Waste picking in South Africa

Derick Blaauw (NWU), Rinie Schenck (UWC) and Kotie Viljoen (UJ)

National dialogue: Integrating the informal sector and SMEs into municipal solid waste management in South Africa

8 October 2015

Cape Town

Structure of the presentation

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

1. The meaning of work
2. South Africa's informal economy
3. Waste picking described
4. Waste Picker research
5. Profile of the WPs
6. Employment history
7. Income analysis
8. Enabling factors
9. "Barriers" to employment

Rinie Schenck

Derick Blaauw

The meaning/importance of work

- Economic dimension
- Social dimension
- Psychological dimension
- Vital for the well being of the person

South Africa's informal economy

- Unregistered, unregulated, unorganised
- 17 % of total employment and 12.7% of total labour force.
- Informal retail sector: +/- 750 000 informal micro-retailers - home ('spaza' shops) & street vendors, generating total revenues of R31.8bn per year (Heistein, 2015).
- 45 000 – 100 000 day labourers (Blaauw, 2010).
- Absorbs a relative small proportion of workforce by developing-country standards (Kingdon & Knight, 2001a).
- Reasons: mind set and barriers

Describing Waste picking by a waste picker

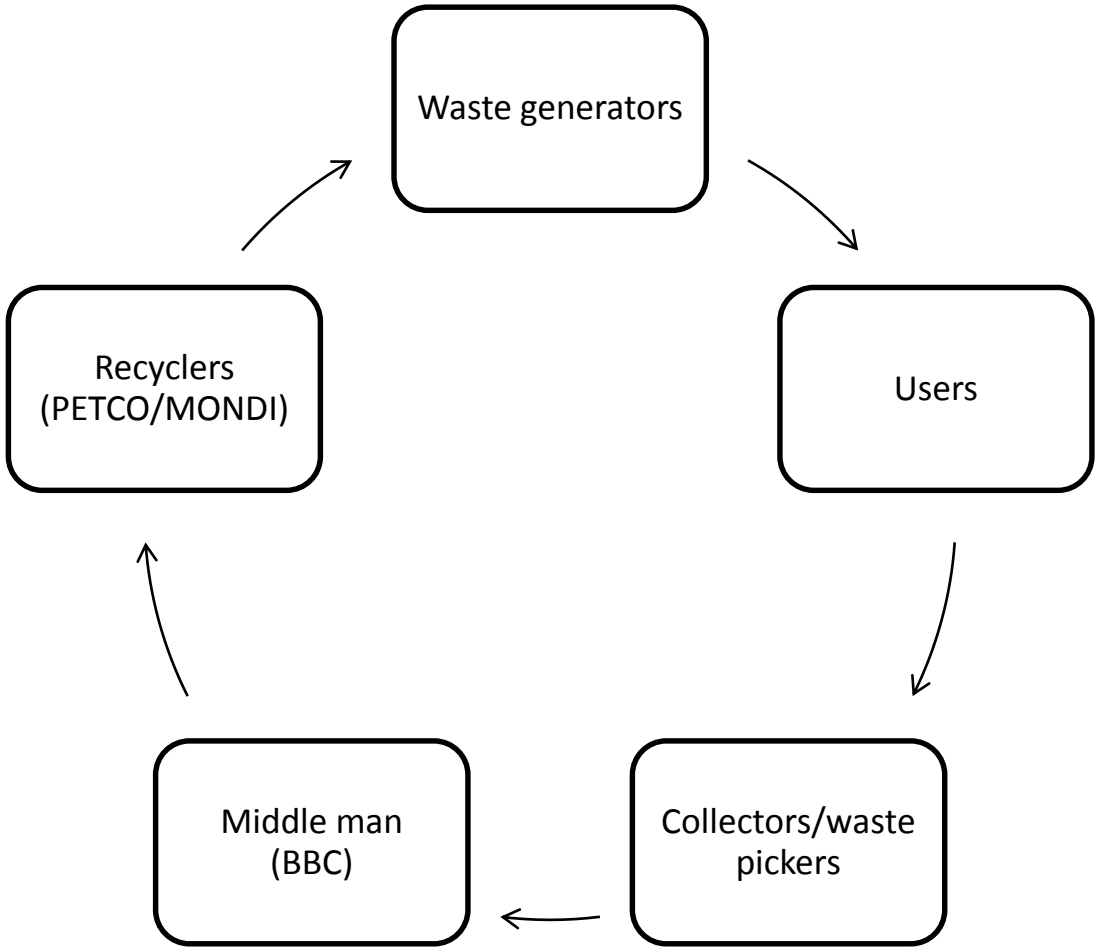
- *"Waste picking is an unskilled profession and give unskilled labourers the opportunity to enter the labour market "*
- *"There are no barriers to enter waste picking"*

- World Bank: 15 million waste pickers around the world
- SA - 35-70,000 (estimations)
- Work for themselves or "self employed"
- "Determine" their own income

Landfill waste pickers

Street waste pickers

“Recycle cycle”



Waste Picker Research

- Study 1: Exploratory interviews were conducted with street waste pickers (SWPs) in Pretoria, (2009)
- Study 2: Consisted of a survey of SWPs in Pretoria with 142 respondents (2010)
- Study 3: In 2011 a reconnaissance study to determine the prevalence of buy-back centres (BBCs) and SWPs in the major cities of South Africa
- Study 4: The National survey was completed with 910 SWPs and 64 BBC's (2012)
- Study 6: Consisted of a survey on 9 landfill sites with 400 landfill waste pickers (LWPs) in the Free State Province in South Africa (2012)
- Study 7: Received funding to look at nutritional status of the LWPs (2015)
- Study 8: Received Funding for funding - WPs in the Karoo region (2015)
- Study 9: Management of landfill sites and best practices

Profile of the WPs

	Street Waste pickers – national 2012	Landfill waste pickers- Free State 2012	Landfill waste pickers- Stellenbosch 2015
Youth	42% under 35	42% under 35	48% under 35
Gender			
Male	96%	52%	75%
Female	4%	48%	25%
Total	**100**	**100**	**100**
Race			
Black	84.6%	98%	33,3%
Coloured	14.6%	2%	66,6%
Indian/Asian	0.4%	0%	0%
White	0.4%	0%	0%
Total	**100**	**100**	**100**

Street waste pickers (96%male)

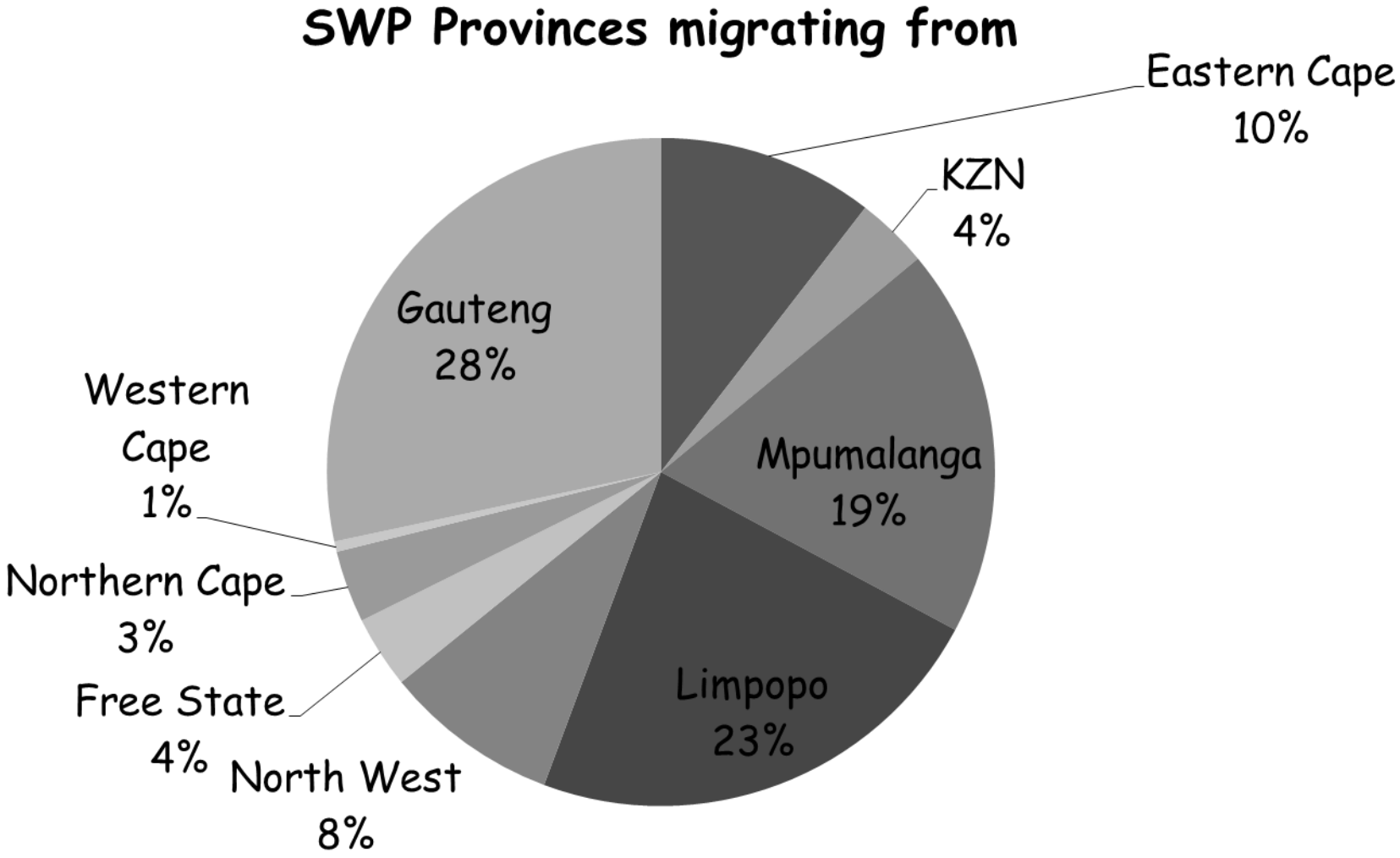
Female SWP (4%)

Street waste picker

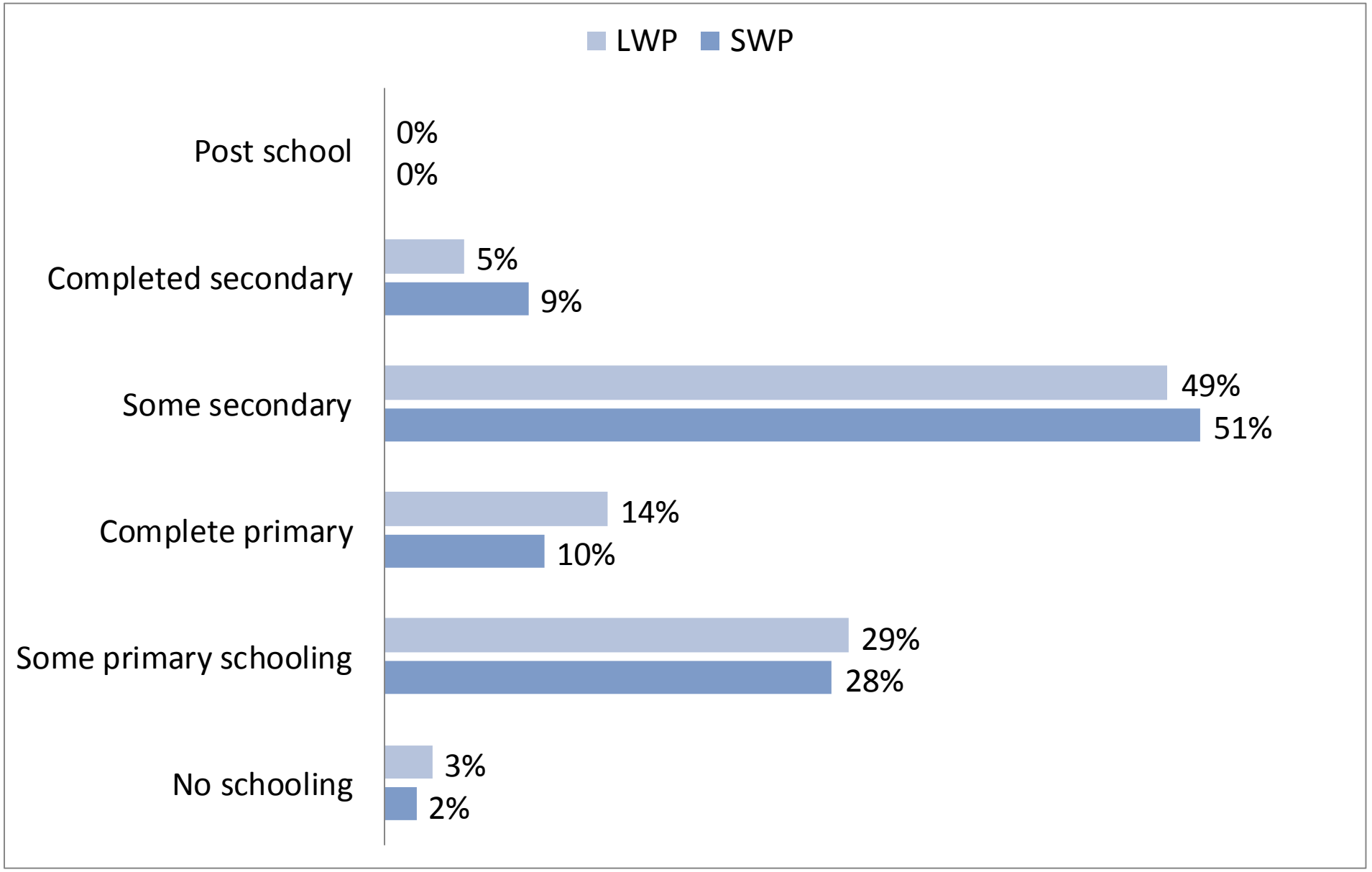
Countries of origin

Country	SWPs- national 2012	Landfill waste pickers- Free State 2012	Landfill waste pickers Stellenbosch 2015
South African	72.3%	89%	98%
Zimbabwe	8.3%	1%	
Namibia	0.5%		
Swaziland	0.3%		
Mozambique	1.8%		
Lesotho	15.7%	9%	
Botswana	0%	1%	
Other	1.1%		2%
Total	**100**	**100**	**100**

Pretoria SWPs 2012

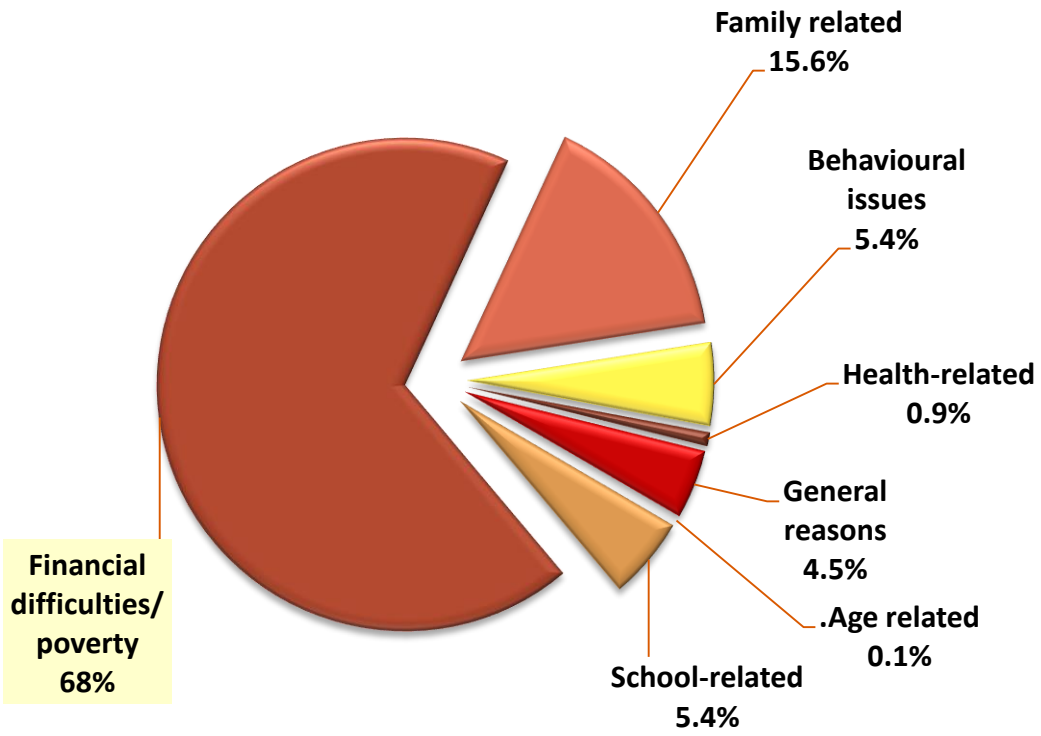


Education of the WPs – Free State 2012



SWPs national 2012: Reasons for leaving school early

It is generally accepted that poverty has a detrimental effect on the capability to achieve the productive functioning such as schooling (Fryer and Hepburn, 2010:6).



Few left by choice
68%

- **Financial difficulties/ poverty** most prominent reason
  - lost one or both parents
  - no-one to care for them
- Family related issues
  - Problems at home
- Problems related to behaviour / characteristics
  - might decrease employability

Source: Survey data

UNIVERSITY OF JOHANNESBURG

Reasons for becoming SWPs

- *"I am my own boss",*
- *" I get sufficient income"*
- *" doing well enough."*
- *" the only option"* due to being uneducated, low skilled and limited opportunities in the formal labour market.

Variety of economic activities

- An ethnographic study by Reyneke (2012) on a landfill site in Pretoria suggests that multiple economic activities are also playing themselves out on landfill sites such as producing items from the collected waste, off and uploading (trucks)
- Collecting of food and other household items

The Family Lives of the WPs

	SWPs (national)	LWPs (Free State)
Brick House	18%	46%
Shack	22%	47%
Elsewhere (construction site, street, veld, place of work, domestic worker)	70%	7%
Total	100	100

Living on the landfill

LWPs: Pretoria

- During the day about 300-400 waste pickers operate on the landfill. Yet not all these individuals reside on the landfill. Only about 200 of the waste pickers own shacks on the landfill and the others commute back and forth on a daily basis". This means that around 50% of the waste pickers on the landfill site are sleeping on the landfill (Reyneke 2012)

Landfill waste pickers (LWPs)

Food security: Access to food

	Dustbins	Landfill sites	Other WPs	Own/ bring/buy	Other e.g. churches, individual
SWPs	32%	-	15%	40%	32%
LWPs	-	31%	15%	83%	15%

Waste pickers: Food security

- *‘’… you see somebody’ supper from last night and you eat it…”*
- *“ from my experience no one has died from food…”*
- *“Some people dry meat in the sun and dry it until their next trip home”*

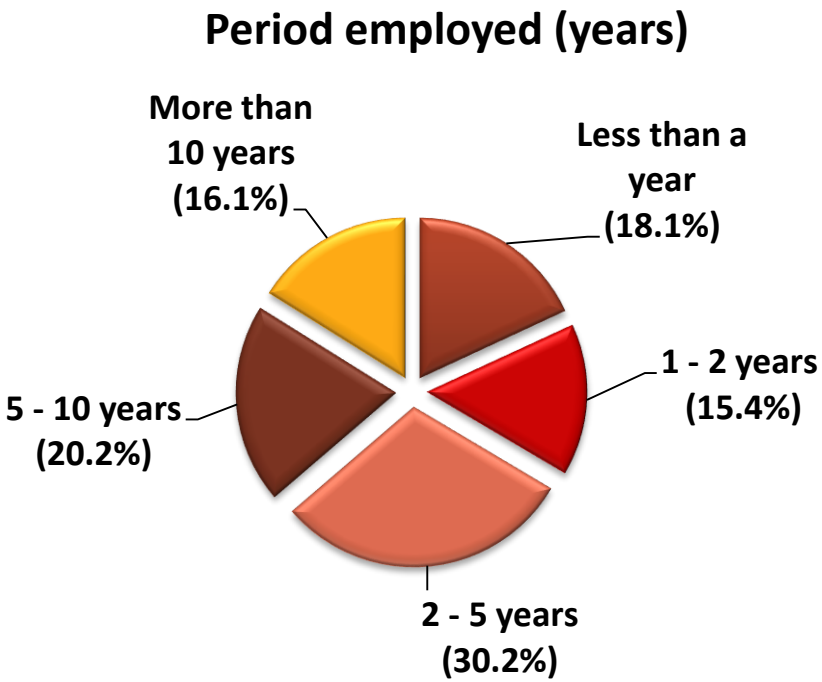
Sense of independence

- “ I am my own boss, no one tells me …. What to do, what, when and how….” “Your employer does not push you, even if you are not feeling well …. He does not push you, he is not after you, you push yourself, your pay is determined by you”
- “ I am my own boss”

N2 Scrap metal collectors

(on their way to “Marikana”)

Employment history: previous full-time job experience



Source: Survey data

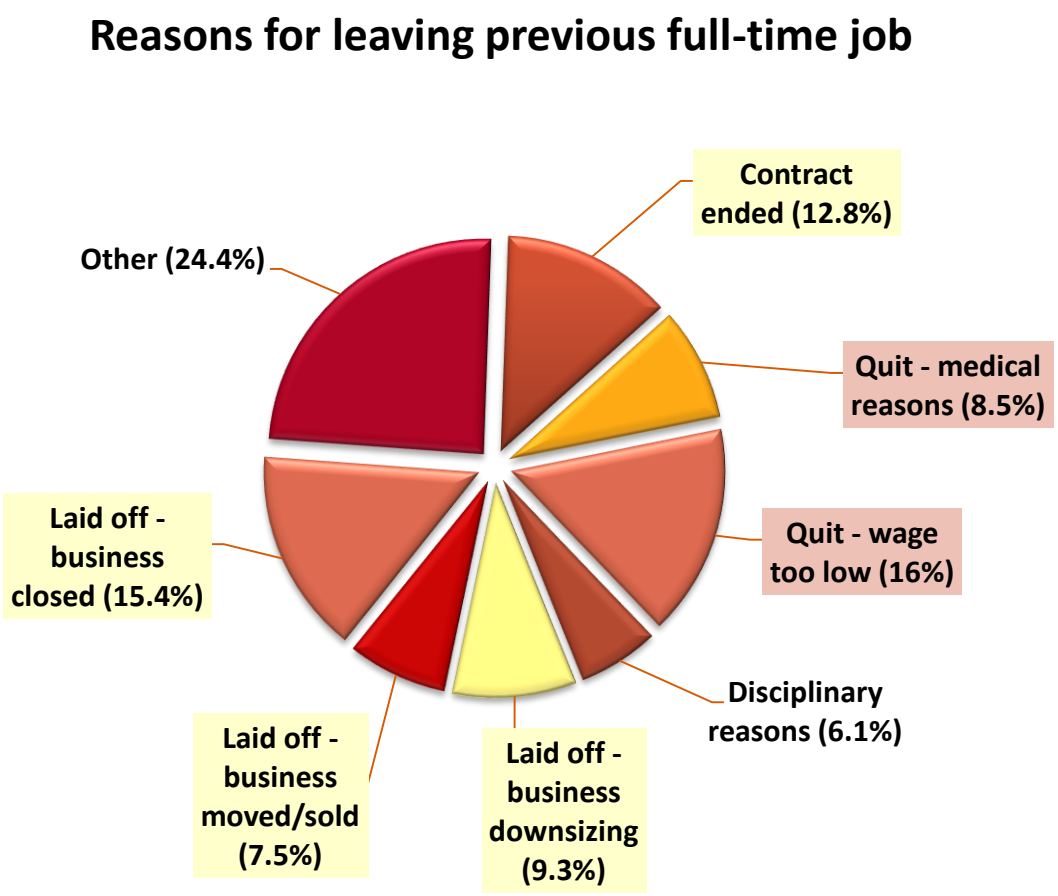
Only 52.4% previously had a full-time job with benefits

- 16.1% - longer than 10 years
- **30.2% - 2-5 years**
- 20.2% - 5-10 years
- **18.1% - less than a year**
- **15.4% - 1 to 2 years.**
- Almost **63.7%** had their previous full time job for less than 5 years

Lack of full-time job experience makes them more vulnerable in terms of competing for and finding a full-time job.

UNIVERSITY OF JOHANNESBURG

Reasons for leaving last full-time job



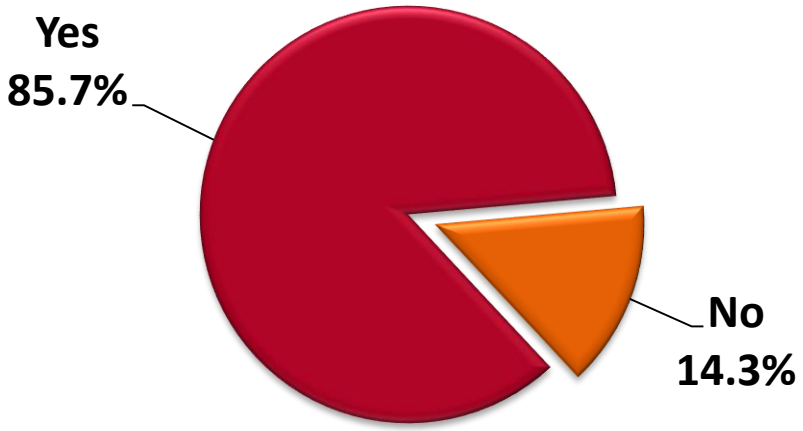
32.2% - were laid off
12.8% - contracts ended

24.5% quitted their job
including
16% for low wages
8.5% for medical reasons

Source: Survey data

UNIVERSITY OF JOHANNESBURG

Are they looking for a full-time job?



Source: Survey data

Show that street waste picking is not an option to earn high incomes.

Most still prefer another job

Anything I can get (345)

"I would like to have a proper job"

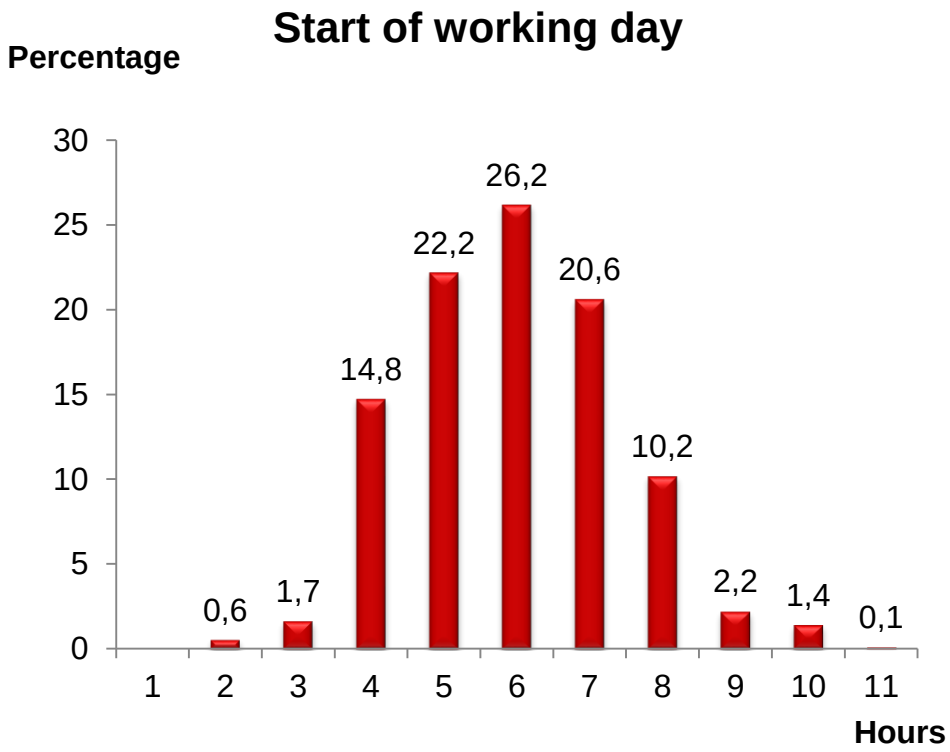
"I would like a real permanent job"

"I would rather have a decent job"

Not looking for a job?

- 35.1% - too old to find a job
- 24.3% - disability and illness
- 13.5% - satisfied with their job as SWP
- 3.6% - immigrants (either temporary in the country or do not qualify to work in South Africa)

Start of the working day



They start very early

- to follow the dustbins to collect as much as possible before the municipal trucks collects the waste
- Competition is stiff and they compete to get to the more valuable waste first
- Compete for limited amounts of waste

- 5H00 or earlier - 39.3 % starts
- 6H00 another 26.2% joins
- 7h00 majority (86%) are busy picking waste
- Only 35% work 8 hours or less
- Majority work between 8 and 11 hours

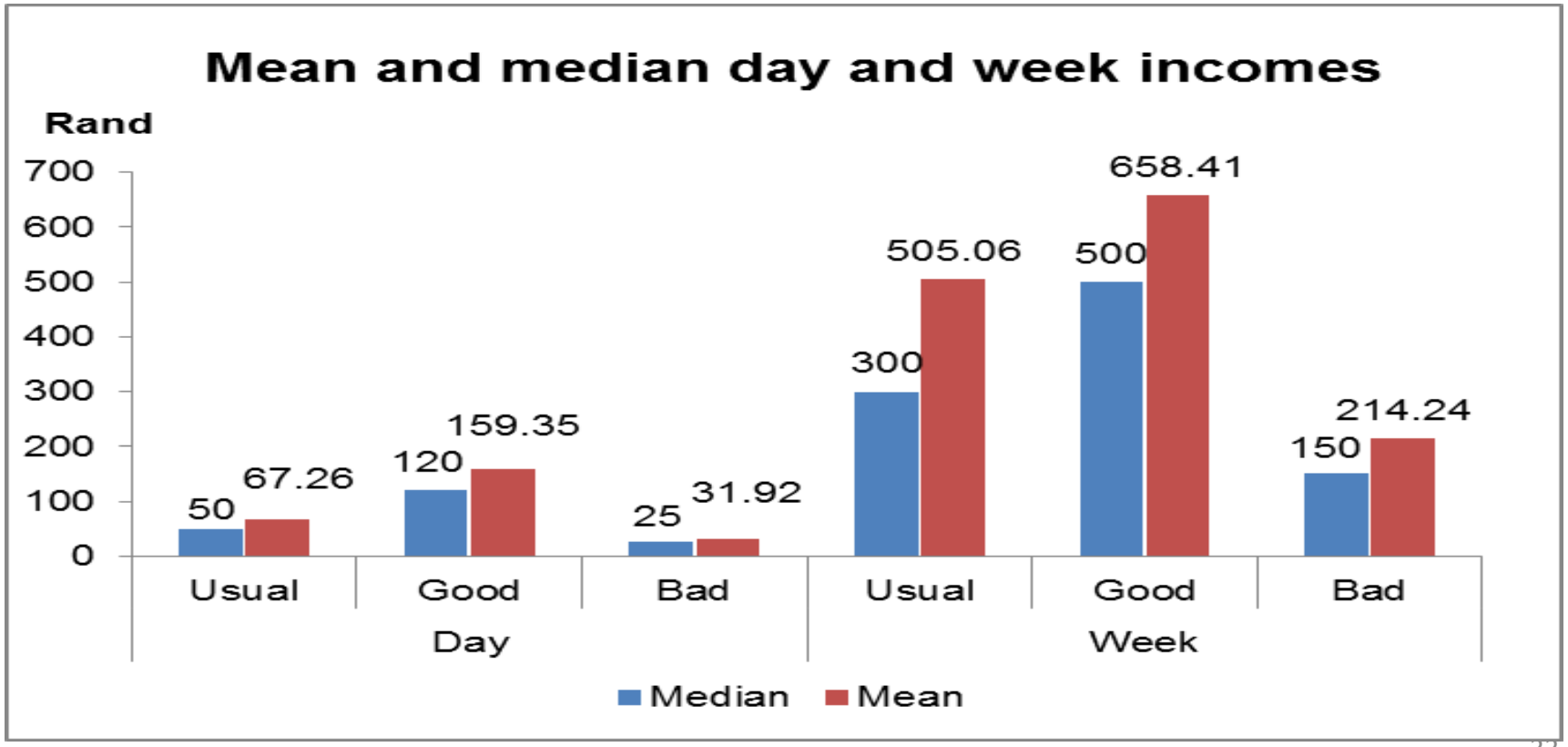
UNIVERSITY OF JOHANNESBURG

Analysis of the SWPs' income and interpretation of the findings

- Two groups of SWPs were identified:
  - Those earning their income on the day they have collected the waste.
  - Those who store their waste and sell it weekly.
- Of the total of 873 SWPs who revealed their income, 751 reported it for a day's waste collected, while 122 reported it for a week's waste collected.
- Data was collected for 3 different scenarios:
  - the income usually earned,
  - the income earned on a good day or week; and
  - Income earned on a bad day or week.

Descriptive analysis and interpretation of findings - Phase 1

The descriptive analysis of the income earned by SWPs **confirms the claim of low and uncertain incomes.** The average usual income earned for a day's waste is R67.29 with a median income of R50. The mean income earned for a usual week's waste is R508.79 and the median income is R300. Because of the large variance in incomes, the median income is a better indication of the incomes earned and shows that only a few street waste pickers earn high incomes.



Descriptive analysis and interpretation of findings – Phase 1

Quantity of waste - Income and city size

- There are **large differences in the incomes across cities**, but **no correlation between the income and the size of the cities.**
- Reasons: There is an interplay between factors such as the **availability of waste**, **competition for the waste**, and the **different prices paid for the different waste products**.

- More waste is available in the larger cities, but it **does not necessarily reflect in higher incomes** because the **competition** for waste is also greater in the larger cities
- Availability of waste affected by: weather conditions, holiday seasons, fashion seasons and fresh farm produce seasons.

UNIVERSITY OF JOHANNESBURG

Cities	Day (usual incme)			Week (usual income)		
	n	Mean	Median	n	Mean	Median
		(R	(R)		(R)	(R)
Bloemfontein	39	61.74	40	6	220	165
Cape Town	152	64.05	50	1	200	200
Durban	65	58.06	45	15	226.6	200
East London	36	44.58	30	-	50	50
Johannesburg	188	80.65	60	84	621.23	400
Kimberley	14	40.79	40	-	-	
Mafikeng	6	79.17	65	-	-	
Nelspruit	1	65	65	1	350	350
Pietermaritzburg	3	73.33	75	2	450	450
Polokwane	11	66.82	70	-	-	
Port Elizabeth	18	43.22	35	1	100	100
Pretoria	212	68.4	50	12	301.67	300
Upington	6	84.5	90	-	-	
Total	751	67.26	50	122	505.06	300

Income of SWPs

Large differences in the mean incomes between the cities
No relationship between the mean income and the size of the cities

Median incomes:
Day = R50
Week = R300

Reasons:

Interplay of factors such as:

- different prices paid for the different waste products
- availability of waste
- competition for the waste

More waste is available in the larger cities but will not necessarily be reflected in higher incomes because the competition for the waste is also greater

" I do not earn enough for a decent living"

" I am suffering…it is very difficult to survive."

"Sometimes there are not enough to pick up"
"Lots of competition"
"There is huge competition in the work"
"Some people living in flats and some working in certain companies started to sell the waste for themselves"

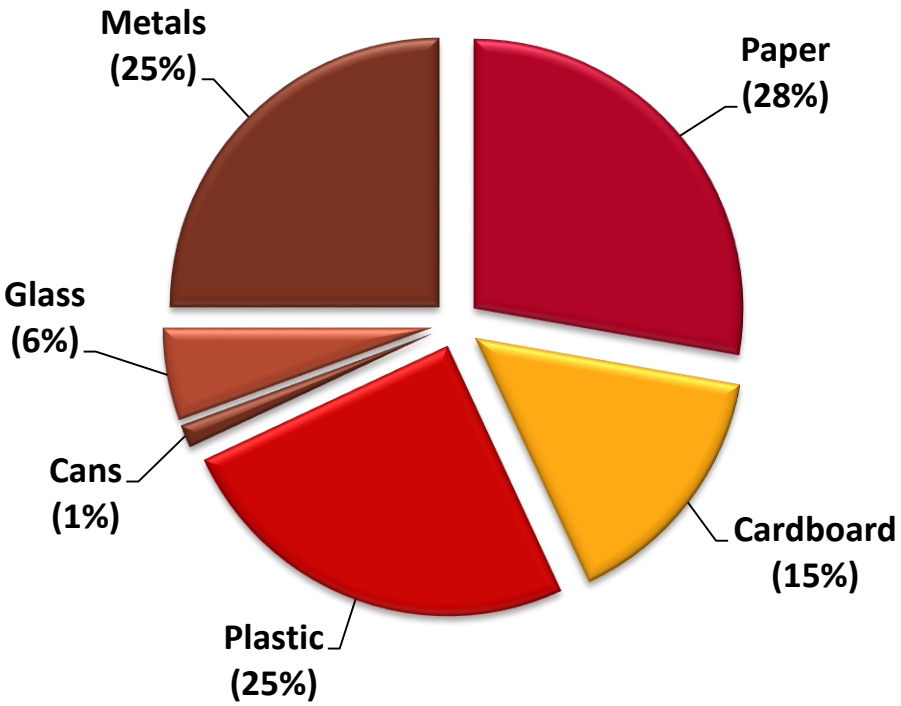
UNIVERSITY OF JOHANNESBURG

Specialising in collection one recyclable waste product

72 SWPs
specialise in one type of recyclable waste

Low levels of specialisation
higher valued recyclable products are scarce / not freely available

Product specialisation



- **Plastic earn highest mean income**
  R86.50 day / R686.43 week
- **Metal R69.06 day**
- **Cardboard R66.60 day / R350 week**

28% specialise in paper only earn mean income of R43 day / R140 week

Cans: R11 day
Glass: R20 day

UNIVERSITY OF JOHANNESBURG

Cross-sectional regression analysis

Apart from the price differences between the various recyclable waste products 8 other possible independent variables, were identified that seem to have an influence on the usual day income of street waste pickers. These variables are:

- gender;
- age;
- use of a trolley;
- duration or hours worked on a day;
- educational attainment level;
- country of origin
- the starting time of waste picking activities; and
- being married or living with a partner; and

A Cross-sectional regression analysis was performed to **assess whether and to what extent the variables identified in the descriptive analysis explain some of the income variation.**

Specification of the model:

Usualdayincome = f (Male, Age, Trolley, Duration, Education, Foreign, MarLwp, Starttime)

UNIVERSITY OF JOHANNESBURG

Variables used in the regression model and the expected signs of the coefficients

- The **usual day income was transformed to a natural log function** outliers that violate the assumption of normality is common in larger samples (Pallant, 2007:62).

Variable	Dummy variable	Continues variable	Expected sign of the coefficient
Gender	MALE		Positive
Age		AGE	Negative
Equipment used	TROLLEY		Positive
Duration		DURATION	Positive
Education level		EDUCATION	Positive
Country of origin	FOREIGN		Positive
Married or living with partner	MARLWP		Positive
Starting time		STARTTIME	Negative

Empirical results

	Model I				Model II			
	B	**Std. Error**	**t**	**Prob**	**B**	**Std. Error**	**t**	**Prob**
Constant	3.741	.282	13.285	.000	3.707	.175	21.150	.000
Male	0.273	.113	2.416	.016	.291	.111	2.614	.009
Age	-0.014	.002	-5.732	.000	-.014	.002	-6.689	.000
Trolley	0.3	.062	4.835	.000	.325	.060	5.462	.000
Duration	0.031	.013	2.419	.016	.032	.011	2.831	.005
Education	0.007	.009	0.725	.469	-	-	-	-
Foreign	0.131	.120	1.089	.277	-	-	-	-
Starting time	-0.015	.022	-.647	.518	-	-	-	-
Married/ LWP	0.074	.060	1.237	.217	-	-	-	-

Models I and II summary

	Model I	**Model II**
R	0.355	0.349
R squared	0.126	0.122
Adjusted R-squared	0.116	0.116
F	11.951	23.72
Obs	671	691
df	8	4
Prob	0.0005	0.0005
Durbin Watson	1.866	1.874

Empirical results

12.6% of the **income variance** is explained by the independent variables included in the model.

The sign of the variables that **are statistically significant**:

- **MALE** variable is **positive**, as expected
- **AGE** has a **negative** coefficient as expected
- - Strengthens the fact that the younger the SWPs are, the higher their income-earning potential.
- Might be ascribed to the physical nature of the work, which becomes more difficult as the waste pickers age.
- The findings in previous studies, which suggest that SWPs who use a trolley to collect their waste earn a higher usual day income than those using other equipment is confirmed by the **positive** coefficient for the **TROLLEY** dummy variable.
- The variable for **DURATION**, which represents the number of hours spent picking waste also has a positive coefficient, as expected. It shows that the income earned increases with the number of hours worked.

Source: Survey data

UNIVERSITY OF JOHANNESBURG

Empirical results

- **The variables that are not statistically significant:**
- The coefficients for EDUCATION, FOREIGN and MARLWP are all **positive as expected**, but none of them are statistically significant.
- The STARTTIME dummy is **negative as expected**

Therefore, all the variables' coefficients had signs which were expected, but only four variables are statistically significant, namely MALE, AGE, TROLLEY, and DURATION.

The **variable that contributes most to the variation in the income** of SWPs in this model, is the TROLLEY variable. The variable with the second highest coefficient is MALE.

A second regression model (MODEL II) were specified removing the variables that were not statistically significant in the first model. Model II explains 12.2 per cent of the variation in the usual day income. In Model II, all independent variables were statistically significant.

UNIVERSITY OF JOHANNESBURG

Enabling factors

Recognition

Policies and strategies NDP, City space, by laws, NGO, Govt **Having a Voice**	**Operational enabling factors** Access to waste, tools language Health, safety, protective clothing, education **Gaining Validity**	**Attitudinal enabling factors** Public, Business, SAPD, Metro police **Becoming Visible**

“Barriers” to employment

- Literacy
- Educational level
- Trolley (SWP)
- Access to waste (e.g. sorting at source)
- Management of Landfill
- Municipality (SWP)

Baie dankie / Thank you