URBANIZATION RESEARCH IN SOUTH AFRICA: PRIORITIES FOR THE 1990s

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Report SD-3

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ACKNOWLEDGEMENTS

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EKSERP

'n Delphi-studie begin wanneer 'n klein groepie monitors (drie in hierdie geval) 'n vraelys vir 'n groter groep respondente ontwerp. Nadat die vraelys terugontvang is, som die moniteringspan die resultate van die eerste rondte op en bereken die sentrale waardes en die verspreiding van die response rondom die sentrale waardes. 'n Nuwe vraelys word dan ontwerp. Die respondente word ten minste een kans gegun om hul oorspronklike antwoorde (waar nodig) in die lig van die algemene respons van die hele groep te heroorweeg. Diegene wie se menings steeds grootliks verskil van die meerderheid word versoek om hul uiterste standpunte te motiveer. Hulle word weer die geleentheid gebied om hul vroeëre mening te heroorweeg. Die proses word herhaal totdat konsensus bereik word.

Hierdie studie toon die prioriteite van navorsing oor verstedeliking in Suid-Afrika soos bepaal deur 'n groep mense wat op verskeie gebiede by verstedeliking betrokke is, hetsy in die openbare of private sektor of nie-regerings-/ gemeenskapsorganisasie (NGO's) of as akademici en navorsers aan universiteite en navorsingsinstansies.

Die 77 items van die vraelys is aan 'n faktorontleding onderwerp, en die navorsingsprioriteite van die sewe faktore wat uitgesonder is, is daarna vasgestel.

Die uitslag van die voorkeurbepaling van die sewe faktore is:

1. Stedelike/ Metropolitaanse beplanning en dienste (wat behuising, infrastruktuur en ekonomiese akkommodasie insluit).
2. Gevolge van die afskaffing van apartheidswetgewing.
3. Probleme wat ervaar word deur die armes en die mense wat onlangs in-migreer het.
4. Landelike en streeksontwikkeling (wat trekarbeid insluit).
5. Die verstedelikingsproses (wat migrasie en vestigingsprosesse insluit).
6. Ekonomiese ontwikkeling en akkommodasiestrategieë.
7. Landelike-stedelike verskille en die posisie van plaaslike regerings in die verstedelikingsproses.

ABSTRACT

A Delphi study begins when a small monitor team (consisting of three members in this case) designs a questionnaire for larger respondent groups. After the questionnaire has been returned, the team summarizes the results of the first round and calculates the central trend and a measure of dispersion of the responses. A new questionnaire is then designed. The respondents are then given at least one chance to reconsider their original replies (where necessary) in the light of the overall responses given by others. Those individuals whose opinions continue to differ greatly from those of the majority are asked to motivate their extreme position. They are again given an opportunity to reconsider an earlier opinion. This process is continued until consensus is reached.

This study shows the priorities of urbanization research in South Africa, as determined by a panel of people involved in various fields of urbanization, whether from the public or private sector or non-governmental/community organizations (NGOs) or as academics and researchers at universities and research institutions.

A factor analysis of the 77 items included in the analysis was undertaken, and the research priorities for the seven factors that were identified, have subsequently been determined.

The results of the prioritization in terms of these seven factors are the following:

1. Urban/Metropolitan planning and services (including housing, infrastructure and economic accommodation).
2. Effects of the scrapping of apartheid legislation.
3. Problems experienced by recent in-migrants and the poor.
4. Rural and regional development (including migrant labour).
5. The process of urbanization (including migration and settlement processes).
6. Economic development and accommodationist strategies.
7. Rural-urban differences and the position of local governments in the urbanization process.

INTRODUCTION: THE DELPHI PROCESS

Historical overview of the Delphi technique

The technique takes its name from the ancient city of Delphi where the Greek god, Apollo Pythios, was renowned for his ability to predict the future (Goodman 1987: 729).

The Delphi technique originated at the RAND Corporation in Santa Monica (California) in the late 1940s as a method for eliciting expert opinion (Sackman 1974: iii). According to Preble (1983: 76), the early use of the Delphi technique was on problems of a military nature. Because of the possible military application of the technique, it was kept a secret until the mid-1950s (Rieger 1986: 196).

According to Rabiega (1982: 72) the original format of the Delphi technique as developed by the RAND Corporation involved surveying a panel of seven to ten members to derive a forecast under question. These panels were normally convenient samples of experts rather than a random sample and none of the panellists knew the identities of others in the group.

After the declassification of Delphi by the US military, several documents were published by the RAND Corporation. During this period, i.e. the mid-1950s to the mid-1960s, the names R.C. Amsler, B. Brown, N.C. Dalkey, T. Gordon, O. Helmer and A. Kaplan became prominent in the literature on Delphi. Up until this time, Delphi was clearly full of problematic issues and potentially serious flaws with the result that it was treated with caution and a degree of scepticism, even by its RAND originators (Sackman 1974: 65).

From the mid-1960s to the mid-1970s many documents on the Delphi technique were published. According to Dalkey (1969: 15) and Sackman (1974: 65) the 1964 RAND Corporation publication of T. Gordon & O. Helmer entitled *Report on a long-range forecasting study* launched the Delphi technique into international prominence.

SUBSEQUENT RESEARCH

Since Delphi's inception some 42 years ago, the RAND Corporation has conducted a large number of Delphi experiments. In addition, literally hundreds of studies have been conducted and published by major corporations, governments and academic institutions in the United States of America, the USSR, Europe and the Far East.

The Delphi method has been used in various types of applications.

It has been used in the fields of forecasting and planning (Dalkey 1968; Adams 1980; Pelton 1981; Baldwin 1982; Spinelli 1983; Cicarelli 1984; Preble 1984; Murray & Jarman 1987; Heath, Neimeyer & Pedersen 1988; Koskiala & Huhtanen 1989).

Delphi has also been applied in the assessment of potential impact (Wright 1982; Cavalli-Sforza & Ortolano 1984; Richey, Mar & Horner 1985a; Richey, Mar & Horner 1985b; Stocks 1990).

The technique itself has also been subject to evaluation by researchers from different disciplinary perspectives.

The psychological processes involved in the individual's responses to the Delphi method have been studied (Bardecki 1984). This study examined two aspects of these processes, namely the basis for changing opinions and the factors related to continued participation in subsequent rounds. It was found that increasing dissonance in general would lead to a reduction in response stability and in higher drop-out rates. The author postulated that these different responses may be related to the level of ego involvement in the study. In terms of the belief balance of respon-

dents, the results of this study suggest that those who believe in the subject of the study are likely to remain in the study while those who have neutral views are more likely to drop out.

Little substantive work has however been done on the accuracy of Delphi in making long-range forecasts (Parenté et al. 1984). A study conducted by Walter Riggs (1983) at Georgia State University concluded that the technique outperforms other similar methods on the basis of accuracy for long-range forecasting.

Characteristics of the Delphi technique

According to the literature, there are three major features which characterize the Delphi technique and distinguish it from other group decision-making processes.

Several authors have regarded the anonymity of responses as a major characteristic of the Delphi process (Charlton et al. 1981: 228; Corotis, Fox & Harris 1981: 1095; Shefer & Stroumsa 1981: 267; Baumann, Ervin & Reynolds 1982: 721; Bond & Bond 1982: 567; Nagy, Frable & Murphy et al. 1982: 224).

Anonymity is achieved in various ways. The respondents taking part in the process are not informed of the source of individual responses. Often the identity of participants may also be concealed from one another to prevent some respondents from matching the response to the respondent. Anonymity eliminates to a large extent the unwillingness to contradict superiors or respected individuals, as well as the unwillingness some panellist may have to abandon a publicly expressed opinion. Because the questionnaire is usually administered by mail, the panellists do not meet each other or discuss issues face to face, but correspond (by mail) with the monitor team (Rabiega 1982: 72; Miller & Cuff 1986: 332) This eliminates the undesirable effects of bias introduced by personalities (Matheson 1982: 29) and domination by influential individuals (Charlton et al. 1981: 228). In some cases it may also avoid group pressures of the majority forcing agreement on the minority (Garde & Patel 1985: 74).

The second characteristic, which was introduced in 1953 by Dalkey and Helmer, is that of multiple iteration and controlled feedback of individual responses between rounds (Dalkey et al. 1970: 1; Shefer & Stroumsa 1981: 267; Baumann, Ervin & Reynolds 1982: 721) with the possibility of adjustment of opinion (Nagy et al. 1982: 224).

The Delphi method involves multiple iterations until consensus is reached (Riggs 1983: 90) or until the monitor team is satisfied that further iterations "would not yield a closer approximation of the 'true' value" (Baumann, Ervin & Reynolds 1982: 721). These iterations are important because they allow the monitor team to explore areas of disagreement as well as to evaluate the underlying reasons for these disagreements (Richey et al. 1985a: 137). It should, however, be pointed out that "consensus" does not necessarily imply total agreement among the panel of experts.

A third characteristic is the statistical analyses of results (Nagy et al. 1982: 224) which usually involve measures of central tendency and a measure of dispersion, or perhaps the entire frequency distribution of responses for each item (Sackman 1974: 7).

Basic philosophy

The Delphi technique is a data-collecting procedure that is an almost pure example of a method based on what is known as Lockean philosophy. Basic to this philosophy is the lack of formal analytical truths or theory and a complete reliance on empirical data to determine the validity (Corotis, Fox & Harris 1981: 1096).

According to Corotis, Fox and Harris (1981: 1098) the process of iteration and feedback which can be repeated as many times as needed, is consistent with the Lockean philosophy of achieving convergence of group consensus.

In conducting a Delphi study, a monitor team typically designs a questionnaire to be administered to a panel of experts. (In our study, "experts" were defined as persons with a high degree of knowledge, experience or interest in areas related to urbanization.)

The monitor team plays an important role in the application of the Delphi technique. According to Richey et al. (1985a: 138) there are three important functions that the monitor team must perform to allow for the successful application of the technique:

- Identify potential panel members.

- Convince potential members to join the Delphi panel.

- Provide feedback of relevant information to panellists at various points throughout the implementation stage.

Feedback is very important in the Delphi procedure. Dalkey (1969) reports on a series of experiments conducted at RAND that were designed to compare face-to-face discussion with the controlled feedback interaction and evaluate controlled feedback as a technique of improving group estimates. Although Dalkey's experiments did not produce conclusive results, they did indicate that, more often than not, face-to-face discussions tended to make group estimates less accurate, whereas, more often than not, anonymous controlled feedback procedures made group estimates more accurate. Although valuable insights were gained into the nature of the group information process, Dalkey found no significant influence on the final estimate when justifications for numerical responses were included in the feedback. Dalkey (1969) also experimented with asking one major question and several others related to that one major question. The results indicated that some additional questions improved accuracy somewhat. It should however be pointed out that these results were indecisive.

Delphi: a critique

In the mid-1970s there was a severe attack on the Delphi technique. Although Delphi was questioned prior to the Sackman critique in 1974 (Rieger 1986: 196), Sackman's attack was unique in that it came from the RAND Corporation itself and presented a critique on the *entire* Delphi technique.

Apart from perhaps the 1972 publication of W. Timothy Weaver entitled *Delphi: a critical review*, Sackman (1974) and Goodman (1987) have probably contributed most to the extensive critical review of Delphi. Sackman (1974:32) lists ten important issues to be considered when evaluating conventional Delphi.

- Is the concept expert and its claim to represent valid expert opinion, scientifically tenable, or is it overstated?

- Are Delphi claims of the superiority of group over individual opinion, and the superiority to remote and private opinion over face-to-face encounter, meaningful and valid generalizations?

- Is consensus authentic?

- Are questions, particularly forecasting questions, precise and meaningful?

- Are responses precise and unambiguous?

- Are results meaningful and unambiguous?

- Is Delphi concerned with coherent predictions, analyses, or forecasts of operationally defined and systematically studied events or behaviours, or is it primarily concerned with instant unconsidered responses of polled individuals?

- Does anonymity reinforce scientific accountability or unaccountability in method and findings?

- Does the technique systematically encourage or discourage the adversary process and exploratory thinking?

- Does Delphi represent a critical tradition or is it uncritically isolated from the mainstream of scientific questionnaire development and behavioural experimentation, and does Delphi set a desirable or undesirable precedent for interdisciplinary science in the professional planning and policy studies communities?

In the sections that follows, some of these questions will be dealt with in greater detail.

DELPHI EXPERTS

According to Sackman (1974: 33), the Delphi monitor team is often tempted to select panellists they know or colleagues recommended by acquaintances. Because such a selection is easier and faster, it therefore also has a much lower drop-out rate. The sample of experts is also likely to include persons with similar backgrounds, interests and experiences and persons who think alike.

According to Goodman (1987: 731) the question of how an expert is defined and whether expert opinion is distinguishable from non-expert opinion, is largely unresolved.

A small study undertaken by Michael T. Bedfort in 1972 and quoted by Sackman (1974: 39), compared the opinions of housewives with experts in "communication, consumer behaviour, and sociology" in a two-round study entitled *The future of communications services at home* and found there were remarkably few differences between the forecasts of the two groups.

A more appropriate strategy would seem to be to recruit individuals who have knowledge of a particular topic and are willing to engage in discussion on it without the potential misleading title of "expert" (Goodman 1987: 732).

DELPHI CONSENSUS

The position taken by Sackman (1974: 45) is that the procedure arrives at consensus through a feedback mechanism that rewards conformity. Delphi then deliberately influences responses toward minimum dispersion of opinion in the name of consensus (Sackman 1974: 47). This is done through the presentation of measures of central tendency, particularly the median as reasoned consensus. However, by the time the study reaches the third or fourth rounds, respondents, and even the die-hards, may be inclined to just give in and save everybody else the trouble of yet another round of Delphi questions. Goodman (1987: 733) also highlighted this problem and comments that it is not only insufficient to imply consensus with the mean or median, but it is also potentially misleading.

From another viewpoint, Delphi consensus is also suspect. Sackman (1974: 49) argued that when first-round items are accompanied by statistical feedback, the items are different. Rewording of a questionnaire item can change the item substantially. Against this background Sackman (1974: 49) asks whether Delphi feedback changes questionnaire items in an uncontrolled and unknown way. Consensus then becomes unachievable because the questionnaire items cannot be compared from round to round.

DELPHI RESPONSES

Sackman (1974: 53), in his critique on Delphi, comments that responses tend to represent stereotyped thinking. Panellists comment; "This is here already" or "No one cares", etc. When placed in a situation where they are regarded as experts and expected to provide quick answers to sometimes complicated issues, most people are likely to resort to stereotypes.

ANONYMITY

According to Goodman (1987: 730), anonymity may lead to a lack of accountability. Sackman (1974) suggests that anonymity may also encourage instant unconsidered responses because a respondent is not answerable to other participants for what she or he has said.

The Delphi critique: a response

The following generalizations are indicated:

- In this study the individuals that participated were recruited on the basis of their knowledge of and interest in the subject as well as their willingness to participate in the project. This knowledge of and interest in the subject probably largely eliminated the likelihood of instant and unconsidered responses. The panel members for this study also came from vastly different backgrounds and had very different ideological perspectives, showing that there was **no** attempt on the part of the monitor team to include people who were fairly "similar" and

would "think alike". This study also steered clear of the concept of "experts" and therefore met Goodman's requirements.

- With regard to stereotypical responses it should be pointed out here that there were few in this study, and even where they did occur, they probably reflected a strong belief, for instance in the case of the response "enough research has already been done on the subject". "Stereotypical" responses of this nature did not warrant any undue concern on the part of the monitor team.

- Anonymity and therefore lack of accountability certainly is a potential problem but this was probably overcome to some extent by making the initial list of respondents known and showing the distribution of participants in the subsequent round.

- The issue of "forced consensus" is referred to again later (see "Treatment of deviations from the first-round means" on page 8), but suffice it to state here that consensus was not really forced upon the panel members for this study.

The use of the Delphi method in research prioritization

INTRODUCTION

There are several extensions and modifications of the Delphi technique. One such modification is known as cross-impact analysis. Cross-impact analysis takes into account the impact of the one event on subsequent events when several events are interrelated. (In Enzer (1972) more detailed information is provided on cross-impact analysis.) SEER (System for Event Evaluation and Review) is another such modification. SEER establishes an initial list of forecasts that have been constructed through interview prior to the beginning of the Delphi study (Riggs 1983: 91).

The potential of cross-impact analysis was considered for the purpose of our study, but an investigation undertaken by the HSRC's former Institute for Statistical Research indicated that it may not be worth the additional effort.

AIMS

The general aim of this study was to bring together individuals from different backgrounds and engage them in an investigation to determine

- the prioritization of urbanization research for the 1990s;

- the contribution that research can make to the understanding of urbanization and related processes and to the solving of problems in this regard.

RATIONALE FOR SELECTING DELPHI

The monitor team generated a list of advantages of Delphi in the review of the related literature. The advantages of Delphi, at least in the monitor team's estimation, were concerned with the low cost, ease of administration, the simplicity of the method, and the minimal time and effort on the part of the panellists.

METHODOLOGY AND DESIGN OF THE DELPHI EXERCISE ON RESEARCH PRIORITIES

Introduction

The Delphi design was slightly adapted to suit our needs for this specific study. We did not wish to make any predictions for the future, although we wanted the panel to reach consensus on the urgency of a range of possible research themes on urbanization.

To initiate the Delphi exercise, a list of 195 names was drawn up. These individuals formed the potential Delphi panel and were chosen on the grounds of their involvement in issues surrounding urbanization. These issues were in the fields of research, administration, politics or planning.[1]

A series of three questionnaires was mailed to each panel member with instructions to return the completed instrument to the monitor team within a specified time.[2] Following each specific questionnaire, brief summaries of the previous round were compiled and presented in successive rounds.

It was decided to calculate the arithmetic means (averages) for the various responses instead of the medians (central values), modes (most frequent values), etc. The following are a few of the reasons why the mean was preferred:

- Unlike the median, the mean takes into account extreme-value responses (e.g. 1 or 7 on a seven-point continuum).

- The mean is uniquely defined (unlike the mode that may have two or more values in a multi-modal distribution).

- The mean readily lends itself to statistical analyses such as confidence intervals, and there-fore allows more definitive conclusions to be made about the order of priority.

The monitor team decided that the "acceptable level of consensus" would be reached when the 95 % confidence interval for any particular theme did not extend beyond one integer value on the seven-point continuum used.

Round 1

A questionnaire was sent to each of the persons on the initial list of potential panel members, and they were asked to suggest more themes and also to nominate (with reasons) other people not appearing on the list that should be considered for inclusion in the panel.

No monetary compensation was offered to the panellists as incentive for participation. Panellists were told that they would receive full documentation of the research findings including a report which was anticipated to be the ultimate product resulting from the project.

In the first round, the question on how soon research was required was asked and a total of 58 items (mostly the themes suggested by Kok & Gelderblom 1989: 236 - 245) were listed on a seven-point continuum, ranging from "never" (1) to "immediately" (7). A separate form was in-

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[1]   Appendix B lists the names of those panel members who participated in the second round of the investigation and who had no objection to their names being published.

[2]   The questionnaires for Round 1 were sent out on 17 November 1989, while those for the second and third rounds were dispatched on 1 February and 18 May 1990 respectively.

cluded on which the panellists could comment on the items and propose any new themes that may be included in the questionnaire for the second round.

Of the 195 questionnaires sent out for the first round, 110 were returned. This means that a response rate of 56,4 % was obtained, which was regarded by the monitor team as sufficiently satisfactory.

All groups in society were not equally represented, the most conspicuous underrepresentation being that of women (11 % of the responses in the first round). Although it was feared that the responses might have been biased, no statistically significant differences between the responses of men and women were found.

Round 2

The questionnaire for the second round was sent to 141 persons, being the respondents of the first round plus the additional nominees who were willing to participate.

REFORMULATING THE POTENTIAL RESEARCH THEMES

Based on the feedback received from the first round, the monitor team then extended the questionnaire to 77 items. (The items of the extended questionnaire are included in Appendix A with the newly added items indicated with asterisks.)

Taking the recommendations of the panellists into account, a few slight changes in the wording of some of the items were made between Rounds 1 and 2:

- The two items concerning the circumstances of populations subjected to possible incorporation into the homelands and those populations subjected to possible resettlement, were extended to include the phrase "not implying support for the homeland policy / resettlement actions".

- The item on the position/problems of recent female urban in-migrants was changed from "the position/problems of women in urbanization and migration".

- In the second-round questionnaire the item "the need to develop the necessary expertise on accommodating strategies for urbanization" was extended to include "and to identify specific target groups for this purpose".

- Some of the respondents had a problem with the term "homelands" and this was changed to "homelands / Bantustans / national states".

- The item on the availability of suitable land for black housing in the metropoles was changed to "low-income housing".

- The item on financing / subsidizing of housing and the acquisition of funds for this purpose was extended to include "housing and related infrastructure".

- In the item on local governments' access to resources the words "financial, human, etc." were added.

Many of the 77 potential research themes that were studied here had been developed earlier in the research by Kok & Gelderblom (1989). To avoid a biased perspective, the respondents in this study were requested to comment on the themes and to add others which they thought needed to be considered as well. The respondents reacted favourably to this request and a number of themes were added to the original list while a few were removed after the comments of the respondents had been considered. It can therefore be safely said that bias was removed in the choice of potential research themes.

The problem remains, however, that the selected themes represent the perceptions of those concerned *during 1990*, and will therefore not necessarily reflect the opinions of the same persons a few years ahead. Nevertheless this is a general shortcoming of prioritization which can only be overcome by relatively frequent repetitions.

RESPONSE RATE

Of the 141 questionnaires sent out, 114 were returned, giving a response rate of 80,9 % for the second round. (Appendix B lists the 87 panel members who gave permission to be identified.)[3]

TREATMENT OF DEVIATIONS FROM THE FIRST-ROUND MEANS

In the second round respondents were given their own first-round response and the mean for each item, and asked to reconsider their earlier response. If they decided to deviate more than one from the mean, or give one of the extreme values (a one or a seven), a clear reason was required of them.

The criteria that had been agreed upon by the monitor team to decide which reasons to accept, were the following:

- The reason had to be *relevant* to the theme dealt with by the particular item.

- *Comparisons between themes* were not accepted as valid reasons *unless* these were accompanied by a further (acceptable) motivating statement.

- The reason had to be relevant to the *urgency of research on the theme* and **not** *to the importance of the theme* as such.

A few of the respondents pointed out for some items that the subject was most important, but that research was not required. The importance of those themes had been realized earlier and a low priority thus indicated prior research attention rather than a lack of importance. (These comments compelled the monitor team to undertake Round 3, in order to establish the research priorities by taking into account not only the **urgency** of research but the **applicability or relevance** of such research as well.)

The reasons indicated by panel members were grouped into 173 categories. For the purpose of this report, however, a further grouping into six categories was made, namely those reasons that

- were generally applicable,
- concerned housing, availability of land and services,
- concerned management, policy-making, planning and community involvement,
- addressed economic issues,
- addressed social issues,
- concerned agricultural, rural and regional development.

1. The first category (i.e. those reasons that could be applied generally), consisted of nine motivational groupings, with four associated with a *lower* priority. These included statements like "enough research has been done", it was "too early to get into this field" and the fact that the respondent was not knowledgeable about or interested in a specific theme. The respondents who indicated a *higher* priority concentrated mainly on the fact that not enough research was being done, that that which had been done was inaccessible or not practically applied, and that research should adapt to the multidimensional facets of problems.

2. Of the category of reasons concerned with housing and the availability of land and services, only three of the 21 were related to a *lower* priority. On the issue of perceptions of more privileged groups on informal settlements in their vicinity, one respondent thought that co-operation was more important than perceptions, while another was of the opinion that the issue of self-build housing schemes might be overrated. Those reasons that accompanied a rating of *greater urgency* concentrated on the scarcity of available land for housing and services, the backlog in housing provision and services (both physical and social) and the needs of the lower socio-economic groups in this respect. (On the final priority list, the urgency of these themes figured strongly among those themes identified to be most urgently awaiting new or further research.)

3. In the category dealing with management, policy-making, planning and community involvement, 48 motivational categories were included. Those associated with a *lower* priority dealt

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mainly with the fact that a certain paternalism or apartheid approach would be phased out, especially in connection with homeland policy and resettlements. The motivational categories that implied a *higher* priority dealt with the importance of the legitimacy and democratization of local governments (accompanied by community involvement). Training for local government officials was also regarded as requiring urgent research attention. The need for research to develop a set of appropriate and affordable planning standards relevant for developing areas was stressed, especially with regard to the fact that limited financial resources had to be utilized to the maximum benefit of the total population. Urbanization in an "orderly" way was considered necessary by some respondents and the importance of urban management and control was thus stressed.

4. In the category dealing with economic issues, 34 reasons were indicated. Only five of these reasons were associated with *lower* priorities. Three of these were concerned with the irrelevance and unimportance of comparing capitalist and socialist approaches. The urgency for research on issues such as transport subsidies, the affordability of housing and services, promoting of the informal sector and job creation programmes eventually featured high on the final list of research priorities.

5. The fifth category comprised those reasons that were concerned with social issues. Twenty-four of the 26 reasons stressed the urgency of these issues, which include the provision of services / facilities for the poor, problems of stress connected with rapid urbanization, unrest and instability and sociopsychological issues. The problem that group cohesion was being destroyed by resettlement was also raised.

6. The last category concerns agricultural, regional and rural development. Only a minority stated that agriculture was not a priority for urbanization research, while a large number of respondents stated that the importance of promoting agriculture and the development of rural areas was imperative in creating jobs for the poor. The issue of land reform was also seen as crucial in a new South Africa.

As can be seen in the discussion of the reasons, the respondents were not forced into consensus and the vast majority of panel members indicated valid and specific reasons for their choice relating to the urgency (or not) of particular research themes.

THE REACHING OF CONSENSUS

Consensus was easily reached on all the items in the second round. After analysing the responses, it was found that the widths of the 95 % confidence intervals were *in no case* more than 0,6 on the seven-point continuum.

CONVERGENCE ANALYSIS

The degree of convergence that led to the reaching of consensus between Round 1 and Round 2 was also analyzed.

The means of the second round were used as the basis of the convergence analysis. The absolute differences between the first-round responses and the second-round means were compared with the absolute differences between the second-round responses and the second-round means. The calculations were done only for those items that were included in both the first and second rounds. (The items where the wording was changed, were also excluded.)

Items with a mean difference of less than 0,25 were regarded as already having shown a high level of consensus from the start. These items were "migration motivation/reasons or motives for migration", "migration types and patterns of stepwise migration", "industrial decentralization and its role in regional development (including its cost efficiency)", "integrated urban-rural development" and "local governments' representativeness and legitimacy".

Between Round 1 and Round 2 seven items had differences above 0,45 (on average), which was assumed to be a useful criterion to show that a great deal of convergence had been achieved after the first round. These items were "planning standards and the costs of urban infrastructures (particularly with respect to poorer communities)", "migrant labour: causes, nature, problems and future trends", "implications of the possible phasing out of transport subsidies for commuters", "the need for and affordability of physical infrastructures", "the need for and affordability of other facilities and services", "local governments' liaison with their communities, developers and other

authorities", and "evaluation of the advantages and disadvantages of capitalist and socialist approaches toward accommodating urbanization".

Even though some items showed a relatively high level of consensus from the outset, the convergence that took place between Round 1 and Round 2 was statistically significant (at the 5 % level) for all the items included in the convergence analysis. This means that the Delphi approach did in fact contribute to achieving a satisfactory level of consensus that might not otherwise have been possible. The members of the Delphi panel clearly also contributed a great deal by their willingness to take into account the views of other panel members.

Round 3

RATIONALE

After having reached consensus on the *urgency* of individual research themes, it was decided to undertake one more round to determine the "relevance" of research in respect of the individual themes. Under "Treatment of deviations from the first-round means" on page 8 and "Urgency of research: results of the Delphi exercise" on page 12 more information on the rationale for the third round is given.

INSTRUCTIONS

The respondents were asked to indicate to what extent research could contribute to addressing the issues surrounding urbanization in this country. More specifically, they were asked to consider what the potential value of research on a specific theme was to

- contribute to a better understanding of the phenomenon or problem concerned;

- provide insight into the possible solutions to the particular issue;

- succeed in convincing policy makers (within and outside official government structures) to reconsider past policies (that may have been ineffective or counterproductive) on, or to devote more attention to, the issues concerned;

- succeed in convincing planners, officials, community organizations and others concerned with the implementation of urbanization policy/strategies to adopt different approaches or actions to alleviate the specific problem, and

- contribute to providing a common base for discussion and thereby bring together the various (often opposing) actors dealing with the particular issue.

RESEARCH APPROACH

During the third round the same items as in the second round were used to measure the perceived relevance of particular research themes. However in this case a five-point scale was used. The categories of this Likert-type scale were:

1 = Not important at all / Totally unimportant
2 = Hardly (not really) important
3 = Fairly (reasonably) important
4 = Very important
5 = Extremely important / Totally indispensible

All the respondents of the second round were asked to participate in the third round as well, but not all the panel members did so. In the third round 88 of the 114 questionnaires were returned, providing a response rate of 77,2 % which was somewhat lower than in the previous round. This may perhaps be ascribed to the fact that some second-round respondents might have thought that the third round was a repetition of the second round, or it may have been that some of the respondents simply lost interest after two rounds.

ANALYSIS OF RESULTS

Owing to economic considerations, no provision had been made for a fourth or further round to ensure the reaching of consensus on the **relevance** of research. We therefore had hoped that there would be less difference of opinion on the "appropriateness" than on the "urgency" of research.

Fortunately it was found that the responses on the questionnaire items for Round 3 were sufficiently uniform to making it unnecessary, theoretically speaking, to undertake any further rounds. (The widths of the 95 % confidence intervals in respect of all 77 items were 0,48 or less, which meant that our earlier requirements for consensus were met in a single round.) Should that not have been the case, our findings would have been somewhat inconclusive.

These findings showed that, even though there would not have been an opportunity to attempt reaching consensus, it was unnecessary to be concerned: consensus was reached in Round 3 as well!

Weighting of panel responses

For the convergence analysis mentioned above (see "Convergence analysis" on page 9) and for the study of the degree of consensus reached during the first two rounds, the responses were weighted in terms of the organizational affiliation of the panel members. The weighting was done to compensate for the observed underrepresentation of representatives from the private sector and non-governmental, community organizations (NGOs). (The other two groups - or sectors - were the public sector - including politicians - and academics/researchers from universities and research institutions.) An analysis of the first-round responses showed statistically significant differences between the three groups for a number of items, and therefore it was necessary to compensate for the skewness in the distribution.

The distribution of (second-round) panel members across these three groups/sectors was as follows:

- Public sector (including political representatives): 51 (44,7 %)

- Private sector and non-governmental/community organizations (NGOs): 19 (16,7 %)

- Researchers/academics (at universities or research institutions): 44 (38,6 %)

If these three groups/sectors had been equally represented on the panel, each would have had 38 (i.e. 114/3) "representatives" on the panel. To compensate for the skewness in the "representation", the following weights were allocated to the responses of panel members from these three groups: (a) public sector: 0,745 (i.e. 38/51); (b) private sector and NGOs: 2,000 (38/19), and (c) academics/researchers: 0,864 (38/44).

For the final list of research priorities, the responses of Round 2 and Round 3 were combined and weighted according to the respondent grouping in the third round (in which 88 panel members participated). As in the case of Round 2, each sector was weighted in such a manner that the opinions of all three groups/sectors carried equal weight.

The weights used for the *final* prioritization were as follows:

- Public sector (including political representatives): 0,733 (i.e. 29,33/40)

- Private sector and non-governmental/community organizations (NGOs): 1,955 (29,33/15)

- Academics and researchers at universities and research institutions: 0,889 (29,33/33)

Calculation of the final priorities

The calculation of the final priorities was done by multiplying the second-round *mean score* of the group/sector to which a particular panellist belonged with the latter's rating for the third round. The consensus of opinion on the urgency of research on a specific theme, that was reached during the second round, was therefore combined with the third-round responses on the same theme.

RESULTS

Urgency of research: results of the Delphi exercise

As was mentioned under "The reaching of consensus" on page 9, consensus was easily reached on the relative urgency of the various research themes. In Appendix C the detailed results of this exercise are given. It should be borne in mind however that these consensus opinions do not take into account the *relevance* or *appropriateness* of research; they merely reflect the *urgency* of investigation.

The 15 themes identified as requiring the most urgent attention are the following (in priority order):

1. Job creation programmes (and income-generating activities)

2. Availability of suitable land for low-income housing in the metropoles

3. Financing/Subsidizing of housing and related infrastructures and the acquisition of funds for this purpose

4. Development of procedures for the involvement of communities, and with a view to meaningful negotiation

5. Communities' involvement in community problems, problem identification and conflict regulation

6. Affordability of housing

7. The need for and affordability of physical infrastructures

8. The need for and affordability of social infrastructures (e.g. education, vocational training and health services, and recreation, sports and cultural facilities)

9. Planning standards and the costs of urban infrastructures (particularly with respect to poorer communities)

10. The need for and affordability of other facilities and services

11. Prospects for urbanization and metropolization in South Africa

12. Self-build housing schemes

13. Population growth in rural and urban areas, and the factors affecting it

14. Housing availability and needs

15. Promoting the informal sector

As will be seen under "The individual themes: a brief discussion of the most and least important items." on page 15, some of the above themes are also seen as having the highest priority when the *relevance* of research is taken into account. Certain striking differences are found between the order of the themes discussed above and those highlighted under "The individual themes: a brief discussion of the most and least important items." on page 15.

Particularly noteworthy is the much higher relative rating given to the urgency of research on "housing availability and needs" *when the appropriateness of research is* **not** *consciously taken into account.* When the latter component is added, this item falls from 14th position to 27th position on the priority list. This shows that, although "housing availability and needs" should be investigated as a matter of relative urgency, research is not perceived to be able to contribute very much

to the solution of the problem; the solution is obviously to be found elsewhere, perhaps in the public and private sectors.

Other similar, though somewhat less accentuated differences are found in respect of the themes (a) "self-build housing schemes", which drops from the 14th position above to 24th position on the final priority list (as referred to in "The individual themes: a brief discussion of the most and least important items." on page 15), (b) "the need for and affordability of *other* facilities and services" drops from the 10th to the 22nd position, and (c) "prospects for urbanization and metropolization in South Africa" (which drops from 11th to 20th position).

From the above it should be clear that the mere "urgency" of research should not be regarded as sufficient to determine research priorities. The *potential contribution* of research toward finding solutions to the particular problem should also be taken into consideration. For this reason, the remainder of the report concentrates on the *combination* of the "urgency" and "appropriateness" of research as determined during Rounds 2 and 3 of the study.

Grouping of themes in terms of response similarities: results of a factor analysis

In an attempt to reduce the 77 items to a few logical groupings, a factor analysis was undertaken of the combined results of the last two rounds. The advantage of factor analysis is that it summarizes the response pattern over many variables by grouping those variables for which responses of most of the individual respondents are approximately the same.

In this case factor analysis helped the monitor team to group those items to which the majority of panel members gave about the same rating. The aim of this analysis was therefore merely to reduce the number of items to be discussed, with a view to providing a general overview of urbanization research priorities.

A number of panel members had inadvertently skipped certain items in the two rounds concerned and therefore some items had missing values. Furthermore a number of second-round responses for specific items were removed because the reasons given for deviations from the first-round means did not meet the requirements set by the monitor team, and this added to the number of missing values (see "Treatment of deviations from the first-round means" on page 8). Since factor analysis requires *at least* one observation for every item and because a particular observation is omitted from the factor analysis if it has one or more missing values, it was necessary to impute values to replace missing item ratings. The imputation was done here by allocating to the missing values the *mean* rating of the group/sector (i.e. public sector, private sector & NGOs or academics/researchers) to which the panel member belonged at the time of the second round.

The factor analysis that was subsequently undertaken, indicated the presence of seven factors, also known as "dimensions". (In Appendix D the results of the factor analysis are presented in detail.) A tentative interpretation (i.e. "naming") of these seven factors is the following:

- Factor 1: Urban/Metropolitan planning and services (including housing, infrastructure and economic accommodation)

- Factor 2: The process of urbanization (including migration and settlement processes)

- Factor 3: Rural and regional development (including migrant labour)

- Factor 4: Problems experienced by recent in-migrants and the poor

- Factor 5: Rural-urban differences and the position of local governments in the urbanization process[4]

- Factor 6: Effects of the scrapping of apartheid legislation

- Factor 7: Economic development and accommodationist strategies

The research priorities for these seven factors were subsequently determined. For each factor the maximum possible score was calculated by multiplying the number of items associated with a

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[4] This factor seems to reflect a grouping of responses that may perhaps be associated with either "promodernization" or "antimodernization" sentiments.

particular factor by the product of the maximum scale ratings, namely 35 (derived from the highest possible ratings of 7 and 5 for the second and third rounds respectively). The actual scores for the various factors were then calculated as proportions of the maximum possible scores (described above) and these proportions were subsequently expressed as percentages.

The results of this prioritization were the following:

1.   Factor 1: Urban / Metropolitan planning and services (including housing, infrastructure and economic accommodation). (The mean factor score was 53,5 %.)

2.   Factor 6: Effects of the scrapping of apartheid legislation. (Mean factor score: 52,2 %.)

3.   Factor 4: Problems experienced by recent in-migrants and the poor. (Mean factor score: 45,9 %.)

4.   Factor 3: Rural and regional development (including migrant labour). (Mean factor score: 44,5 %.)

5.   Factor 2: The process of urbanization (including migration and settlement processes). (Mean factor score: 42,2 %.)

6.   Factor 7: Economic development and accommodationist strategies.   (Mean factor score: 38,6 %.)

7.   Factor 5: Rural-urban differences and the position of local governments in the urbanization process. (Mean factor score: 36,1 %.)

In Table 1 a detailed description of the factor priorities for the (weighted) Delphi panel as a whole is given, as well as for the separate groups/sectors represented on the panel.

Table 1: Factor priorities for the entire Delphi panel and the three groups/sectors

Priority	Entire panel		Public sector		Private sector /NGOs		Academics/ researchers	
	Factor	Mean %	Factor	Mean %	Factor	Mean %	Factor	Mean %
1	1	53	1	56	6	53	1	56
2	6	52	6	46	1	53	6	47
3	4	46	3	41	4	47	4	46
4	3	45	5	40	3	45	2	45
5	2	42	2	39	2	42	3	42
6	7	39	4	38	7	39	5	40
7	5	36	7	38	5	35	7	38

* Factor 1: Urban/Metropolitan planning and services
 Factor 2: The process of urbanization
 Factor 3: Rural and regional development
 Factor 4: Problems experienced by recent in-migrants and the poor
 Factor 5: Rural-urban differences and the position of local government
 Factor 6: Effects of the scrapping of apartheid legislation
 Factor 7: Economic development and accommodationist strategies

■   From Table 1 it should be clear that Factor 1 (urban/metropolitan planning and services) is clearly the main priority of respondents from the public sector and of academics/researchers, while Factor 1 and Factor 6 (effects of the scrapping of apartheid legislation) are about equally important for respondents from the private sector / NGOs as well as for the Delphi panel in general who rated these two factors as having the highest priority.

■   Factor 4 (problems experienced by recent in-migrants and the poor) and Factor 3 (rural and regional development) are the factors considered to be third and fourth on the priority list for the panel in general. Factor 4 is in the third position in the case of the private sector / NGOs and the academics/researchers, but is only sixth on the priority list of panel members from the public sector.[5] Factor 3 is third on the priority list of the public sector representatives on

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[5]   This relatively low rating by public-sector panel members, compared with that of the other two groups/sectors, may be a reflection of what may be described by the liberation groups in our society as an "insensitivity" and a "lack of

the panel, and has the fourth highest priority for representatives from the private sector and NGOs. Factor 3 is, however, fifth on the priority list of the academics/researchers.

- Fifth on the overall priority list is Factor 2 (the process of urbanization), and it takes the same position on the priority lists of both the public sector and the private sector / NGOs. The academics/researchers, however, attached a somewhat higher priority to this group of items, and for them Factor 2 appears in the fourth position. (The somewhat greater emphasis placed on the *process* of urbanization by the academics and researchers can perhaps partly be explained by the perceived inadequacy of research done on the subject and by the theoretical and empirical challenges it offers for a better understanding of the phenomenon in this country.)

- In the sixth position on the overall priority list is Factor 7 (economic development and accommodationist strategies) and it occupies the same relative position on the priority list of panel members from the private sector / NGOs. Public sector representatives and academics/researchers have, however, indicated that this factor is lowest on their list of priorities.

- The lowest overall priority is given to Factor 5 (rural-urban differences and the position of local government in the urbanization process). Once again this matches the rating by panel members from the private sector / NGOs, but public sector panel members afforded this factor a much higher priority - Factor 5 appears fourth on their list of priorities. (This relatively drastic deviation from the general pattern by those in the public sector may stem from a "pro-modernization" perspective to the "problems" of urbanization. People in the private sector and NGOs and academics/researchers clearly do not share this perspective and are, generally speaking, not as convinced as the public sector panel members that urbanization should be viewed from such a perspective. See also Footnote 1.)

Research on **urban/metropolitan planning and the provision of services** and on **the effects of the scrapping of apartheid legislation and policies** (particularly with respect to group areas and homelands/reserves) are clearly perceived by this Delphi panel as having the highest priority (in both absolute and relative terms).

Next on the overall priority list is the need for research on **the problems experienced by recent urban in-migrants and the poor**, followed closely by the need for research on **rural and regional development**.

The **process of urbanization, economic development and accommodationist strategies**, and **rural-urban differences and the position of local governments** take up the last three positions on the overall priority list for the seven factors identified in this study.

The individual themes: a brief discussion of the most and least important items.

In Appendix E a complete list of the overall priorities is given.

Because of a relatively large break (0,47) between the means of the 19th and 20th items on the final priority list, the discussion of the overall priority list will concentrate mainly on the first 19 items, but the three items with the lowest priority will also be discussed. The priority listing of the three individual organizational groupings (sectors) will be discussed only where it deviates from the overall priority list.

The items having highest priority can be summarized as follows:

1. The field in which research is most urgently needed and where the respondents felt that research could help in alleviating the problem, was "job creation programmes (and income-generating activities)". (This was also the highest priority for the group from the private sector and the NGOs and the second item on the priority list for academics / researchers.) From this it is clear that the alleviating of unemployment and poverty is seen to be crucial to the future of South Africa's urbanization.

empathy" on the part of government officials and politicians "in the system" to the plight of the less privileged segments of the population.

2. The second item on the overall priority list was the "availability of suitable land for low-income housing in the metropoles". This item was first on the list for academics / researchers and second for the public sector and the private sector / NGOs. The sharp rise in squatting in the metropolitan areas in recent months, with the accompanying disputes over land, confirms that this remains a crucial issue.

3. The third item is the "affordability of housing". Escalating building costs and interest rates necessitate ongoing research in this field as about 70 % of the population in South Africa cannot afford the conventional housing provided by the private sector.

4. "Financing / subsidizing of housing and related infrastructures and the acquisition of funds for this purpose" was fourth on the overall priority list. The private sector and NGOs regarded this item as having sufficient priority to be placed in the third position, indicating the urgency of funding and subsidizing in providing for the lesser privileged as perceived by this group / sector. Some of these respondents were of the opinion that national priorities and standards will have to be adjusted to take care of this problem.

5. The fifth item on the overall priority list is "communities' involvement in community problems, problem identification and conflict regulation". The respondents from the public sector rated this item of less importance and placed it only in the 18th position, while the academics / researchers awarded this item a 16th place on the overall priority list.

6. The sixth item on the overall priority list, is "the necessity of an appropriate form of metropolitan government". This item was placed very low (in 27th position) on the priority list of the public sector. Some of the panellists commented that the present system of Regional Services Councils is an appropriate form of metropolitan government and therefore no further research is required. Nevertheless, in view of the current emphasis among non-parliamentary political groups on the "one-city" concept, the relatively high overall priority given to this theme appears to be warranted.

7. Promoting the informal sector is seventh on the overall priority list, while the academics / researchers placed it in the 17th position. Some of them commented that it may be important, but that it cannot be seen as conducive to economic development. It is rather seen as an interim arrangement for the jobless to survive until a more stable job can be acquired.

8. The next item on the overall priority list is "planning standards and the costs of urban infrastructures (particularly with respect to poorer communities)". It is interesting to see that the public sector panellists placed this item first, while those from the private sector and the NGOs rated this item as less important (by awarding only an 11th place to it). This may, to some extent, reflect a measure of disillusionment with past planning practice in South Africa in the private sector and among NGOs.

9. The ninth item, "the need for and affordability of social infrastructures (e.g. education, vocational training and health services, and recreation, sports and cultural facilities)" is a logical follow-up of the previous item. The private sector and non-governmental organizations placed this item only in the 10th place, probably as a result of the possibly implied "modernization" and "elitist" elements underlying it.

10. The item in 10th position is "land (ownership) reform in rural areas". The group from the public sector allocated a very low priority (30th position) to this item, but the other two groups allocated a much higher value to this item (eighth and ninth position). Recent developments such as claims for more agricultural land for black farmers and the imminent scrapping of the two Land Acts, seem to warrant the higher rating being afforded to this issue by panel members who did not come from the public sector.

11. The next item on the priority list is "methodology for the dissemination and implementation of research findings, particularly with a view to alleviating poverty". The group from the private sector and NGOs placed this item in the seventh position, indicating that they may be dissatisfied with the unavailability and lack of implementation of research findings in the past. The group from the public sector placed this item only in the 34th position.

12. The 12th item on the list is "the need for and affordability of physical infrastructures". The respondents from the public sector afforded this item third priority, indicating the vast financial implications of this item for the various governments, while the other two groups placed this item further down on the priority list.

13. The item "development of procedures for the involvement of communities, and with a view to fostering meaningful negotiation" is next on the overall priority list. There is not much difference between the priorities awarded to this item by the different panel groups.

14. The 14th item on the priority list is "training of local-government personnel". Although the public sector panellists and the academics/researchers placed this item lower on the priority list, the respondents from the private sector/NGOs awarded a 12th place to this item.

15. The item in the 15th position on the priority list is "planning practice / urban design as it relates to urbanization (particularly with respect to poorer communities)". The necessity of an appropriate planning practice to cater for the needs of the poorer section of the population is stressed by the relative importance of this item.

16. The next item on the priority list is "the effect of the abolition of the Group Areas Act on property values, land-use patterns and vested economic interests". Although the respondents from the private sector/NGOs awarded a 13th position to this item, the public sector respondents and the academics/researchers gave a low priority (29th and 44th position respectively) to this item.

17. Item 17 on the priority list comprises research on population growth in rural and urban areas as well as the factors affecting it. The panellists from the academic/research group placed a high premium on such research, putting this item in the sixth position, while the panel members from the private sector and NGOs thought that it was of less importance and placed it in the 20th position. Some academics/researchers were of the opinion that research on this item should be regarded as urgent in order to provide the necessary information for planning for the future.

18. The next item is the "training needs of persons responsible for implementing accommodating strategies". The respondents from the private sector/NGOs placed this item higher on the priority list (in 16th position) than those from the public sector and the academics/researchers (33rd and 39th position respectively).

19. The 19th item on the priority list is "the effect of the abolition of the Group Areas Act on the social integration of South African society". The respondents from the public sector awarded this item a 35th position on the priority list and the academics/researchers a 32nd position.

A brief look at the least urgent items is perhaps also warranted. The break between the average of the 74th and the 75th item was identified as relatively large (2,0) and therefore the three items that the panellists thought were the least urgent, will be discussed here.

1. The third-last item is whether "research (should) be undertaken to determine whether crime / violence within urban areas is different from, and occurs to a greater extent than in rural areas".

2. On the second-last item, namely the "circumstances of populations subjected to possible incorporation into the homelands (not implying support for the homeland policy)", consensus was reached that the homelands policy will be phased out and that research is therefore not required.

3. The research item considered to be least urgent by the panellists concerned the question whether research should be undertaken "to determine whether differences between religious practices exist between urban and rural areas and, if so, how urgent such research is". Some of the panellists stated that such information is at the most only "nice to know", but not useful in any development planning.

Conclusion

Research requires the use of scarce financial resources and it is imperative that such resources be allocated to the potentially most deserving projects. To allow equitable decisions to be taken on the relative merits of research proposals, some basis for distinction is needed. One way to obtain such a basis for decision making is through the determination of priorities. To ensure equity, it is necessary to consult a broad spectrum of interests in society, and this requires inputs from the public sector, the private sector and other non-governmental organizations, as well as from the academics/researchers who will be primarily responsible for conducting the research needed.

These objectives were to a large extent realized in this study. Despite a few shortcomings, some of which were discussed earlier, the data from this study provide a reasonably clear picture of the urbanization research priorities for the 1990s, based on current perceptions. The Delphi approach that was used in this study clearly enhanced the reaching of consensus on these matters.

The prioritization in terms of **the seven factor dimensions** identified in this study shows that *urban/metropolitan planning and services* and the *effects of the scrapping of apartheid legislation* need to be investigated as a matter of great urgency. These are followed (in terms of priority) by the need for research on *problems experienced by recent in-migrants and the poor* and *rural and regional development*.

The analysis of **the individual items** presented here points out that research on job creation programmes and income-generating activities is most urgently needed and could assist in alleviating this problem. The availability of suitable land for low-income housing in the metropoles, affordability of housing as well as the financing/subsidizing of housing, are some of the research themes that have been given high priority ratings.

Of very little importance seems to be research on possible incorporation of populations into the homelands/reserves, since respondents felt that the present homeland policy of the South African Government should and will be phased out. Of least importance for the 1990s is research on differences in religious practices between urban and rural areas.

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APPENDIX A. ITEMS USED IN THE QUESTIONNAIRES FOR ROUNDS 2 AND 3

1. Population growth (with the necessary attention to urbanization and development)

2. Population growth in rural and urban areas, and the factors affecting it

3. Prospects for urbanization and metropolization in South Africa

4. The demarcation of functional metropolitan regions*

5. Urban sprawl*

6. Peri-urban (on the fringes of the cities) and semi-urban populations (deeper into the rural areas)

7. Circumstances of populations subjected to possible incorporation into the homelands (not implying support for the homeland policy)

8. Circumstances of populations subjected to possible resettlement (not implying support for resettlement actions)

9. Planning practice / Urban design as it relates to urbanization (particularly with respect to poorer communities)

10. Planning standards and the costs of urban infrastructures (particularly with respect to poorer communities)

11. Urban decay and urban renewal*

12. Migration patterns (general)

13. Migration motivation / Reasons or motives for migration

14. Migration types and patterns of stepwise migration

15. Migration/Settlement patterns in a post-apartheid South Africa*

16. Position of the household/family in migration and urbanization

17. The position/problems of recent *female* urban in-migrants

18. The position/problems of recent *elderly* urban in-migrants*

19. The position/problems of recent *juvenile* urban in-migrants*

20. The need for control and administration of migrants from outside the RSA*

21. Migrant labour: causes, nature, problems and future trends

22. Characteristics and circumstances of commuters

23. Implications of the possible phasing out of transport subsidies for commuters

24. The causes, nature and extent of adjustment problems in urban areas and return migration

25. Methods/Approaches to address problems of adjustment and stress in urban areas

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*This is a newly added item for the purposes of Rounds 2 and 3 (based on the suggestions from respondents who participated in Round 1).

26. Should research be undertaken to determine whether crime/violence within urban areas is different from, and occurs to a greater extent than crime/violence within rural areas, and if so, how urgent is such research?*

27. Should research be undertaken to determine whether differences between religious practices exist between urban and rural areas, and if so, how urgent is such research?*

28. The need to develop the necessary expertise on accommodating strategies for urbanization and to identify specific target groups for this purpose

29. Training needs of persons responsible for implementing accommodating strategies

30. The consequences of urbanization on attempts to incorporate the poor / less privileged into the development "mainstream"

31. Industrial decentralization and its role in regional development (including its cost efficiency)

32. The multisectoral approach to regional development

33. Possibilities and utilization of the basic needs approach in regional development programmes

34. Growth-point development

35. Deconcentration-point development

36. Development of platteland and homeland towns

37. The interaction between urban and rural areas, particularly in respect of technology (transport, communication, etc.)*

38. The effects of betterment planning in rural areas

39. Possibilities and utilization of appropriate technologies in rural areas

40. Land (ownership) reform in rural areas

41. Integrated urban-rural development

42. Reallocation of agricultural land to Africans outside the homelands / bantustans / national states

43. Differential health conditions in rural and urban areas*

44. Perceptions of more privileged groups on informal settlements in their vicinity

45. Health conditions in informal settlements*

46. Availability of suitable land for low-income housing in the metropoles

47. The need for and affordability of social infrastructures (e.g. education, vocational training and health services, and recreation, sports and cultural facilities)

48. The need for and affordability of physical infrastructures

49. The need for and affordability of other facilities and services

50. Affordability of housing

51. Housing availability and needs

52. Financing/Subsidizing of housing and related infrastructures and the acquisition of funds for this purpose

53. Liveability of housing

54. High-density housing

55. Self-build housing schemes

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*Newly added item.

56. Promoting the informal sector

57. Job creation programmes (and income-generating activities)

58. The effect of rapid urbanization on urban employment and wages

59. The economic basis of urban areas*

60. The role of labour unions in urbanization*

61. Macro-level economic demands on physical, social and economic infrastructures in urban migrant destinations due to a high level of urbanization*

62. Inward industrialization

63. Evaluation of local-government policies

64. Local governments' access to resources (financial, human, etc.)

65. Local governments' representativeness and legitimacy

66. Training of local-government personnel

67. Local governments' liaison with their communities, developers and other authorities

68. Communities' involvement in community problems, problem identification and conflict regulation

69. Development of procedures for the involvement of communities, and with a view to fostering meaningful negotiation

70. The necessity of an appropriate form of metropolitan government*

71. Methodology for the dissemination and implementation of research findings, particularly with a view to alleviating poverty

72. Development of a data bank for urbanization research / documents

73. Evaluation of the advantages and disadvantages of capitalist and socialist approaches toward accommodating urbanization

74. The effects of the re-unification of South Africa on urbanization*

75. The effect of the abolition of the Group Areas Act on property values, land-use patterns and vested economic interests*

76. The effect of the abolition of the Group Areas Act on other legislation (e.g. population registration)*

77. The effect of the abolition of the Group Areas Act on the social integration of South African society.*

*Newly added item.

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APPENDIX B. PANEL MEMBERS WHO GAVE PERMISSION TO BE IDENTIFIED

1. Akerman, Mr P.A., Pietermaritzburg City Council, PIETERMARITZBURG
2. Badenhorst, Prof. M.S., University of Pretoria, PRETORIA
3. Bernstein, Ms A., Urban Foundation, JOHANNESBURG
4. Botha, Dr L., SA Housing Trust, RANDBURG
5. Botha, Mr W.J. van H., University of the OFS, BLOEMFONTEIN
6. Bowen, Mr P.N., Ciskei Housing & Urban Development Corporation, BISHO
7. Chinkanda, Dr E.N., Department of Planning and Provincial Affairs, PRETORIA
8. Cilliers, Prof. S.P., University of Stellenbosch, STELLENBOSCH
9. Clowes, Mrs J., African Self-Help Association, BRAAMFONTEIN
10. Craven, Dr G.H., Red Ons Eie Platteland, STEYTLERVILLE
11. Crockett, Mr R.J., Sage Schachat, JOHANNESBURG
12. Davies, Prof. W.J., ISER, Rhodes University, GRAHAMSTOWN
13. De Vos, Dr T.J., CSIR, PRETORIA
14. Du Toit, Prof. J.B., retired professor, STELLENBOSCH
15. Eloff, Dr C.C., HSRC, PRETORIA
16. Emmett, Dr A.B., HSRC, PRETORIA
17. Ferrinho, Dr P., University of the Witwatersrand, PARKTOWN
18. Fourie, Prof. P.C., RDC Region C, BLOEMFONTEIN
19. Fuggle, Prof. R.F., University of Cape Town, RONDEBOSCH
20. Gelderblom, Mr D., University of South Africa, PRETORIA
21. Gouws, Dr N.B., Department of National Health and Population Development, PRETORIA
22. Groenewald, Mrs F.W., Women's Bureau of SA, SOMERSET WEST
23. Hart, Mr T., Urban Foundation, JOHANNESBURG
24. Hattingh, Prof. P.S., University of Pretoria, PRETORIA
25. Heydenrych, Dr D.H., HSRC, PRETORIA
26. Horenz, Mr J.B.G., City of Port Elizabeth, PORT ELIZABETH
27. Hugo, Mr J., Johannesburg City Council, BRAAMFONTEIN
28. Hugo, Mr P.F., Breërivier Regional Services Council, WORCESTER
29. Human, Adv. J.J., Amatola Regional Services Council, EAST LONDON
30. Jackson, Dr A.O., Department of Planning and Provincial Affairs, PRETORIA
31. Jespersen, Mrs G.A., Winelands Regional Development Association, SOMERSET WEST
32. Jones, Mr I. de G., SA PERM, JOHANNESBURG
33. Joubert, Mrs F.G., Highveld Regional Services Council, MIDDELBURG
34. Knoetze, Mr J.C., Department of Manpower, VANDERBIJLPARK
35. Kruger, Mr J., Development Bank of Southern Africa, HALFWAY HOUSE
36. Lang, Mr J.P., Metroplan, PIETERMARITZBURG
37. Le Roux, Prof. P.J. du P., University of the Western Cape, BELLVILLE
38. Lötter, Mr J.C., Central Economic Advisory Services, PRETORIA
39. Lötter, Dr J.M., HSRC, PRETORIA
40. Maasdorp, Prof. G.G., University of Natal, DURBAN
41. Mabin, Prof. A., University of the Witwatersrand, JOHANNESBURG
42. Marais, Mr A.P., Upper Karroo Regional Services Council, DE AAR
43. Marais, Revd M., PIETERMARITZBURG
44. McCarthy, Prof. J.J., University of Natal, DURBAN
45. Mears, Mr R.R., Vista University, TSHIAWELO
46. Mercer, Mr J.G.B., Port Elizabeth City Council, PORT ELIZABETH
47. Møller, Dr V., CSDS, University of Natal, DURBAN
48. Moore, Mr D., KFC, MELMOTH
49. Naudé, Mr A.H., CSIR, FAURE
50. Nieuwoudt, Mr E., Lebowa Department of Economic Affairs, LEBOWAKGOMO
51. Nutt, Mrs A., KONTAK, JOHANNESBURG

52. Olivier, Dr J.J., Development Bank of Southern Africa, HALFWAY HOUSE
53. Olivier, Prof. N.J.J., University of Potchefstroom, POTCHEFSTROOM
54. Oosthuizen, Dr A.J.G., Member of Parliament, JOHANNESBURG
55. Piek, Dr B.J., President's Council, CAPE TOWN
56. Platzky, Ms L., THE HAGUE
57. Potgieter, Dr F.J., President's Council, CAPE TOWN
58. Reddy, Dr J.N., Ministers' Council, House of Delegates, DURBAN
59. Riley, Mr N., Cape Town City Council, CAPE TOWN
60. Rogerson, Prof. C.M., University of the Witwaterstand, JOHANNESBURG
61. Rootman, Mr P.G., RDAC Region F, NELSPRUIT
62. Saayman, Mr A., City of Port Elizabeth, PORT ELIZABETH
63. Sadie, Prof. J.L., Bureau for Economic Research, STELLENBOSCH
64. Saunders, Prof. C.C., Cape Town University, RONDEBOSCH
65. Schoeman, Dr J.H., Department of National Health and Population Development, PRETORIA
66. Schumann, Prof. D.E.W., RDAC Region A, STELLENBOSCH
67. Schutte, Mr A.F.C., East Rand Regional Services Council, GERMISTON
68. Schutte, Prof. J.L., Potchefstroom University for CHE, POTCHEFSTROOM
69. Smit, Prof. P., University of Pretoria, PRETORIA
70. Snyman, Dr S.A., HSRC, PRETORIA
71. Spiegel, Dr A., University of Cape Town, RONDEBOSCH
72. Steyn, Mr D.G.F., Lebowa Development Corporation, LEBOWAKGOMO
73. Steyn, Prof. H.P., University of Stellenbosch, STELLENBOSCH
74. Tomalin, Mr P.N., Western Cape Regional Services Council, CAPE TOWN
75. Van der Berg, Prof. Servaas, University of Stellenbosch, STELLENBOSCH
76. Van der Hoven, Mr P.P.C., Transvaal Provincial Admininistration, PRETORIA
77. Van der Kooy, Mr R.J.W., HSRC, PRETORIA
78. Van der Merwe, Prof. I.J., University of Stellenbosch, STELLENBOSCH
79. Van Rensburg, Dr J.J., Department of Planning and Provincial Affairs, PRETORIA
80. Van Zyl, Dr G.N., Planning consultant, BELLVILLE
81. Van Zyl, Mr J., Gold Fields Regional Services Council, WELKOM
82. Vrey, Prof. W.J.H., ISER, University of the OFS, BLOEMFONTEIN
83. Waanders, Mr P.G., Transvaal Provincial Admininistration, PRETORIA
84. Wait, Prof. C.V.R., RDAC Region D, PORT ELIZABETH
85. Welch, Prof. C. Tod, University of Stellenbosch, STELLENBOSCH
86. Wessels, Dr A., University of the OFS, BLOEMFONTEIN
87. Yach, Dr D., Medical Research Council, TYGERBERG

APPENDIX C. CONSENSUS OPINIONS ON THE URGENCY OF RESEARCH (BASED ON ROUND 2)

PRIORITY	ITEM	ABBREVIATED DESCRIPTION*	MEAN SCORE	STANDARD ERROR**	MEDIAN
1	57	Job creation programmes	6,03	0,076	6
2	46	Availability of land for low-income housing	6,02	0,083	6
3	52	Financing/Subsidizing of housing, etc.	5,94	0,092	6
4	69	Procedures for comm. involvement/negotiation	5,89	0,058	6
5	68	Communities' involvement in community problems	5,89	0,074	6
6	50	Affordability of housing	5,87	0,079	6
7	48	Need/Affordability: physical infrastructures	5,83	0,056	6
8	47	Need/Affordability: social infrastructures	5,79	0,063	6
9	10	Planning standards and infrastructure costs	5,73	0,077	6
10	49	Need/Affordability: other facilities/services	5,70	0,062	6
11	3	Prospects for urbanization/metropolization	5,68	0,078	6
12	55	Self-build housing schemes	5,66	0,079	6
13	2	Population growth: rural & urban areas	5,62	0,099	6
14	51	Housing availability and needs	5,60	0,108	6
15	56	Promoting the informal sector	5,58	0,101	6
16	1	Population growth: urbanization & development	5,44	0,127	6
17	71	Methodology: dissemination/implementation	5,39	0,092	5
18	66	Training of local-government personnel	5,39	0,121	6
19	70	Appropriate form of metropolitan government	5,38	0,108	6
20	75	Abolition of Group Areas Act: *economic effects*	5,36	0,101	5
21	63	Evaluation: local-government policies	5,34	0,080	5
22	77	Abolition of Group Areas Act: *social integration*	5,34	0,095	5
23	40	Land ownership reform in rural areas	5,30	0,101	5
24	41	Integrated urban-rural development	5,29	0,095	5
25	9	Planning practice/Urban design & urbanization	5,29	0,109	5
26	30	Urbanization & incorporation of the poor	5,29	0,081	5
27	29	Training needs: accommodating strategies	5,26	0,093	5
28	59	The economic basis of urban areas	5,23	0,100	5
29	54	High-density housing	5,21	0,078	5
30	28	Developing expertise: accommodating strategies	5,19	0,081	5
31	65	Local govts' representativeness/legitimacy	5,19	0,132	5
32	67	Local govts' liasion with communities, etc.	5,18	0,113	5
33	36	Development of platteland/homeland towns	5,16	0,116	5
34	64	Local governments' access to resources	5,16	0,098	5
35	6	Peri-urban & semi-urban populations	5,15	0,089	5
36	76	Abolition of Group Areas Act: *other legislation*	5,14	0,100	5
37	23	Implications for commuters: transport subsidy	5,11	0,099	5
38	32	The multisectoral approach & regional dev.	5,10	0,105	5
39	45	Health conditions in informal settlements	5,09	0,105	5
40	53	Liveability of housing	5,08	0,078	5
41	42	Reallocation of agricultural land to Africans	5,08	0,130	5
42	58	Urban employment/wages & rapid urbanization	5,04	0,095	5
43	15	Migration/Settlement: post-apartheid SA	5,03	0,121	5
44	39	Appropriate technologies in rural areas	4,99	0,105	5
45	74	Effects of re-unification of SA: urbanization	4,94	0,111	5
46	72	Data bank for urbanization research/documents	4,94	0,099	5
47	62	Inward industrialization	4,87	0,094	5
48	16	Position of household/family & urbanization	4,87	0,085	5
49	61	Economic demands on urban infrastructures	4,85	0,093	5
50	60	The role of labour unions in urbanization	4,85	0,102	5

* See Appendix A for a full description of the items

**Standard error of the mean. The lower boundary of the 95 % confidence interval is obtained by multiplying the standard error by 1,96 and then subtracting this product from the mean score. The upper limit is obtained by adding the same product to the mean score.

PRIORITY	ITEM	ABBREVIATED DESCRIPTION*	MEAN SCORE	STANDARD ERROR**	MEDIAN
51	22	Commuters: characteristics & circumstances	4,85	0,099	5
52	31	Industrial decentralization & regional dev.	4,84	0,110	5
53	4	Demarcation of functional metropolitan regions	4,84	0,124	5
54	19	Position/problems: *juvenile* urban in-migrants	4,79	0,122	5
55	33	The basic needs approach and regional dev.	4,79	0,092	5
56	12	Migration patterns (general)	4,72	0,121	5
57	37	The interaction between urban and rural areas	4,69	0,118	5
58	13	Migration motivation/Reasons for migration	4,61	0,114	5
59	14	Migration types & stepwise migration patterns	4,57	0,120	5
60	17	Position/problems: *female* urban in-migrants	4,50	0,127	4
61	11	Urban decay and urban renewal	4,49	0,111	5
62	44	Perceptions of privileged: informal settlements	4,48	0,135	5
63	43	Differential health conditions: rural & urban	4,45	0,115	5
64	5	Urban sprawl	4,44	0,130	5
65	18	Position/problems: *elderly* urban in-migrants	4,35	0,119	4
66	25	Methods/Approaches: urban adjustment/stress	4,31	0,117	4
67	24	Urban adjustment problems & return migration	4,25	0,108	4
68	73	Capitalist vs socialist approaches: evaluation	4,23	0,136	4
69	21	Migrant labour: causes, nature, problems & future	4,21	0,103	4
70	8	Circumstances: populations to be resettled	4,13	0,153	4
71	38	Effects of betterment planning in rural areas	3,96	0,090	4
72	34	Growth-point development	3,96	0,106	4
73	35	Deconcentration-point development	3,90	0,104	4
74	20	Control/Admin. of migrants from outside the RSA	3,79	0,141	4
75	26	Crime/Violence: rural-urban differences	3,54	0,116	4
76	7	Circumstances: populations to be incorporated	3,13	0,128	3
77	27	Religious practices: rural-urban differences	2,67	0,103	3

* See Appendix A for a full description of the items.

**Standard error of the mean. The lower boundary of the 95 % confidence interval is obtained by multiplying the standard error by 1,96 and then subtracting this product from the mean score. The upper limit is obtained by adding the same product to the mean score.

Appendix D. Results of the factor analysis

(ROTATION METHOD: VARIMAX)

ROTATED FACTOR PATTERN

ABBREVIATED ITEM DESCRIPTION*	ITEM	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
Position/problems: elderly in-migrants	18	0.87542*	0.14706	0.00004	0.15932	-0.00007	0.10767	-0.11518
Abolition: group areas: Other legislation	76	0.83475*	-0.02666	0.16116	-0.24173	0.02985	-0.08967	0.01748
Position/problems: female in-migrants	17	0.81482*	0.02753	-0.13211	-0.02864	-0.17577	0.09083	0.18916
Local govt: representativeness/legitimacy	65	0.79981*	-0.05621	0.04571	0.07838	0.02557	0.24816	0.14414
Abolition: group areas: Social integration	77	0.75930*	-0.03327	0.08473	-0.11897	-0.13490	0.00380	0.18222
Advantages/disadv.: capitalism/socialism	73	0.72921*	0.24350	0.15854	-0.38744	0.00271	-0.11274	0.08819
Position/problems: juvenile in-migrants	19	0.70154*	0.15455	-0.17611	-0.27497	0.21480	0.00912	0.15313
Local govt: training of personnel	66	0.67101*	0.14236	0.19704	0.24605	0.09633	0.00027	-0.08533
Peri-urban & semi-urban populations	06	0.66006*	0.29831	0.07948	0.30941	0.18538	0.08659	-0.01072
Need for control of migrants from abroad	20	0.64680*	0.46693	0.10137	0.25216	0.00244	-0.14800	0.03072
Comm. involvement/negotiation: procedures	68	0.61850*	0.26376	0.49541	0.16784	0.20421	0.11303	0.08604
Land for low-cost housing: availability	46	0.59821*	0.16965	0.49070	-0.05630	0.10947	0.10502	0.10289
Local government policies: evaluation	63	0.57844*	-0.37998	0.17234	0.08081	0.26213	0.04757	0.30650
Necessity for appropriate metropol. govt	70	0.54798*	0.08443	0.22749	0.44963	0.01598	-0.04373	0.31395
Commuters: characteristics/circumstances	22	0.48153*	0.38751	0.23535	-0.13144	0.28753	0.05234	0.21252
Re-unification of SA: effects on urbanizat.	74	0.47341*	-0.11972	0.43256	-0.09506	-0.42959	-0.05364	0.46546
Urban sprawl	05	0.47155*	0.20594	0.29779	-0.05569	0.13952	-0.46607	0.22663
Phasing out of transp. subsidies: implicat.	23	0.47154*	0.23057	0.18474	0.09479	0.27021	-0.35769	-0.08398
Abolition group areas: property values	75	0.47152*	0.36875	0.34219	0.29612	-0.14298	-0.24003	-0.23374
Health conditions: informal settlements	45	0.43905*	-0.23361	0.21377	-0.12375	-0.30162	-0.07862	0.17880
Perceptions of privileged on informal sett.	44	-0.53444*	0.15014	0.28676	0.05678	-0.12585	-0.33978	0.29220
Basic needs approach: possibilities	33	-0.56540*	0.14131	0.32501	0.00985	0.24317	0.23157	0.32783
Inward industrialization	62	-0.68431*	0.43088	0.02424	0.13020	0.18754	0.21276	0.14664
Deconcentration-point development	35	0.12236	0.86966*	-0.22426	-0.04122	0.18897	-0.06411	0.04390
Betterment planning: effects	38	-0.23168	0.82936*	-0.02599	0.23771	-0.06332	0.03848	-0.00389
Growth-point development	34	0.10096	0.81936*	-0.02568	0.05486	0.10157	-0.08581	-0.00190
Development: platteland & homeland towns	36	0.19640	0.73673*	-0.06906	0.37900	-0.01875	0.23386	0.13591
Population growth (rural & urban areas)	02	0.43709	0.71838*	0.25386	-0.34579	-0.01772	-0.00698	-0.07097
Population growth (urbanization & develop.)	01	0.41913	0.68375*	0.26181	-0.28205	0.01532	0.18278	0.12737
Religious practice: rural-urban differences	27	-0.12164	0.61929*	0.21151	0.29165	-0.22832	-0.06275	0.08225
Migrant labour: causes/problems/trends	21	0.34171	0.61158*	-0.02652	-0.10419	0.01701	-0.01478	0.60471

*See Appendix A for a full description of the items

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Appendix D. (continued)

ABBREVIATED ITEM DESCRIPTION*	ITEM	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
Migration motivation & reasons	13	-0,00173	0,60476*	0,33897	0,03892	0,38428	-0,19299	0,27031
Prospects for urbanization/metropolization	03	0,29474	0,55464*	0,36926	-0,36776	-0,00368	0,03602	-0,07821
Populations subject to incorporation	07	0,44511	0,47978*	-0,20071	0,17928	0,14435	-0,14381	0,29169
Crime/violence: rural-urban differences	26	-0,17159	0,47968*	0,07325	0,40482	-0,18537	-0,09300	-0,03556
Populations subject to resettlement	08	0,46983	0,47853*	-0,23688	-0,07939	0,17986	0,13442	0,33811
Adjustment problems: causes/nature/extent	24	0,27694	0,44864*	0,30481	0,12141	-0,00859	0,19287	0,01304
Training needs: accommodating strategies	29	-0,27712	-0,60851*	0,34840	0,17822	0,17564	0,34720	-0,12603
Develop expertise: accommodating strategies	28	0,24285	-0,69933*	0,23509	0,19837	0,20155	0,37723	0,00551
Affordability of housing	50	-0,08385	0,06785	0,81848*	-0,02228	0,19785	-0,04458	-0,02908
Need/affordability: other facilities/service	49	0,08182	-0,14420	0,81743*	-0,01630	0,12767	-0,07736	-0,09108
Need/affordability: physical infrastructure	48	-0,04929	-0,06202	0,81729*	0,01235	0,02528	-0,03348	-0,09549
Financing/subsidising of housing & infrastr.	52	0,32269	0,19212	0,81591*	-0,05310	-0,05747	-0,20663	0,02677
Need/affordability: social infrastructures	47	0,02709	-0,15986	0,77348*	0,14170	-0,03601	0,04173	0,08959
Housing availability/needs	51	0,08149	0,07708	0,75033*	-0,00347	0,31288	0,06358	0,09817
Job creation programmes	57	0,46694	0,24015	0,70262*	0,04050	-0,18806	0,31112	0,08761
Promoting informal sector	56	-0,04833	0,18894	0,56025*	-0,00139	0,01266	-0,28691	0,14431
Liveability of housing	53	-0,06296	-0,31927	0,55789*	0,45967	0,20170	-0,03123	0,29761
Self-build housing schemes	55	0,45328	0,17073	0,53660*	0,02954	0,06988	0,08979	0,40016
Economic basis of urban areas	59	-0,29080	-0,15301	0,50433*	0,49805	0,22734	-0,02252	-0,00690
High-density housing	54	0,13083	-0,25240	0,47997*	0,07203	0,13094	0,34360	-0,00179
Migration types & stepwise migr. patterns	14	0,20439	0,14652	0,46160*	0,29264	0,38873	-0,11699	0,14068
Procedures for community involvement	69	0,26527	0,01413	0,45656*	0,34985	0,41815	0,24239	0,19446
Data bank for urbanization research	72	-0,02154	-0,01724	0,40220*	0,10252	0,17597	-0,11245	-0,35560
Integrated (urban-) rural development	41	0,00818	0,16926	0,36952	0,74200*	0,08860	0,17967	-0,41675
Labour unions & urbanization	60	0,09056	0,16811	-0,17428	0,72045*	-0,03421	-0,29573	0,25514
Macro-level econ. demands on infrastructure	61	-0,46242	0,16038	0,07003	0,70941*	0,06376	-0,04882	0,12697
Land ownership reform: rural areas	40	0,07366	0,25822	0,06023	0,69390*	0,21776	-0,02597	-0,17420
Reallocation of agricultural land	42	0,24579	-0,18728	-0,14413	0,64963*	-0,15280	0,22782	0,03821
Rural-urban interaction (esp. technology)	37	-0,27837	-0,02420	0,24022	0,59215*	0,07935	-0,41126	-0,04506
Local govt liason: community/developers/oth.	67	-0,09433	-0,22345	0,36141	0,53668*	0,46234	0,16940	-0,11887
Health conditions: rural vs urban areas	43	0,39395	0,03746	-0,19487	0,43449*	-0,10527	0,20521	-0,16168
Dissemination/implementat. research findings	71	0,06172	-0,29751	0,24748	0,42820*	0,07409	0,34101	0,23808

Appendix D. (continued)

ABBREVIATED ITEM DESCRIPTION*	ITEM	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
Planning practice/urban design: poorer comm.	09	-0,02701	-0,07491	0,18629	-0,16062	0,87316*	0,09326	-0,14247
Planning standards/costs: poorer comm.	10	0,22869	0,18466	0,20532	-0,01206	0,66238*	-0,07749	0,19491
Urban employment/wages & rapid urbanization	58	-0,18066	-0,22354	0,13289	0,34086	0,61358*	0,15725	0,23545
Local government access to resources	64	0,23212	-0,46139	-0,04759	0,15278	0,60918*	0,24758	0,12954
Multisectoral approach & regional dev.	32	-0,46691	-0,12930	0,29164	0,15311	0,58124*	-0,06923	-0,31131
Migration patterns (general)	12	0,04922	0,41180	0,35413	0,20179	0,48389*	-0,15852	0,00203
Industrial decentralization & regional dev.	31	0,09619	0,30548	0,21932	-0,28969	0,44745*	-0,29513	0,33109
Appropriate technologies in rural areas	39	0,12290	0,19124	-0,09149	0,01212	0,16550	0,74000*	0,03134
Incorporation of the poor & urbanization	30	0,03991	-0,27307	0,12232	-0,01953	0,16564	0,72768*	0,34303
Adjustment problems: methods/approaches	25	0,19340	0,33211	0,15228	-0,01254	-0,33126	0,47579*	0,06802
Demarcation: functional metropol. regions	04	0,31125	0,14426	0,31523	0,09820	0,13712	-0,62928*	0,22838
Urban decay & urban renewal	11	0,10394	0,24699	0,00321	-0,02038	0,08871	0,16306	0,80574*
Migr./settlement patterns: post-apartheid SA	15	-0,01405	-0,48635	0,21720	0,36045	0,14190	-0,12058	0,55563*
Position: household/family	16	0,21579	0,08856	0,37400	0,35851	0,06467	-0,13269	0,41940*

Appendix D. (continued)

VARIANCE EXPLAINED BY EACH FACTOR

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
12.68351	10.074959	9.785698	6.656435	5.203771	4.236113	4.214580

FINAL COMMUNALITY ESTIMATES: TOTAL = 52.853907

ITEM_01 0.841154	ITEM_02 0.896535	ITEM_03 0.673529	ITEM_04 0.693654	ITEM_05 0.644603	ITEM_06 0.668697	ITEM_07 0.627346
ITEM_08 0.676889	ITEM_09 0.858243	ITEM_10 0.638336	ITEM_11 0.755905	ITEM_12 0.597413	ITEM_13 0.740140	
ITEM_14 0.546541	ITEM_15 0.757236	ITEM_16 0.520502	ITEM_17 0.757886	ITEM_18 0.838228	ITEM_19 0.692344	ITEM_20 0.733091
ITEM_21 0.868544	ITEM_22 0.585287	ITEM_23 0.526630	ITEM_24 0.423062	ITEM_25 0.511777	ITEM_26 0.473063	
ITEM_27 0.590945	ITEM_28 0.825613	ITEM_29 0.767507	ITEM_30 0.766125	ITEM_31 0.631532	ITEM_32 0.782766	ITEM_33 0.665603
ITEM_34 0.702891	ITEM_35 0.865016	ITEM_36 0.803268	ITEM_37 0.663884	ITEM_38 0.804200	ITEM_39 0.636171	
ITEM_40 0.635665	ITEM_41 0.929630	ITEM_42 0.614995	ITEM_43 0.462683	ITEM_44 0.610294	ITEM_45 0.437472	ITEM_46 0.664195
ITEM_47 0.655698	ITEM_48 0.685262	ITEM_49 0.726521	ITEM_50 0.724018	ITEM_51 0.687162	ITEM_52 0.856281	
ITEM_53 0.758679	ITEM_54 0.451594	ITEM_55 0.696486	ITEM_56 0.455214	ITEM_57 0.910862	ITEM_58 0.673092	ITEM_59 0.662611
ITEM_60 0.739608	ITEM_61 0.770287	ITEM_62 0.773426	ITEM_63 0.680117	ITEM_64 0.741546	ITEM_65 0.734100	
ITEM_66 0.586443	ITEM_67 0.734052	ITEM_68 0.787592	ITEM_69 0.672829	ITEM_70 0.662066	ITEM_71 0.515384	ITEM_72 0.343100
ITEM_73 0.786787	ITEM_74 0.838668	ITEM_75 0.695787	ITEM_76 0.791156	ITEM_77 0.650390		

APPENDIX E. RESEARCH PRIORITIES (BASED ON ROUNDS 2 AND 3)

PRIORITY	ITEM	ABBREVIATED DESCRIPTION*	MEAN SCORE	MINI-MUM	MAXI-MUM
1	57	Job creation programmes	26,06	6,02	30,12
2	46	Availability of land for low-income housing	24,52	5,95	30,27
3	50	Affordability of housing	23,26	6,07	30,33
4	52	Financing/Subsidizing of housing, etc.	23,08	5,54	29,89
5	68	Communities' involvement in community problems	22,61	5,81	29,47
6	70	Appropriate form of metropolitan government	22,14	5,05	27,22
7	56	Promoting the informal sector	22,05	5,52	29,24
8	10	Planning standards and infrastructure costs	21,99	5,88	30,00
9	47	Need/Affordability: social infrastructures	21,87	5,79	29,79
10	40	Land ownership reform in rural areas	21,66	5,08	27,44
11	71	Methodology: dissemination/implementation	21,50	5,15	26,31
12	48	Need/Affordability: physical infrastructures	21,07	5,78	30,63
13	69	Procedures for comm. involvement/negotiation	20,79	5,98	29,88
14	66	Training of local-government personnel	20,71	5,19	27,24
15	9	Planning practice/Urban design & urbanization	20,26	5,50	27,50
16	75	Abolition of Group Areas Act: *economic effects*	20,23	4,97	25,33
17	2	Population growth: rural & urban areas	20,12	11,64	29,15
18	29	Training needs: accommodating strategies	20,04	5,28	26,40
19	77	Abolition of Group Areas Act: *social integration*	19,57	5,06	25,77
20	3	Prospects for urbanization/metropolization	19,54	11,52	29,27
21	1	Population growth: urbanization & development	19,47	11,53	29,78
22	49	Need/Affordability: other facilities/services	19,36	11,33	29,06
23	39	Appropriate technologies in rural areas	19,34	4,86	24,29
24	55	Self-build housing schemes	19,32	5,79	29,02
25	65	Local govts' representativeness/legitimacy	19,14	5,10	26,88
26	74	Effects of re-unification of SA: urbanization	19,14	4,41	24,49
27	51	Housing availability and needs	19,09	5,82	29,08
28	59	The economic basis of urban areas	18,97	5,17	26,78
29	42	Reallocation of agricultural land to Africans	18,87	4,61	26,82
30	41	Integrated urban-rural development	18,78	9,83	26,63
31	36	Development of platteland/homeland towns	18,51	4,89	26,43
32	63	Evaluation: local-government policies	18,23	5,24	26,40
33	45	Health conditions in informal settlements	18,17	9,57	26,54
34	30	Urbanization & incorporation of the poor	18,15	5,02	26,82
35	31	Industrial decentralization & regional dev.	18,09	4,52	24,27
36	28	Developing expertise: accommodating strategies	18,04	5,33	26,63
37	15	Migration/Settlement: post-apartheid SA	17,86	4,80	26,11
38	6	Peri-urban & semi-urban populations	17,83	9,68	26,79
39	23	Implications for commuters: transport subsidy	17,71	5,37	26,86
40	76	Abolition of Group Areas Act: *other legislation*	17,63	4,80	24,24
41	4	Demarcation of functional metropolitan regions	17,33	4,61	23,06
42	32	The multisectoral approach & regional dev.	17,28	4,93	26,56
43	54	High-density housing	16,95	5,20	27,30
44	19	Position/problems: *juvenile* urban in-migrants	16,94	4,67	24,88
45	60	The role of labour unions in urbanization	16,76	4,38	21,90
46	53	Liveability of housing	16,71	5,23	26,16
47	67	Local govts' liasion with communities, etc.	16,39	5,02	27,40
48	64	Local governments' access to resources	16,33	5,12	26,70
49	16	Position of household/family & urbanization	16,15	9,45	25,47
50	62	Inward industrialization	16,03	5,06	25,31
51	72	Data bank for urbanization research/documents	15,73	5,07	25,35
52	37	The interaction between urban and rural areas	15,68	4,65	23,26
53	33	The basic needs approach and regional dev.	15,60	9,45	25,31
54	61	Economic demands on urban infrastructures	15,49	4,83	24,69

*See Appendix A for a full description of the items

PRIORITY	ITEM	ABBREVIATED DESCRIPTION*	MEAN SCORE	MINI-MUM	MAXI-MUM
55	58	Urban employment/wages & rapid urbanization	15,18	5,28	26,40
56	43	Differential health conditions: rural & urban	14,99	4,83	24,17
57	18	Position/problems: *elderly* urban in-migrants	14,44	4,02	17,30
58	25	Methods/Approaches: urban adjustment/stress	14,40	4,11	22,62
59	17	Position/problems: *female* urban in-migrants	14,19	4,02	24,42
60	13	Migration motivation/Reasons for migration	14,18	4,70	25,23
61	24	Urban adjustment problems & return migration	14,08	3,98	23,33
62	11	Urban decay and urban renewal	14,02	9,36	24,00
63	22	Commuters: characteristics & circumstances	13,87	9,76	25,00
64	73	Capitalist vs socialist approaches: evaluation	13,83	4,16	20,94
65	12	Migration patterns (general)	13,82	9,83	26,05
66	5	Urban sprawl	13,32	4,69	23,44
67	14	Migration types & stepwise migration patterns	12,93	5,05	25,22
68	44	Perceptions of privileged: informal settlements	12,92	4,67	24,15
69	38	Effects of betterment planning in rural areas	12,55	4,02	17,30
70	34	Growth-point development	12,54	3,70	21,02
71	21	Migrant labour: causes, nature, problems & future	12,42	4,00	22,20
72	35	Deconcentration-point development	11,27	3,79	20,63
73	8	Circumstances: populations to be resettled	10,96	3,63	20,35
74	20	Control/Admin. of migrants from outside the RSA	10,66	3,67	21,43
75	26	Crime/Violence: rural-urban differences	8,69	3,42	14,51
76	7	Circumstances: populations to be incorporated	8,11	2,58	16,90
77	27	Religious practices: rural-urban differences	5,61	2,68	13,41

*See Appendix A for a full description of the items.

GLOSSARY

Accommodationist strategies: These are long-term plans of action to make provision for the future social, economic, infrastructural and other needs of ever-growing urban or metropolitan populations.

Apartheid: The official policy of racial segregation of the South African Government since 1948. It has officially also been referred to as the policy of *separate development*.

Appropriate technologies: Practical methods and approaches that are, technologically speaking, suitable for the specific circumstances in the community for and by whom such technologies will be used.

Basic needs approach: A *modus operandi* stemming from the need to provide facilities and services that will enhance the living conditions of the entire population; this approach is closely linked with people's need for food, shelter, social security and dignity.

Betterment planning: A planning approach used by the South African Government in the past to regulate agricultural land use in the homelands by separating land for grazing, crop cultivation and residential purposes. This was usually accompanied by a resettlement of the farming population.

Commuters: People undertaking home-to-work and work-to-home journeys on a regular and relatively frequent basis (daily or at least once a week) over distances that require transportation other than walking.

Community organizations: Non-governmental organizations representing specific communities as a result of a need for democratic representation to deal with community grievances as well as other local socio-economic issues.

Confidence interval: A range of values around the mean value used to estimate the unkown mean in the population with a set level of confidence.

Convergence: The process whereby individual response variations over time tend to become concentrated around a total group mean.

Cross-impact analysis: One of the several modifications of the Delphi technique. Cross-impact analysis takes into account the effect of one event on a subsequent event when several events are interrelated. Usually the analysis develops a series of conditional probabilities for events. Through multiple iteration, cross-impact analysis ensures that the forecasts of interrelated events are consistent with individual probabilities of occurrence and therefore helps to ensure the elimination of contradicting predictions.[6]

Deconcentration-point development: A strategy pursued by the South African Government to promote concentrated industrial development on the periphery of metropolitan areas, in areas where large concentrations of blacks are found. This strategy was closely but not exclusively linked to the "homeland" policy.

Factor analysis: A statistical technique that assists in grouping together variables with similar response patterns. Groups of such similar response patterns are referred to as the "dimensions" or "factors" existing in the data.

Group Areas Act: A piece of legislation introduced by the National Party Government of South Africa in 1950 to prohibit the racial integration of residential areas. This prevention of racial integration was made possible by passing another act, the Population Registration Act in 1950, which made it compulsory for all South Africans to be classified as members of a specific "population group", namely "Asian", black (i.e. African), "coloured" or white.

Groups/sectors: For the purpose of this study the respondents were classified into three categories, namely those in the public sector and politicians, those from the private

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[*] See for example Riggs (1983: 90-91).

sector and non-governmental organizations (NGOs), and academics/researchers from universities or research institutions.

Growth-point development: A strategy pursued by the South African Government to promote concentrated industrial development in outlying areas (relatively far from the major industrial centres) where large concentrations of blacks are found (cf. "deconcentration-point development").

Homelands: Geographically demarcated and constitutionally defined reserves for black Africans within the boundaries of the Republic of South Africa. These reserves were supposed to become politically independent in terms of the apartheid policy of the South African Government. The term "bantustan" is sometimes adopted as an alternative for homeland.

Industrial decentralization: An official policy of the South African Government to create economic opportunities in and around the homelands.

Infrastructures: Services needed by a population which include, among other things, physical services (roads, etc.) and social services (schools, hospitals, etc.).

Informal sector: The undocumented part of the economy, catering mainly for the survival needs of the population, and includes a large spectrum of activities ranging from "socially unacceptable" pursuits (such as begging, prostitution, petty crime, etc.) to small-scale industries or commercial services (but still outside the ambit of legal definition).

Informal settlements: Legalized self-build housing ("squatting") usually (but not necessarily) provided with some of the most basic urban infrastructural services such as roads, water and/or sanitation.

In-migrant: A person migrating to a specified destination that is situated in the same country as the area where the migratory move originated.

Inward industrialization: A phrase coined locally describing the leading-sector economic model intended to complement import substitution and export promotion by concentrating on labour intensive activities which are relatively independent of imported goods. In South Africa it usually refers to a process of economic development through urbanization.

Iteration: Effecting interaction between panellists by repeating a systematic process of collating and summarizing answers for presentation to panellists in the following round, asking each panellist to use this feedback information in reconsidering his or her own earlier response.

Land Acts: The first of the two Land Acts, the Natives Land Act of 1913 confined African land ownership to only 7 % of the total land area of South Africa. Later, African land ownership was confined to 13 % with the addition of the Released Areas (land "released" from the restrictive provision of the 1913 Act by the Natives Trust and Land Act of 1936). These two acts laid the basis for the South African Government's "homeland" policy.

Land reform: Land (tenure) reform is usually seen in South Africa as a process of converting communal land ownership to private or individual ownership, but it may also be used to denote a process in the opposite direction. The term "land reform" sometimes also refers to the redistribution of land with a view to reducing inequity.

Lockean philosophy: A philosophy based on the premise that the empirical content of data completely determines the validity of the system. Because only a finite amount of data can be collected, some uncertainty always remains. This uncertainty in turn leads to a degree of subjective judgement in transforming data into final statements. This judgement is based on data, and the uncertainty can be expressed as a function of the data. In contrast to this philosophy is Leibnizian philosophy, in which formal analytical theory is of fundamental importance and systems find expression in completely defined mathematical form.[7]

Mean (arithmetic mean): The total score in a distribution divided by the number of scores; used as a measure of central tendency.

Measure of central tendency: Data are summarized in the form of the mode, the median or the mean.

Measure of dispersion: Data are presented in the form of summaries of the dispersion of responses, such as the range (the distance between the highest and lowest values) and the variance or the standard deviation.

See Corotis, Fox & Harris (1981: 1096).

Median: The middle value in an ordered distribution; used as a measure of central tendency.

Metropolitan area: An urban conurbation that extends across administrative and even political boundaries and is characterized by high levels of daily interactions between the different administrative or political entities. (A minimum population size of 500 000 or a million residents is sometimes used as a criterion to distinguish metropoles from other cities.)

Metropolization: The increase in the population living in metropolitan areas.

Migrants: Migrant labourers or people changing their permanent place of residence.

Migrant destinations: The areas receiving migrants or migrant labourers.

Migrant labour: A process involving people who work too far away from home to be able to commute (i.e. return home on a regular and relatively frequent basis, e.g. at least once daily or weekly).

Migration: The movement of a person or group of people from one (usual) place of residence to another. (See also "migratory move".)

Migratory move: A move made by someone during a change of her or his usual place of residence, be it "permanently" or for a relatively short period (but not for shorter periods than seven days at a time). A person undertaking a migratory move is called a "migrant".

Missing values: Items for which a response was not given by one or more panellists. The response of such a panellist could therefore not be included in an analysis of that specific item.

Mode: The most frequent value in a distribution; used as a measure of central tendency. Distributions may have more than one mode.

Monitor team: The researchers (in this case the authors of this report) administering the Delphi study.

Multisectoral approach: A strategy to develop various economic sectors in a specific geographic area or region. It is not restricted to industrial development as would be the case under the policy of "industrial decentralization".

One-city concept: A demand made by some democratic movements in South Africa for a single tax base in an urban area. This implies the removal of racially determined boundaries between various local authorities in the same urban/metropolitan area.

Observation: An empirical item of information for a research unit.

Peri-urban populations: People living in informal settlements on the periphery of metropolitan areas in the homelands.

Platteland: An Afrikaans[a] derivation of the word "countryside", referring to that part of the South African countryside outside the metropolitan areas and the "homelands".

Regional Services Council: An organization comprising various local authorities and whose main function is to provide infrastructural public services and financial resources to its constituent local authorities.

Resettlement: The physical removal of groups of people from one place to another for reasons related to policy and/or planning matters. Resettlement in South Africa has usually taken the form of involuntary or forced relocation in terms of the government's apartheid policy.

Respondents: The individuals who provided information/opinions for the purposes of this study.

Response rate: The percentage of respondents who returned their completed questionnaires.

Re-unification of South Africa: The reintegration of the constitutionally independent homeland territories into the Republic of South Africa to form one political entity as before.

RSA: Republic of South Africa, including the self-governing homelands but excluding the constitutionally independent homeland territories.

Rural areas: Places *not* classified as an "urban area" by the central statistics office of a country (unless otherwise specified, in which case other criteria are used or should be given to distinguish rural from "urban" areas).

Scale: A measuring instrument used in social studies, usually to measure the strength of an opinion.

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[a] A language stemming mostly from Dutch and spoken by a majority of the white population in South Africa.

SEER (System for Event Evaluation and Review): A modification of the Delphi technique which is used to establish an initial list of forecasts on the basis of interviews prior to the beginning of the Delphi process. It is also used to ask participants to answer questions in only their own field of expertise.

Semi-urban populations: People living in informal settlements in rural areas deep into the homelands (i.e. far away from the metropolitan areas).

Statistically significant differences: Differences that are sufficiently large to enable one to conclude with a set degree of confidence that the difference cannot be ascribed to mere sample variations.

Themes: The research subjects included in this study.

Transport subsidies: A system of central government subsidization of home-to-work commuting by bus or train to compensate poor people for long commuting distances (partly due to the apartheid policy).

Urban areas: Places classified as "urban" by the central statistics office of a country (unless otherwise specified, in which case other criteria are used or should be given to distinguish urban from "rural" areas). Urban areas are usually characterized by a concentration of people who depend predominantly on incomes derived from non-agricultural pursuits, and they usually contain certain services associated with towns and/or cities (as distinct from farms and other non-urban localities).

Urbanization: The increase in the population living in urban areas.

Urban decay: The deterioration of the quality of structures in the urban environment associated with an increasing proportion of urban structures becoming derelict.

Urban renewal: Deliberate attempts by government to reduce the dilapidation of urban buildings through upgrading or rebuilding programmes. Resettlement is often associated with such attempts.

Urban sprawl: The unchecked and usually large-scale geographical expansion of urban areas into their agricultural and/or rural hinterlands.

Weighting: This is undertaken to compensate for relative underrepresentation in a particular sample. The weighted mean is therefore an aggregate mean for more than one group of scores, calculated to give proportional weight to each group's separate mean according to the size of the group. In the case of this study, weighting was applied to give each of the three identified groups/sectors an equal say in the determination of research priorities.

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