

**Extended Abstract**  
***Innovative Methodologies for Censuses in the New Millennium***

**RESEARCH**  
**TO INFORM CENSUS METHODOLOGIES –**  
**THE SOUTH AFRICAN EXPERIENCE**

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Since the new political dispensation in 1994, South Africa has conducted two population censuses – one in 1996 and another in 2001. In 2002 a permanent structure to conduct population censuses was established in Statistics South Africa.

The draft Census 2011 Strategic Plan lists as a strategic objective the collection and analysis of data and information that informs decisions on population census content and methodology. A specific component, Census Research and Methodology, was created to manage this research ([www.statssa.gov.za](http://www.statssa.gov.za)). It has developed a comprehensive research programme which aims at further developing methodologies and identifying questions that need to be asked.

The research activities focus on the following four areas:

- Content research (pertinent information to be collected as well as questions to be asked);
- Research on the effects of layout and format of the questionnaire;
- Measurement of respondents' perceptions and attitudes as well as the level of satisfaction of Statistics South Africa's stakeholders;
- Business process redesign, the piloting of operations and performance measurement.

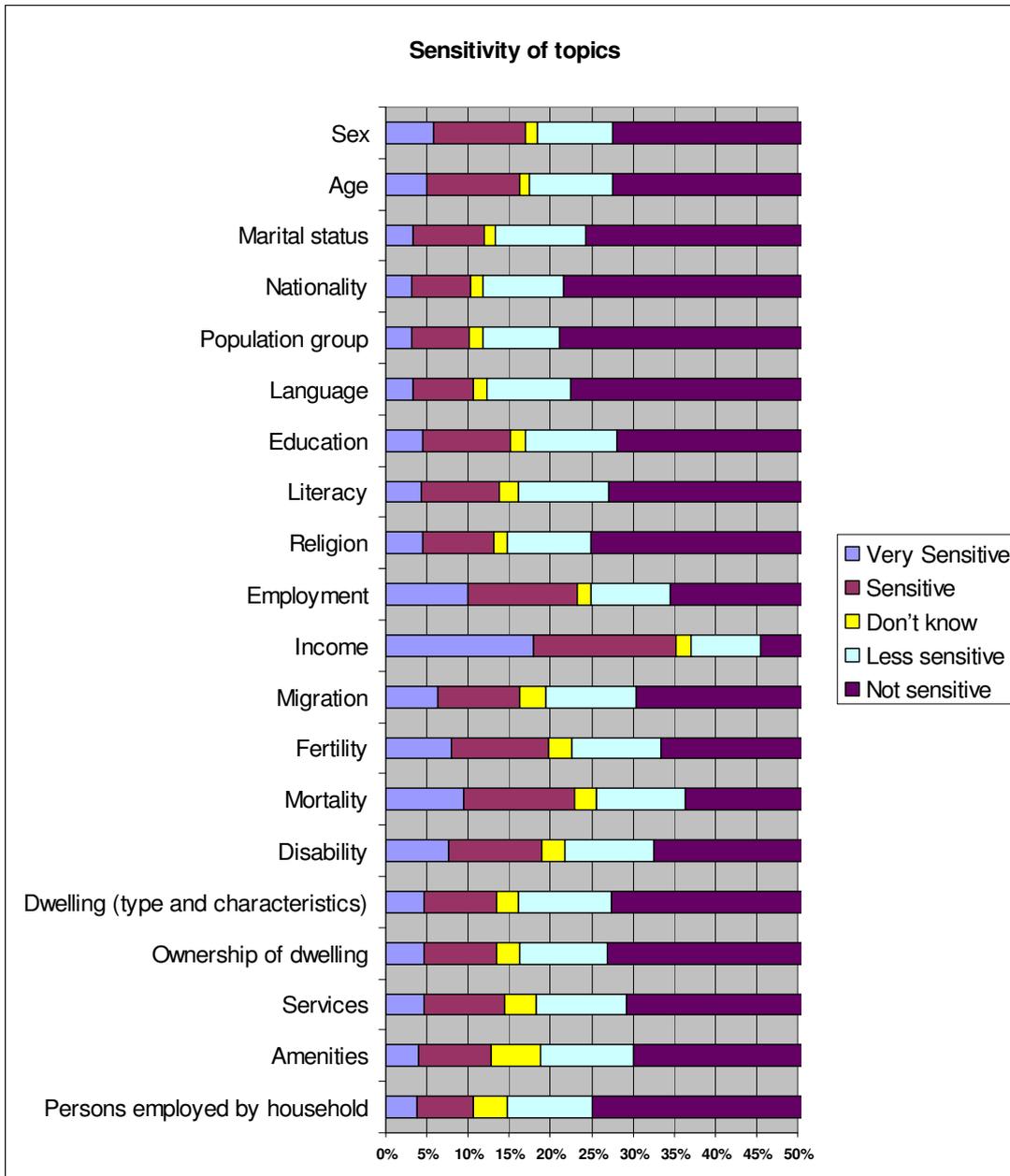
This paper serves to discuss the research which informs the methodologies utilised in the South African National Census. This will be done according to the following format:

- Literature Review
- Case Study
  - Research process followed
  - Application of research results
  - Discussion
- Conclusions

A case study will be focused on to illustrate the results of the methodologies used thus far by Statistics South Africa to demonstrate the benefits of content research. This will focus content research with regard to the disability schedule of questions. A case study is useful in that it will portray how research is being conducted to improve on questions used in the Census.

The problems encountered in conducting census research will be discussed with reference to the complex social context of South Africa. For example, with 11 official languages and a multitude of cultural groups, census content has to be sensitive to different interpretations. Furthermore, census research has indicated major challenges with regard to publicity. **Figure 1** illustrates the high level of sensitivity attached by respondents to several core census topics.

Figure 1: Sensitivity of census topic<sup>1</sup>



Furthermore, **Model 1** indicates that Coloureds, Indians/Asians and Whites show a higher relative risk than to Black Africans to find income a sensitive topic, as do respondents with Grade 12 (Matric) or some other post-school qualification relative to respondents with no education or some primary education.

<sup>1</sup> Report on Census Publicity Research Study, FEBRUARY/MARCH 2005; page 16. [www.statssa.gov.za](http://www.statssa.gov.za)

Model 1 – Sensitivity of income as a census topic<sup>2</sup>

<b>Question to the respondents:</b>		Respondents may find certain topics that are covered in a census form sensitive. How sensitive do you personally rate the following topics? Income		
<b>Definition of dichotomous variable:</b>		Very sensitive or sensitive →1 Less sensitive or not sensitive →0		
<b>Respondent's Background</b>		<b>Odds Ratio</b>	<b>95% Confidence Interval</b>	
<b>Age</b>	35-54 years	.8360597	.7464031	.9364857
	55+ years	.7384514	.6388877	.853531
<b>Sex</b>	Female	.9103813	.8250753	1.004507
	<b>Population group</b>	Coloured	1.285078	1.087464
<b>Level of Education</b>	Indian/Asian	1.406657	1.038584	1.905175
	White	1.308683	1.06878	1.602436
	Primary/some high school	1.159737	1.013285	1.327357
<b>Living Standard Measure</b>	Matric/Other	1.483782	1.265685	1.73946
	LSM 4-6	1.215468	1.079481	1.368586
	LSM 7+	1.343563	1.101969	1.638125
<b>Reference groups:</b>		16-34 Years old Males Black African No education/some primary LSM 1-3		
<b>Sample size</b>		7469		

In the last year the content research focused on the schedule of questions that pertain to the measurement of disability. A disability schedule that was developed by the UN Washington Group on Disability Statistics served as a basis for investigation. The study consisted of two phases – a qualitative phase that consisted of a series of 26 focus groups to identify issues in the measurement of disability, followed by a survey that further investigated these issues and tested a revised schedule, the development of which was informed by the results of the focus group discussions.

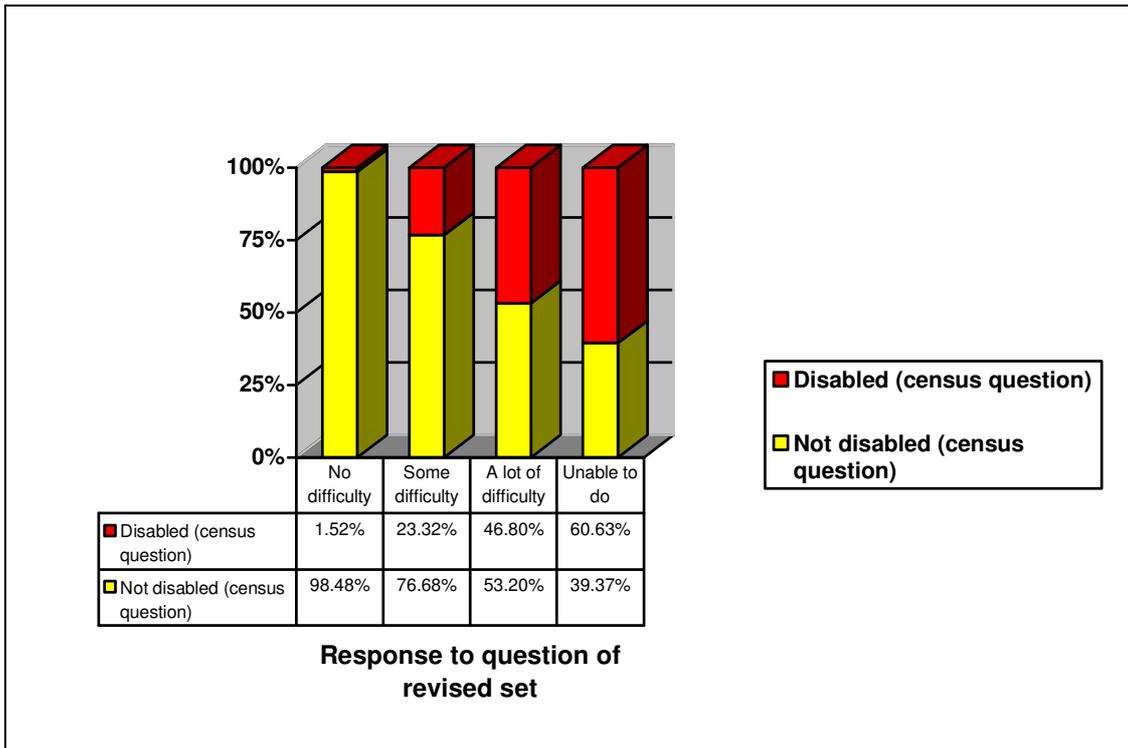
The quantitative phase was also preceded by the consultation of several Government Departments such as the Department of Education, the Department of Labour and the Department of Social Development, who have a direct interest in the disability sector. The major player in the non-governmental sector, the *Disabled People South Africa*, was also consulted. Through this process of consultation, Statistics South Africa tried to obtain support of the process of content research from all the major stakeholders before user consultation on content starts.

Of note in the Census 2001 question was the inclusion of the words “*serious disability that prevents participation*” and the use of binary response options “*Yes*” and “*No*”. A person was classified as disabled if they said “*Yes*” to one or more of the impairment categories listed. The revised set comprised two parts: the first part asked about activity limitations (functioning) and the second part asked about use of assistive devices. The questions on activity limitations allowed for the calculation

<sup>2</sup> Report on Census Publicity Research Study, February/March 2005; page 28. [www.statssa.gov.za](http://www.statssa.gov.za)

of endorsement rates by the following categories: no difficulty; some difficulty; a lot of difficulty; and unable to do. Analysis of the survey data has shown that the revised set measured a much broader notion of disability than that measured by the Census 2001 question. The revised set counted the number of people with difficulties in doing a range of activities and did not focus only on people who self-identified or were identified by their household respondent as “disabled” as illustrated in **Figure 2**.

**Figure 2: Responses for revised set of disability questions compared to the Census 2001 question**



The revised set results in a much higher estimate of disability than the Census 2001 question. It results in more than one estimate reflecting different degrees of difficulty. These different estimates can be used to provide estimates for different purposes. The estimate of people with a high degree of difficulty (“*A lot of difficulty*” or “*Unable to do*”) reflects the number of people who are in need of services such as social assistance, welfare, health, reasonable accommodation at work and inclusive education, a facilitating social and attitudinal environment, and who are more likely to experience significant disadvantage due to their difficulty. The estimate of the population having any degree of difficulty (including a high percentage having only “*Some difficulty*” on one or more activities), should be used to estimate population functioning for purposes of monitoring, for example, health prevention interventions and provision of curative health services. The estimate of people with “*Some difficulty*” provides an indication of the number of people who are likely to benefit from some form of preventive and curative health care services and who do not require the services listed above for people with “*A lot of difficulty*” or who are “*Unable to do*” various activities. Thus, the use of the revised set requires good understanding on the part of data users as to the interpretation of the different estimates.