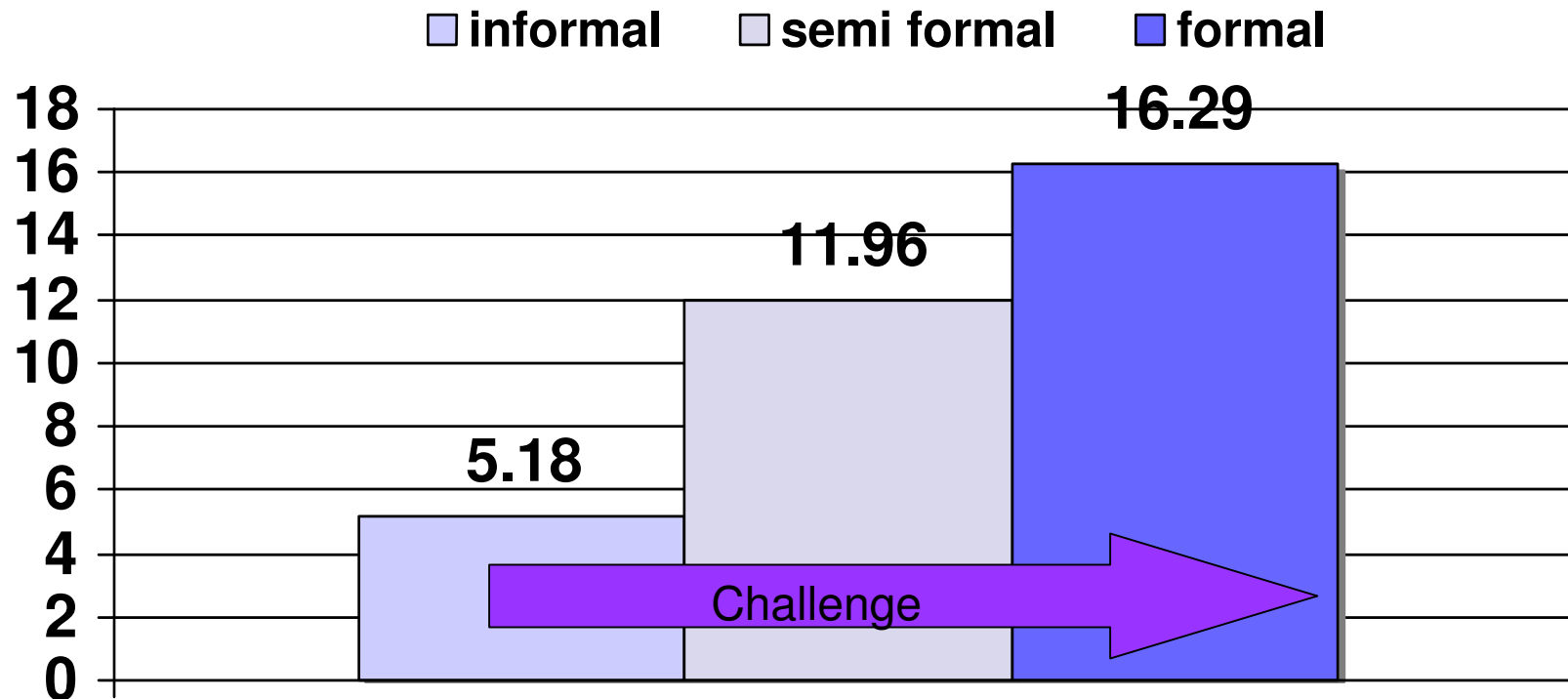
QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.



Why SMEs?

- The sector in which most of the world's poor are working
- The sector exceeds the average economic growth of national economies in many developing countries
- Contributes significantly to economic growth and employment

Create employment and alleviate poverty?



Average number of individuals deriving a livelihood from the business (employees & owners)

What is the impact of SMEs - some e.g.'s

- Estimates of the impact of SMEs on the economy are dependent upon definitions of SMEs used
- Data on the impact of SMEs is unreliable primarily because there is no central public database of SMEs available
- Databases that do exist are proprietary and consequently expensive and do not cover all SMEs in the country
- For e.g. in South Africa, National Treasury estimates 52 - 57% of GDP is contributed by SMEs and Informal SMEs contribute 12 - 14.5%

Literature review - Productivity

- Chowdhury & Wolf used modified Cobb-Douglas production functions to investigate labour productivity and returns for a SME survey conducted in Tanzania and Kenya. Their main finding is that ICT investments have no significant impact of on the return on investment of SMEs

Literature review - Productivity (2)

- But: this ignores the fact that informal SMEs are less likely to have ICTs than formal ones
- Also, a production function assumes that an SME produces just one product - but the less formal the SME, the more likely it will produce anything that makes money
- Therefore: distinguishing between informal, semi-formal and formal SMEs is key to understanding how ICTs impact on their business

Methodology

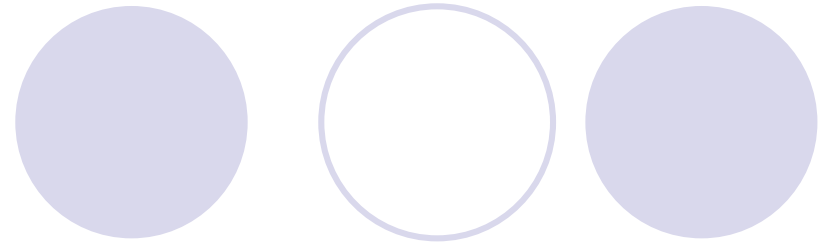
- No random sampling (280 qualitative interviews per county)
- Classification of SMEs by International Standard Industrial Classification (ISIC)
- Classification of SMEs by Formality (Informal, Semi-formal and Formal) :
 - Form of ownership
 - Registration for income tax and VAT
 - Whether a business uses written employment contract
 - Separation of business and personal finances
 - Bookkeeping

Question	Value	Points
D.1 Form of ownership?	Sole proprietor, Partnership	0
	CC, Pty	0.5
D.3 Is your business registered with the Receiver of Revenues? (pay taxes?)	No	0
	Yes	0.5
D.4 Is your business registered for VAT?	No	0
	Yes	1
D.11 How many of your employees have a written employment contract?	None	0
	One or more	1
D12 Does your business strictly separate business from personal finances?	No	0
	Yes	0.5
D.14 Does your business keep financial records?	None	0
	Simple bookkeeping	0.5
	Double entry bookkeeping	1
	Audit annual financial statements	1
Maximum Total		4.5

Classification of formality

Formality Index	Index points
Informal	1.5 points or below
Semi-formal	2 points or more and less than 3.5 points
Formal	3.5 or more points

Sample distribution



ISIC Tabulation	Total
D: Manufacturing	728
F: Construction	232
G: Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	1325
H: Hotels and restaurants	317
I: Transport, storage and communications	429
J & K: Financial intermediation & real estate, renting and business activities	436
M & N & O: Education, health, social work, other community, social and personal service activities	500
Total	3967

	Informal	Semi-formal	Formal	Total
Botswana	50	64	142	256
Cameroon	184	69	27	280
Ethiopia	152	83	47	282
Ghana	92	106	82	280
Kenya	137	90	50	277
Mozambique	70	109	101	280
Namibia	107	108	92	307
Nigeria	146	75	44	265
Rwanda	182	59	38	279
South Africa	102	76	112	290
Tanzania	65	104	94	263
Uganda	151	139	61	351
Zambia	102	95	79	276
Zimbabwe	66	57	158	281
Total	1606	1235	1126	3967

ICT possession vs. usage - 3 indices used

1. ICT possession index measures the number of different ICTs used by SMEs
2. ICT usage index measures how SMEs use ICTs for business transactions
3. ICT usage intensity index:

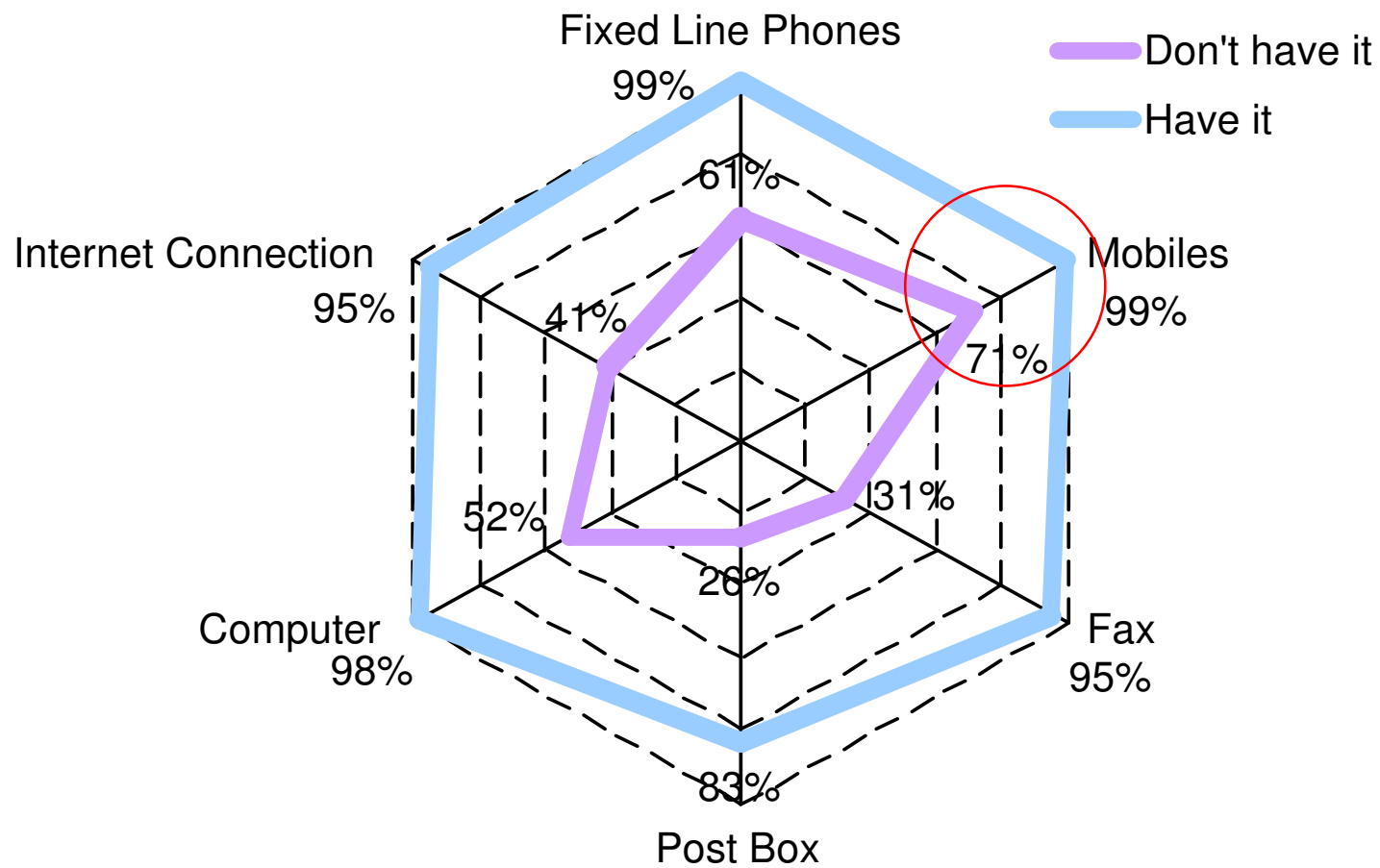
$$\frac{ICTusageindex}{ICTpossessionindex}$$

In other words, of the ICTs that SMEs possess, how intensely do they use them?

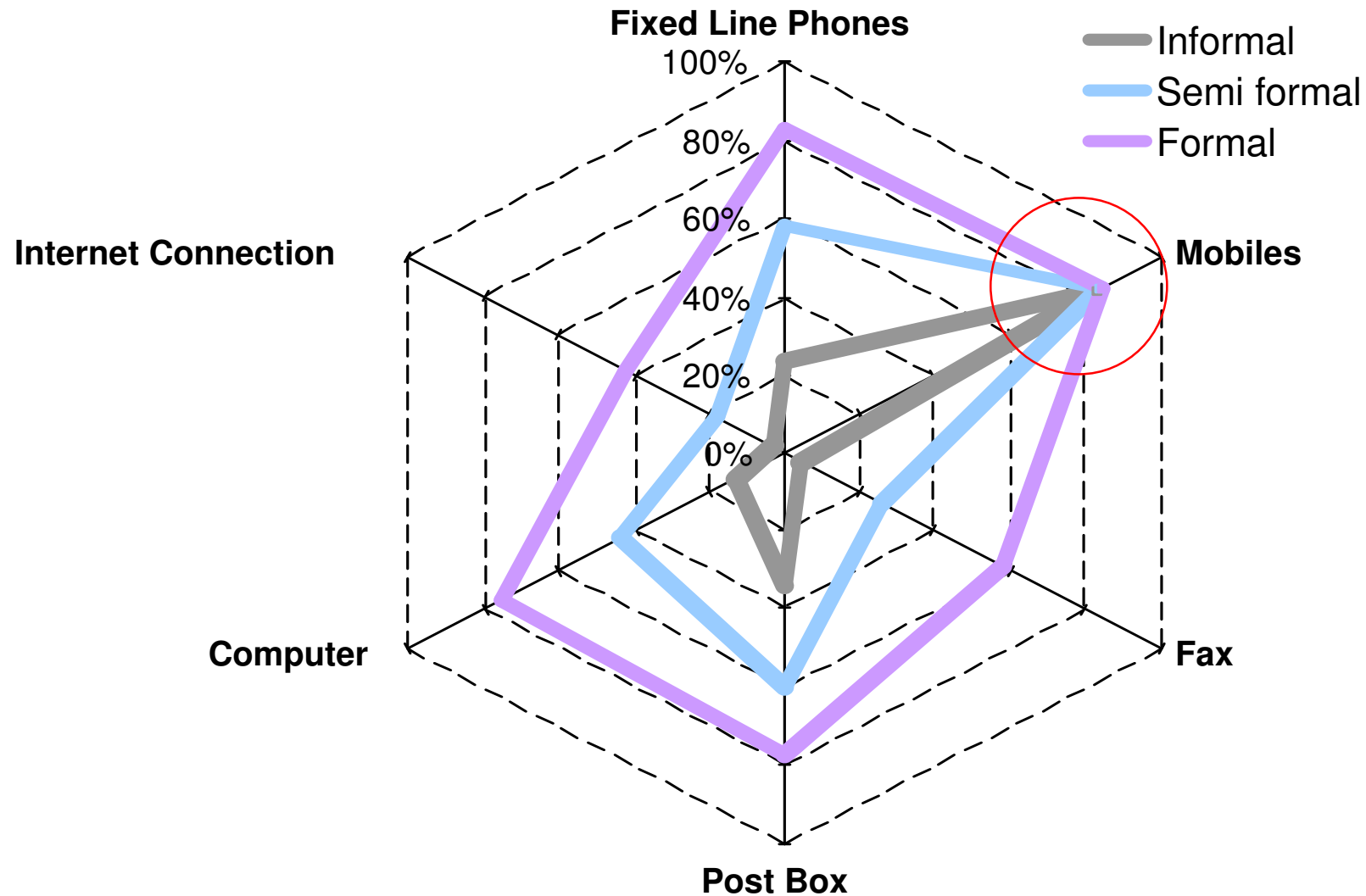
Mean Rank Comparison for ICT Usage, ICT Possession and ICT Usage Intensity

	Formality	Mean Rank
ICT Possession Index	Informal	Lowest
	Semi-formal	Medium
	Formal	Highest
ICT Usage Index	Informal	Lowest
	Semi-formal	Medium
	Formal	Highest
ICT Usage Intensity Index	Informal	Highest
	Semi-formal	Medium
	Formal	Lowest

ICT perceptions: Is important or very important!



Access to ICTs by formality

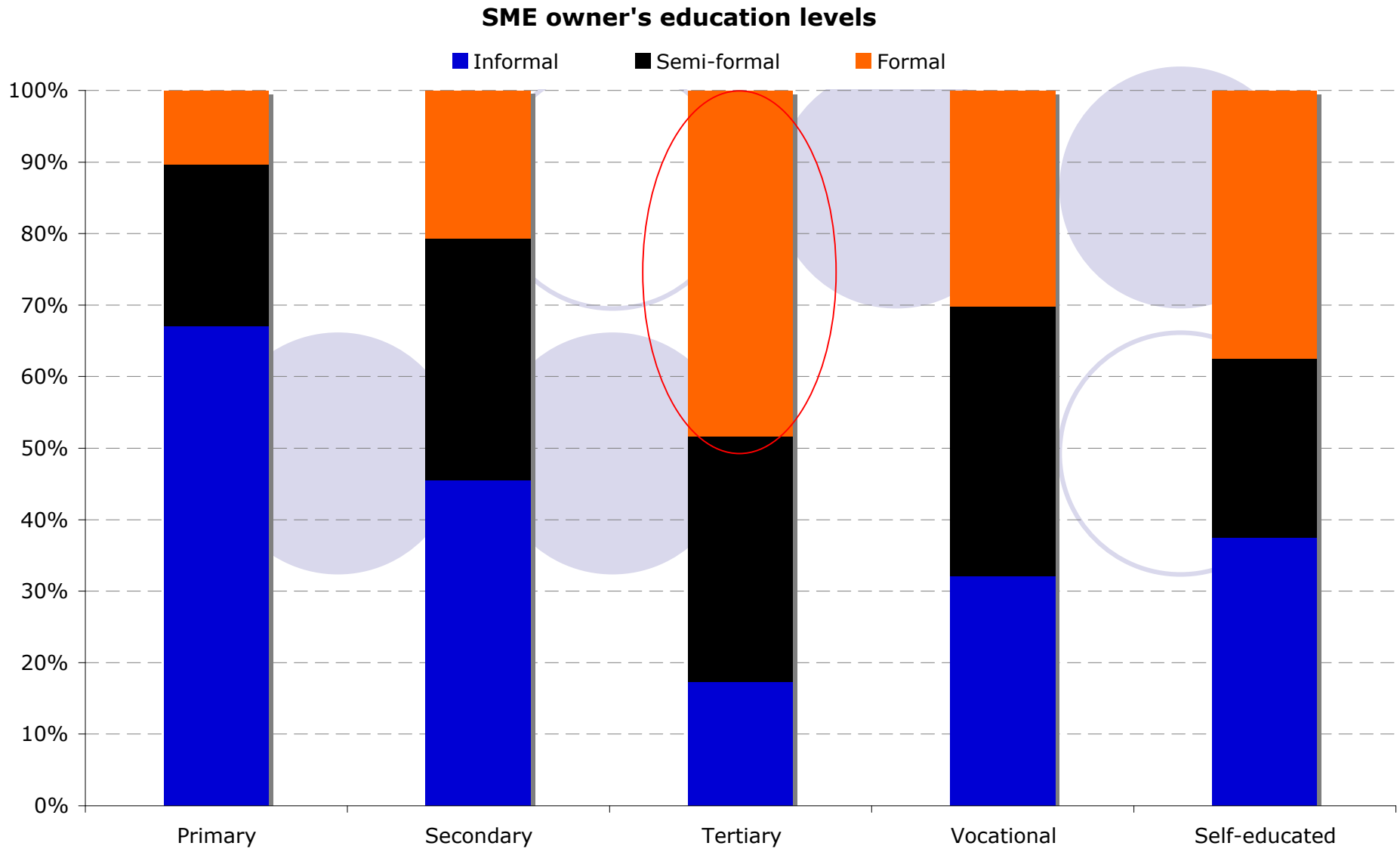


Main Obstacle to ICT adoption

	informal	semi formal	formal	average
Network Problems / Unreliable Infrastructure	11.3%	11.7%	10.5%	11.2%
Lack of Financial Resources	10.6%	4.5%	7.3%	8.0%
Lack of Awareness & Knowledge of ICTs	10.3%	8.4%	10.5%	9.7%
High Cost, Too Expensive	55.6%	60.8%	58.8%	57.9%
Lack of Skills & ICT illiteracy	2.8%	7.4%	6.9%	5.1%
No Need	9.5%	7.2%	6.1%	8.0%

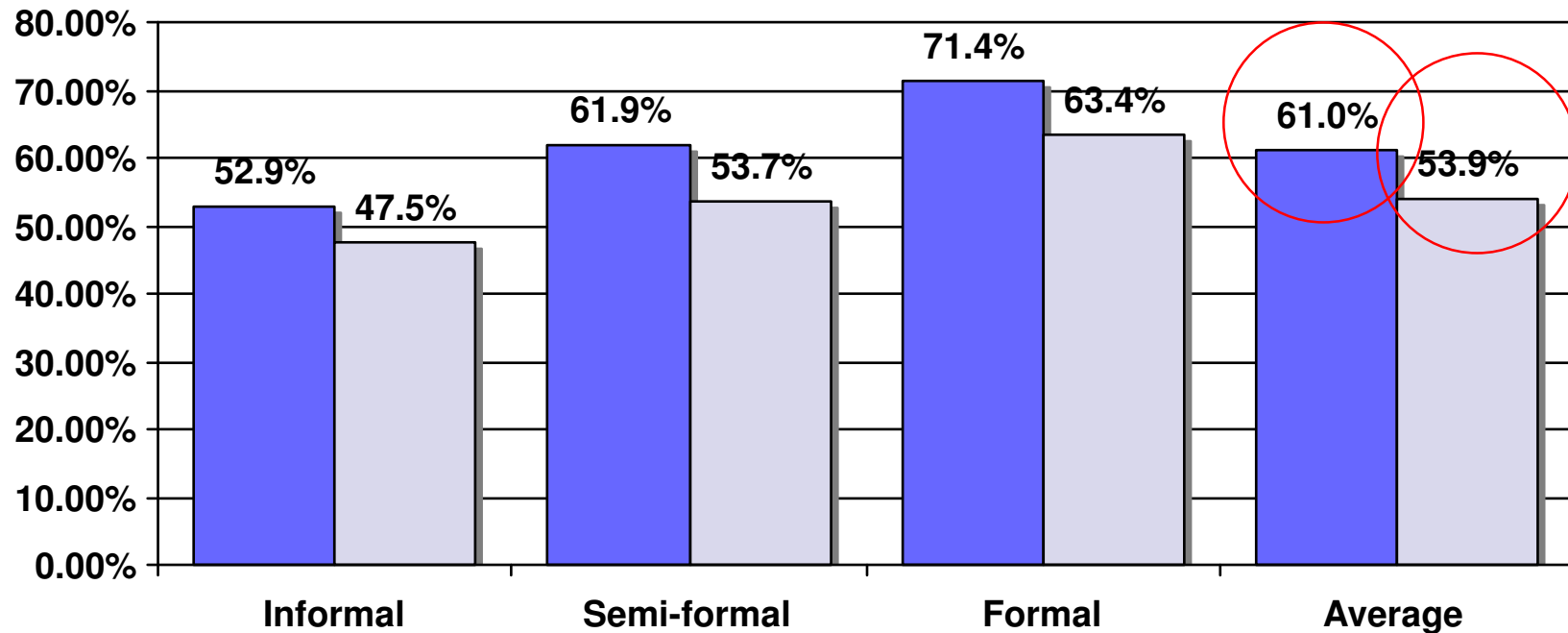
High costs are hitting informal businesses hardest since their ICT costs relative to other costs are the highest!

SME owners' education



Mobile banking

- Yes, I would be interested in cell-phone banking if it were cheaper and equally safe compared to ATMs and checks!**
- Yes, I would be prepared to change my bank or apply for a bank account in the first place if this bank offers cell-phone banking!**



ICT -Usage and Profitability?

- Informal businesses have higher profitability than formal businesses
- Failure to distinguish between formal and informal businesses would lead to wrong conclusions since informal businesses possess less ICTs but are more profitable
- ICT expenditure is a significant factor in turnover generation for formal, semi-formal and informal businesses

Banking

- 24% of informal SMEs had neither a bank account nor any other type of savings accounts (post office etc.)

	Informal	Semi-formal	Formal
Business Savings Account	38.1%	45.9%	44.9%
Business Checking Account	17.7%	47.4%	65.3%
Private Savings Account	24.9%	14.8%	10.5%
Private Checking Account	5.7%	5.8%	5.4%
Internet banking	0.2%	1.8%	6.6%
Mobile phone banking	0.1%	0.3%	1.8%
Corporate Credit Card	1.4%	4.7%	14.5%

Why are SMEs un- or under-banked?

- Formal banking system is too expensive and inconvenient
- For SMEs with no transaction history their ability to repay loans is unknown to banks, therefore it is risky for banks to serve SMEs
- Unbanked SMEs might not have collateral to access formal credit
- Unbanked SMEs might not have the skills to run the business professionally (bookkeeping, inventory systems, business plans)
- Cost asymmetries:
 - Cash expensive for banks but cheap for informal SMEs
 - Manpower is expensive for banks but micro-credit is very manpower intensive

Problems with current M-Commerce solutions

- Not fungible enough!
- Useful to the currently financially included but unlikely to draw in the financially excluded into the financial system
- User must have a credit or debit card (savings account do not come with these typically)
- Transacting airtime is free (free channel), but transferring money from bank account to airtime costs banking fees
- Value is lost in distribution channel in form of dealer commissions in selling airtime
- Airtime is hence not backwards-convertible into cash

Conclusion (1 of 2)

- Expenditure on ICT usage is contributing significantly to turnover generation
- Both ICT usage and possession contributes to higher labour productivity

Conclusions (2 of 2)

- Informal businesses are more profitable in terms of capital employed than semi-formal and formal-ones
- ICTs are significant input factors for both formal and informal SMEs and contribute positively to revenue generation
- Mobile phones are the most used tools in supporting the running of SMEs
- The main constraint to ICT usage remains high investments and / or usage costs
- Hence, effective regulations and policies that enable a competitive ICT environment will facilitate economic growth, employment and social inclusion - in particular for the poor

Recommendations

- Bringing down the costs by enhancing competition:
 - Market structure, entry barriers
 - Number portability
 - International gateways for mobile operators
 - Innovative approaches to other ICTs, including fixed line
- Well-designed mobile financial applications could positively affect profitability of SMEs (example: facilitate cooperation between mobile operators and banks):
 - Mobile operators possess transaction history
 - Providing capital to SMEs is all about information asymmetry
 - Cooperation between mobile operators and banks (and removing regulatory obstacles) could overcome the asymmetry

THANK YOU!

Godfred Frempong goddie58@yahoo.com

