

# The South African informal sector (1997 – 2006)

Hassan Essop & Derek Yu  
Stellenbosch University



# Format of the paper

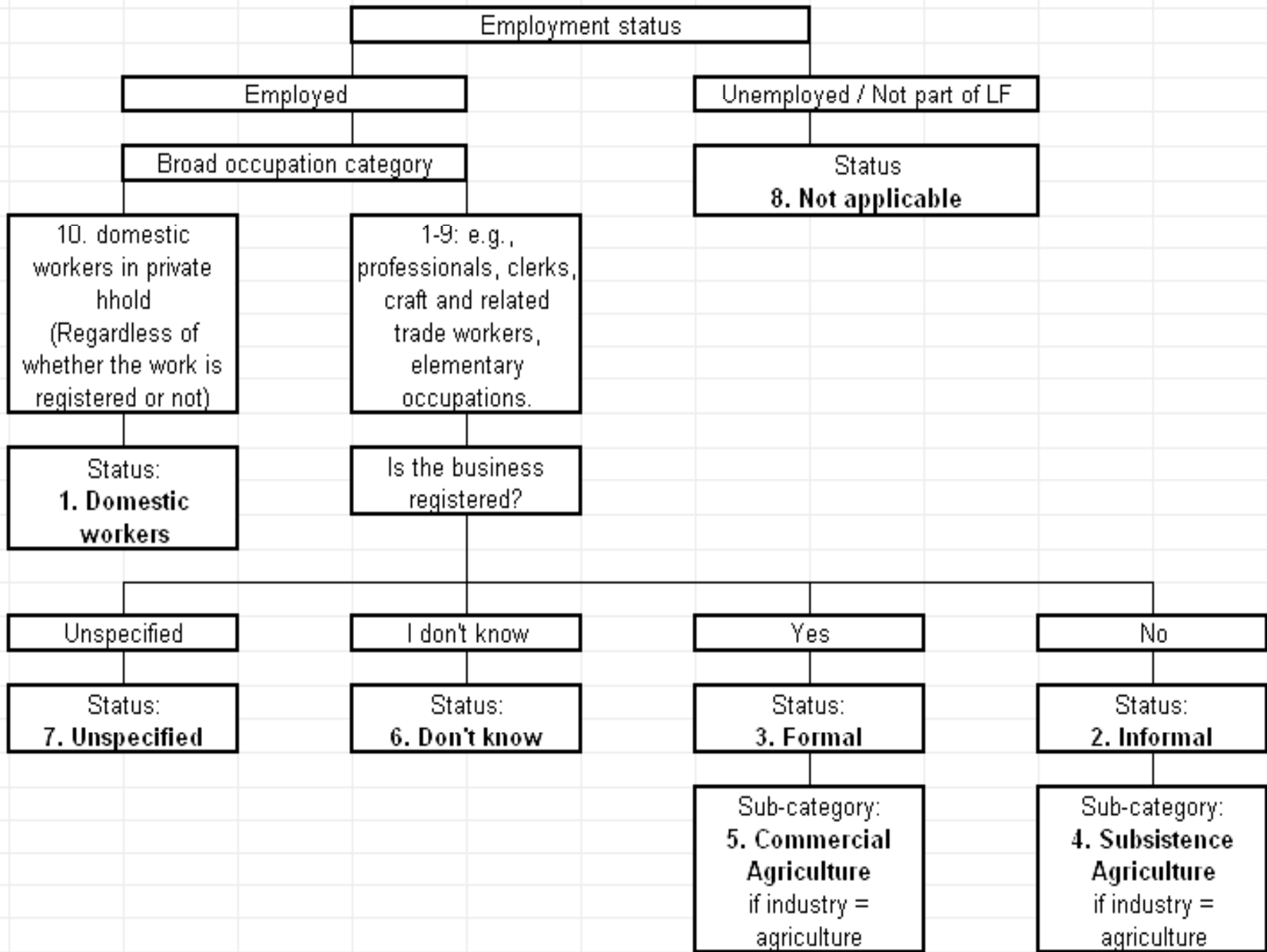
- Definitions (international, RSA)
- Characteristics of RSA Informal Sector
- Multivariate analysis
  - Probit (informal sector vs. formal sector)
  - Multinomial logit
  - Also replicating methodologies by Devey et al & StatsSA
- Current policy: evolved from data?

# International definition (ILO)

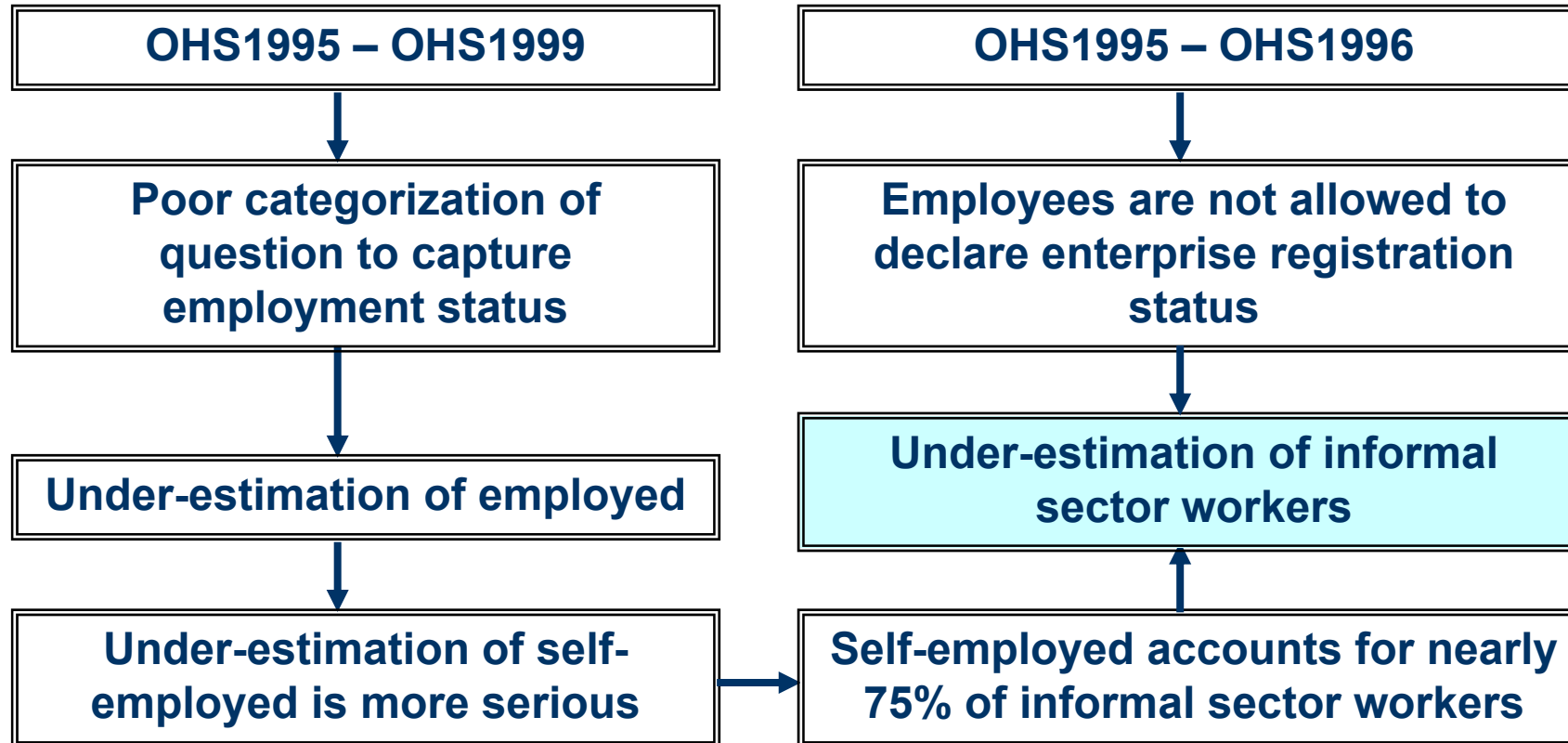
- ILO 1972: the activities of the hard-working poor, who were “not recognized, recorded, protected or regulated by the public authorities”.
- ICLS 1993: Definition of informal sector enterprises to be based on *enterprises*.
- ICLS 2002: defined in terms of employment characteristics of the *worker*

# South African definition (Stats SA)

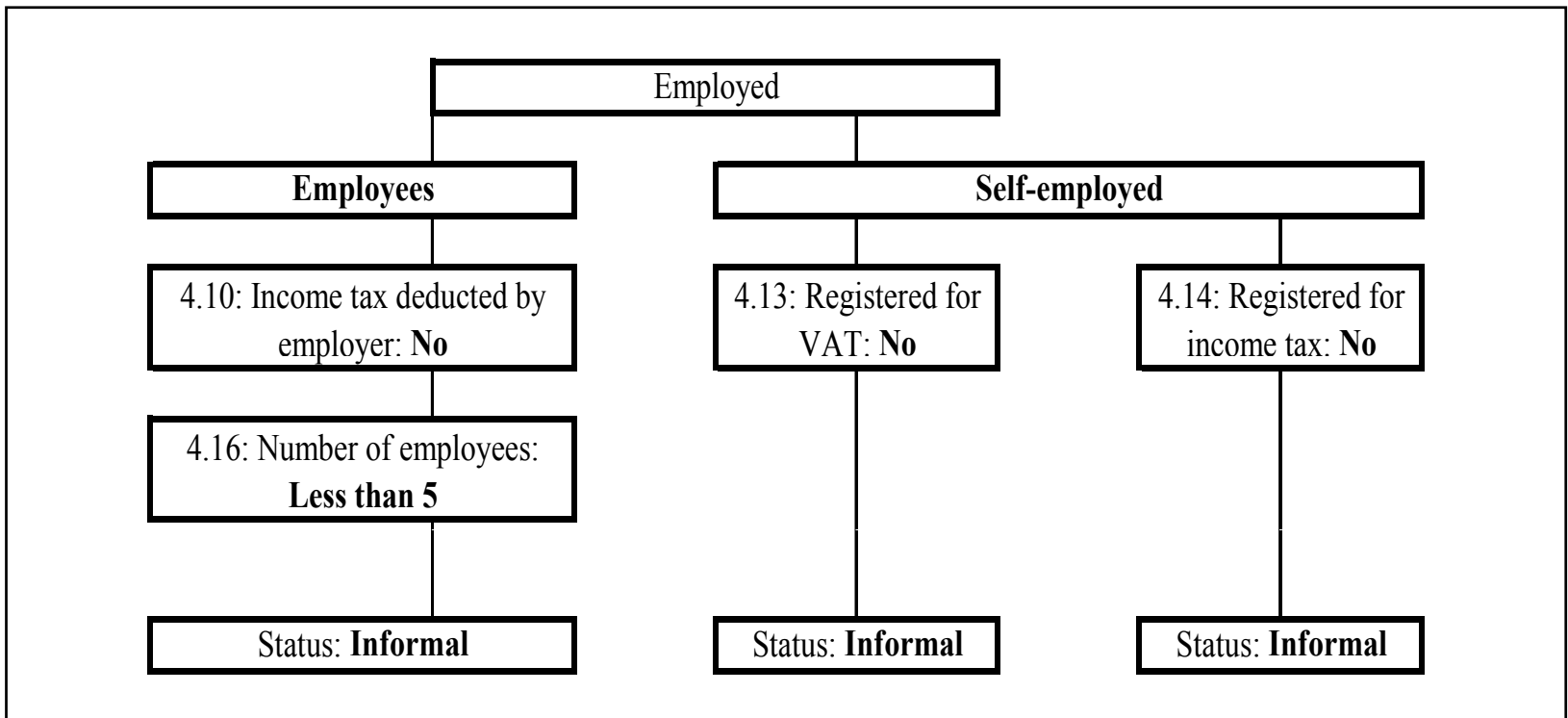
- Until LFS2007 Sept, StatsSA uses the 1993 ILO definition, focusing on non-registration of the enterprise
- However, serious concerns about under-estimation
  - Interviewers not instructed to read explanation of informal/formal market
  - Even if read, respondents may not understand concept of registration
  - Questionnaire assumes respondents know whether employers are registered!
  - Secondary employment is not captured (e.g., main job as formal sector worker, but secondary job as informal sector work)
  - Number of employed (especially self-employed) are underestimated (even more so) in OHS1995-OHS1999



# Under-estimation of informal sector workers in OHSs



# New method to be adopted from the 2008 Quarterly LFS



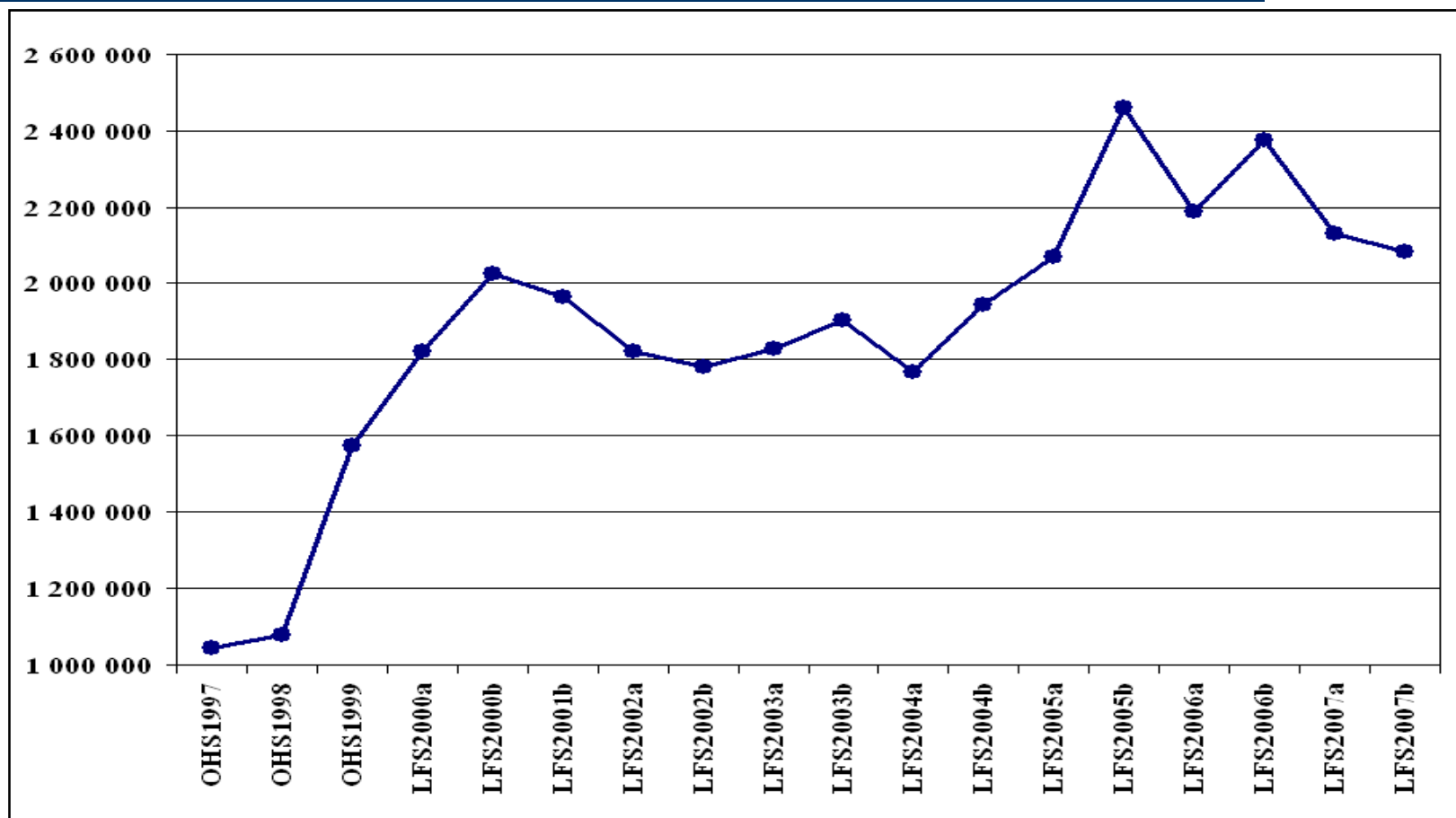
# Can't let the definitions slide...

- “...*informal sector* stands for informal sector less subsistence agriculture, formal sector stands for formal sector less commercial agriculture,
- and *non-agricultural employment* means informal sector employment plus formal sector employment (i.e., the categories ‘domestic workers’, ‘subsistence agriculture’, ‘commercial agriculture’, ‘don’t know’ and ‘unspecified’ are excluded).

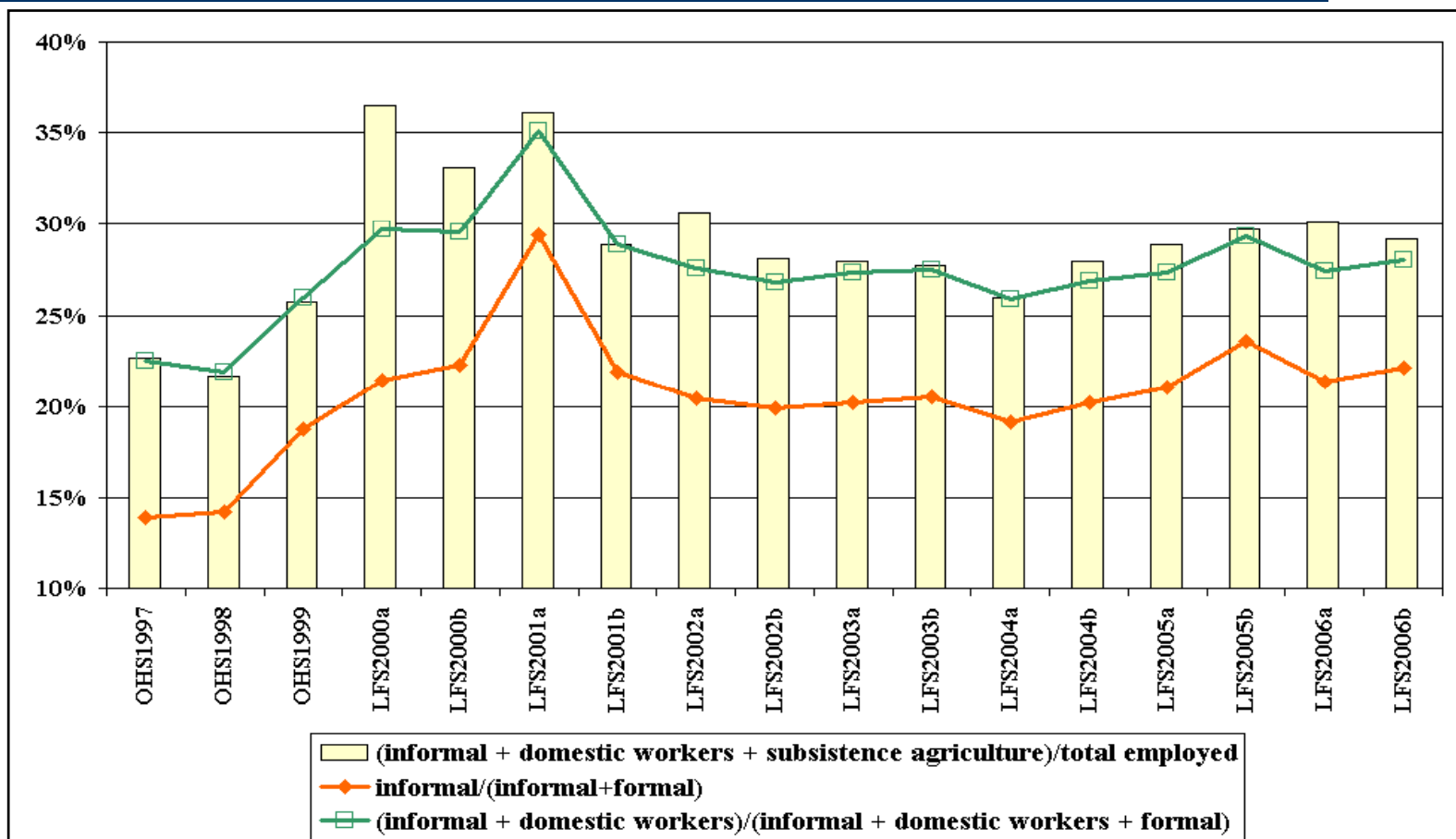
# Informal sector employment, 1997-2007

OHS1995	521 668	LFS2003a	1 827 711
OHS1996	330 100	LFS2003b	1 901 131
OHS1997	1 043 347	LFS2004a	1 764 630
OHS1998	1 077 141	LFS2004b	1 944 236
OHS1999	1 571 646	LFS2005a	2 068 479
LFS2000a	1 819 556	LFS2005b	2 459 690
LFS2000b	2 026 065	LFS2006a	2 187 940
LFS2001a	<u>2 836 182</u>	LFS2006b	2 376 338
LFS2001b	1 964 763	LFS2007a	2 129 164
LFS2002a	1 821 426	LFS2007b	2 083 855
LFS2002b	1 778 542		

# Informal sector employment, 1997-2007



# Informal sector employment as percentage of non-agricultural employment



# Characteristics of informal sector workers

- Race: Black
- Nature of employment: Self-employed (especially females)
- Province: KwaZulu-Natal, Eastern Cape or Gauteng
- Education: Without Matric
- Dwelling: Staying in informal dwelling (e.g., shacks)
- Monthly earnings: ± R1000 (2000 prices)
- Job permanence: Temporary/Casual contract
- Occupation: Unskilled elementary occupations
- Industry: Wholesale/Retail industry

# Educational attainment by sector and race

	Informal sector					Formal sector				
	Black	Coloured	Indian	White	All	Black	Coloured	Indian	White	All
No Education	10.1%	4.1%	1.0%	0.0%	9.2%	3.1%	0.7%	0.4%	0.0%	2.0%
Incomplete Primary	21.2%	13.1%	1.9%	0.0%	19.6%	9.9%	5.4%	0.4%	0.1%	6.7%
Incomplete Secondary	50.6%	54.5%	48.3%	27.3%	50.0%	39.9%	43.9%	24.5%	14.5%	34.1%
Matric	16.0%	23.8%	48.6%	47.2%	18.2%	30.0%	39.1%	48.6%	42.4%	34.9%
Matric + Cert./Dip.	2.0%	3.2%	0.0%	17.0%	2.6%	11.2%	8.3%	15.3%	23.6%	13.7%
Degree	0.2%	1.3%	0.3%	8.4%	0.5%	5.8%	2.7%	10.7%	19.4%	8.6%
Mean eduyear	7.70	9.02	10.47	11.78	7.98	10.17	10.53	11.88	12.69	10.85

# Probit regression on non-agricultural employment

- Dependent variable
  - 1: Informal sector, 0: Formal sector
- Independent variables selected:
  - Race (Reference group: Black)
  - Gender (Reference group: females)
  - Age groups (Reference group: 15-24 years)
  - Province (Reference group: Western Cape)
  - Educational attainment (Reference group: no schooling)
  - Self-employment dummy
  - Female self-employment dummy
  - OHS1997/1998 dummy (OHS1997/1998 under-estimated informal sector employment)
  - LFS2001a dummy (LFS2001a seriously over-estimates informal sector employment)

# Probit regression on non-agricultural employment

- Regressions were run for
  - OHS 1997, LFS2000b, LFS2003b, LFS2006b
  - Also for period between OHS1997-LFS2006b
  - Results robust for all periods
- Also using Devey et al method on informal sector definition
  - Only employees and not self-employed included
- Also StatsSA method

# Probit regression on non-agricultural employment

- Results as expected
- 25-65 yr olds less likely to be in informal sector
- Blacks more likely to be in informal sector
- Females less likely to be in informal sector compared to men
- People from Eastern Cape more likely to be involved in informal sector work than formal sector work

# Probit regression on non-agricultural employment

- Higher education level associated with lower chance of working in informal sector
- Self-employment dummy positive and significant.
- Female self-employment dummy positive and significant.
- Dummy OHS1997/1998 negative & significant (undercount)
- Dummy LFS2001a positive & significant

# Multinomial logit...

- Dependent variable:
  - 1: Formal sector
  - 2: Informal sector
  - 3: Unemployed (Broad definition)
  - 4: Inactive (Broad definition) (Reference group)
- Results:
  - Nothing surprising, as expected, check the paper...

# Devey et al. formal-informal sector index

Question number	Index = 1	Index = 0
4.4: number of employers	(1): one employer (2): more than one employer	???
4.6: permanence of work	(1): permanent	(2): fixed period contract (3): temporary (4): casual (5): seasonal
4.8: written contract with employer	(1): yes	(2): no
4.10: who pays wage	(1): employer (2): labour broker (3): contractor or agency	(4): other
4.11: employer contributes to pension of retirement fund	(1): yes	(2): no
4.12: paid leave	(1): yes	(2): no
4.13: membership of trade union	(1): yes	(2): no

# Devey et al. formal-informal sector index

Question number	Index = 1	Index = 0
4.16 number of regular workers in enterprise	(6): 50 or more	(1): 1 (2): 2 – 4 (3): 5 – 9 (4): 10 – 19 (5): 20 – 49
4.17a: works for a registered company or close corporation	(1): yes	(2): no
4.17b: employer makes UIF deductions	(1): yes	(2): no
4.17c: employer makes medical aid or health insurance payments	(1): yes, for himself only (2): yes, for himself and his dependents	(3): no medical aid benefits provided
4.17d: enterprise is registered to pay VAT	(1): yes	(2): no
4.19: location of work	(3): inside a formal business premises (4): at a service outlet	(1): in the owner's home (2): in someone else's home (5): at a market (6): on a footpath or street (7): on a public transport

## Devey et al. formal-informal sector index

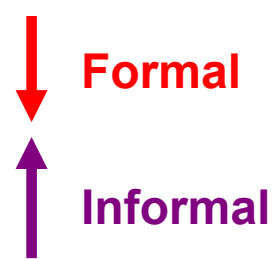
- The index will only work for employees, since the self-employed are not allowed to answer 4.4 – 4.13
- It seems everyone is guaranteed to get 1 mark if they give solid answer on 4.4.
- What if the respondent's answer is 'I don't know' or 'unspecified'?

# Devey et al. formal-informal sector index

- Adjustments

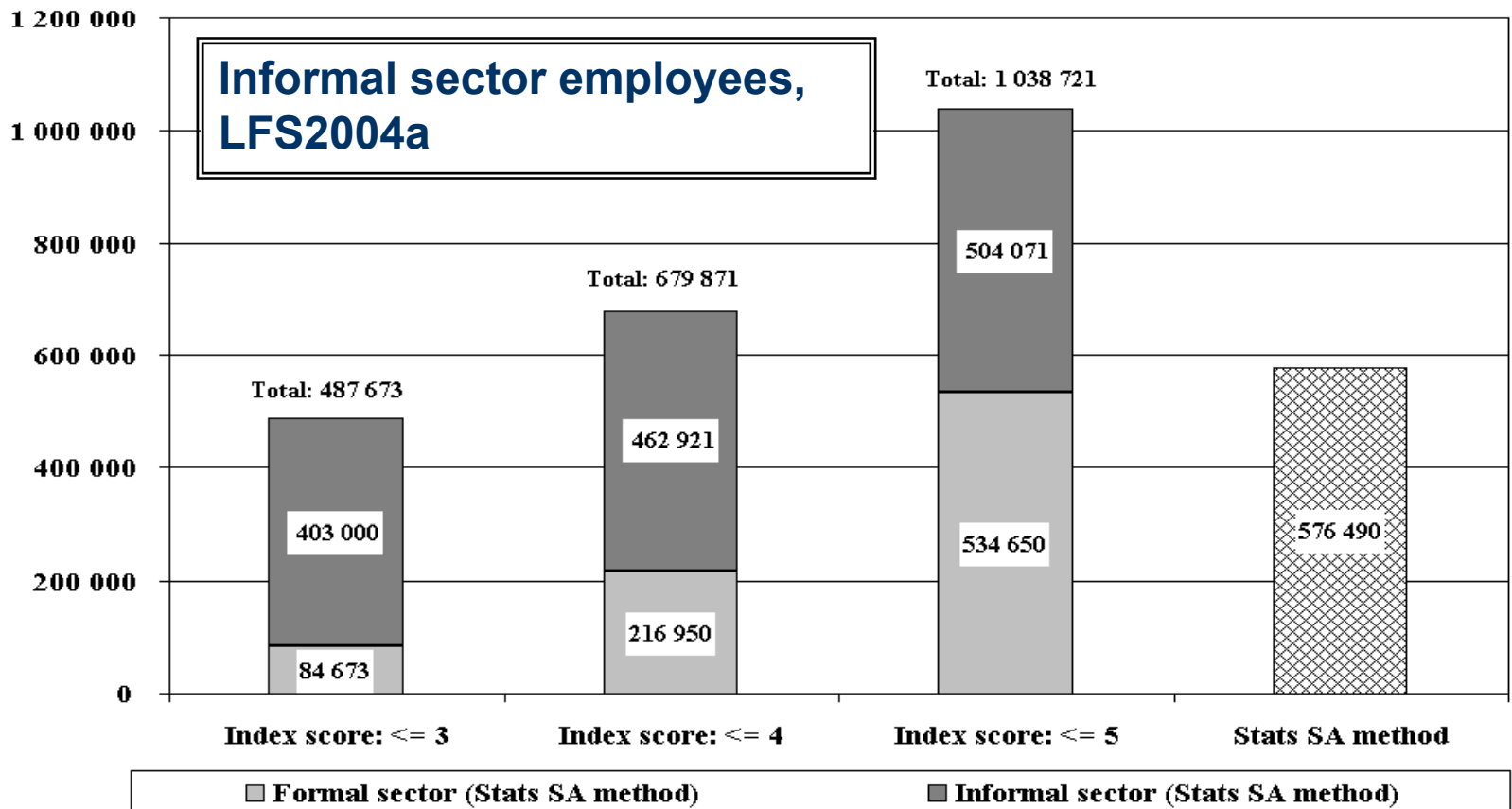
- Self-employed: Use the StatsSA enterprise registration methodology
- Employees: Use the Devey et al. method
- Nothing could be done on 4.4.
  - Unless we replace 4.4 with another question (e.g., flexibility of work hours, supervision of work by employers, willingness to work longer, etc. – to be discussed in forthcoming paper)
- If the respondent's answer is 'I don't know' or 'unspecified', an index value of 0 is allocated to that question.

# Devey et al. formal-informal sector index

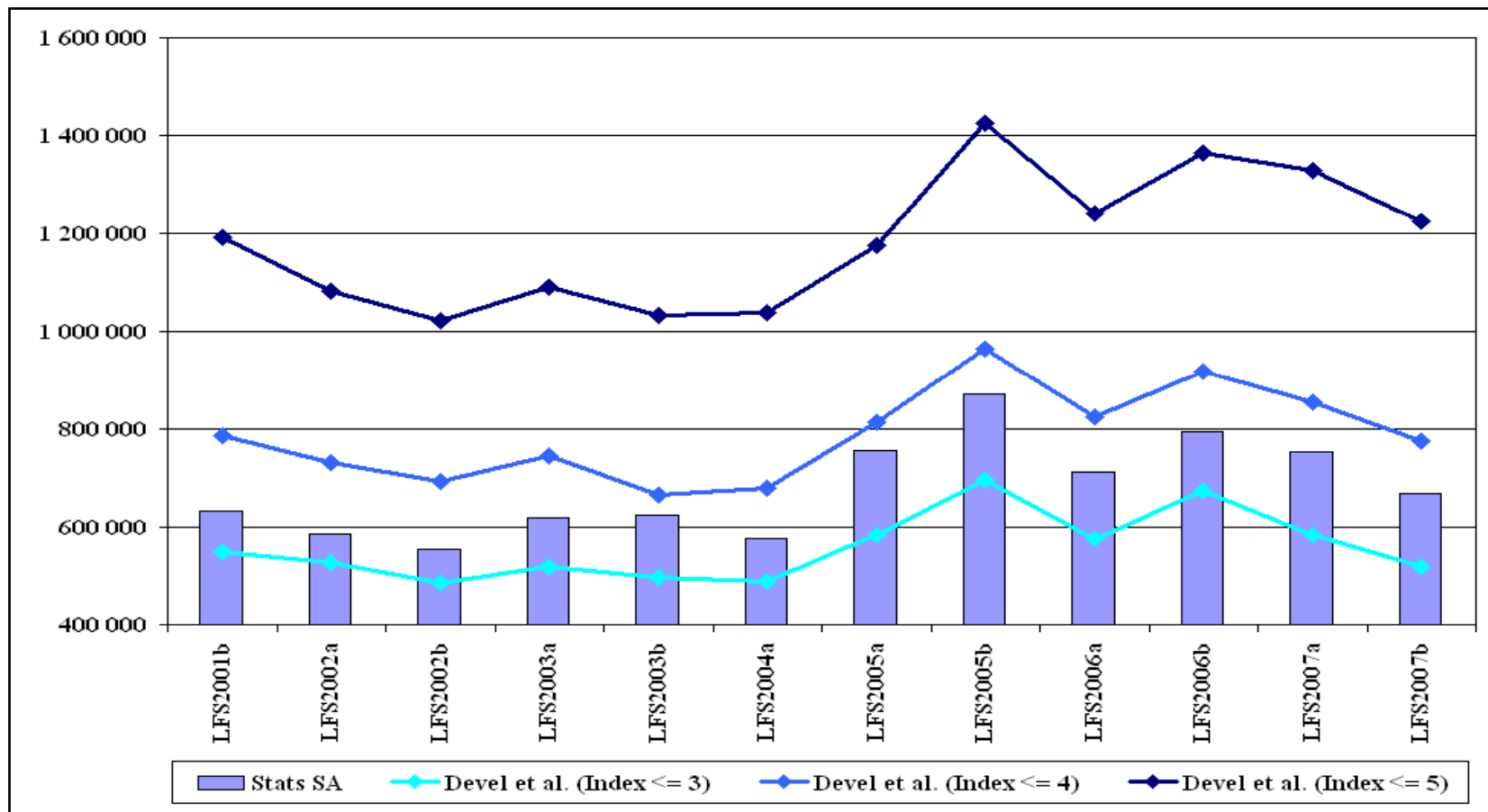


Index score	Status (Using the Stats SA enterprise registration methodology)					
	Formal sector employees			Informal sector employees		
	No. of people	Percentage	Cumulative %	No. of people	Percentage	Cumulative %
0	163	0.00%	0.00%	1 463	0.30%	0.30%
1	2 990	0.00%	0.00%	4 450	0.80%	1.00%
2	17 591	0.30%	0.30%	258 030	44.80%	45.80%
3	63 929	0.90%	1.20%	139 057	24.10%	69.90%
4	132 277	1.90%	3.10%	59 921	10.40%	80.30%
5	317 700	4.60%	7.70%	41 150	7.10%	87.40%
6	354 686	5.10%	12.80%	22 180	3.80%	91.30%
7	394 000	5.70%	18.50%	12 489	2.20%	93.50%
8	578 860	8.30%	26.90%	8 996	1.60%	95.00%
9	937 298	13.50%	40.40%	11 301	2.00%	97.00%
10	1 261 047	18.20%	58.60%	6 267	1.10%	98.10%
11	1 244 494	17.90%	76.50%	6 519	1.10%	99.20%
12	1 092 388	15.80%	92.30%	4 364	0.80%	99.90%
13	536 504	7.70%	100.00%	303	0.10%	100.00%
Total	6 322 227	100.00%		556 122	100.00%	

# Devey et al. formal-informal sector index



# Informal sector employees – Stats SA method vs. Devey et al. index



# Now, the controversial stuff...

- Government policy
- Two simple questions...
  - Are the definitions used appropriate?
  - Have targeted beneficiaries been correctly identified?
- Government wants to...
  - Improve capacity of SMMEs, entrepreneurship, etc...
  - Has “targeted beneficiaries”

## Second question...

- Yes
- But no regional focus
- No appropriate focus on micro firms (84% between 1-4 employees)

# First question...

- Second economy...does government think it is important???
- Too broad definition (SMME)
- Leads to poorly structured interventions
- Rogerson's (2004) review
- But more work needed...

## Further research needed in the following areas:

- Alternative approaches to derive informal sector employment
  - ‘Upgraded’ Valodia et al. index
  - Heintz & Posel method
  - Currency demand approach
  - Electricity consumption approach
- Econometric analyses
- Government strategy in supporting the informal sector