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## The impact of spatial development initiatives on recent/past migration in South Africa

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Spatial development initiatives (which also include related initiatives around local economic development) are not unique to South Africa. Similar attempts to stimulate development in specific areas have been made by governments in various parts of the world for many decades.

These efforts became prominent and even quite popular internationally during the 1960s. The best-known example of such attempts was the Venezuelan initiative of 1960 to stimulate development in *Ciudad Guayana*, some 720 km southeast of the capital Caracas (see Gelderblom and Kok 1994:209–216 for a description of the programme). This initiative has been reviewed by a large number of prominent researchers and social scientists, including Lloyd Rodwin, John Friedmann, Anthony Penfold and Alan Gilbert, and the overall conclusion has been that, despite a number of planning disappointments, the programme was successful in terms of the viability of the urban complex that came into being (Friedmann & Wulff 1975).

In an attempt to cope with the problems arising from the globalisation of the world economy, southern African countries are developing a common strategy for regional economic integration. Part of this strategy is the spatial development initiative (SDI), which comprises a package of measures aimed at attracting investors "into a bundle of economically sustainable projects in a region with potential for growth" (cf. <http://www.csir.co.za/websource/ptl0002/-Annualreviews/biochemtek/tfd.html>). A particular emphasis is placed on projects with a high socio-economic impact, especially in the agricultural and agro-processing sectors.

In South Africa regional development initiatives have been in existence since the 1930s, and these became a prominent part of government policy during the 1960s. However, between the 1960s and 1980s the political agenda of the apartheid government outweighed the socio-economic rationale for regional development in this country (see Urban Foundation 1990:16–22). Soon after the first democratic government had taken office in 1994, a revised regional development strategy saw the light of day. In 1995 the South African Department of Trade and Industry announced an investment initiative for the southern African region called Spatial Development Initiatives (SDIs), and one of the most prominent initiatives in this regard was the Maputo Development Corridor (Hlatshwayo 2002).<sup>2</sup> The Maputo Corridor is supposed to

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<sup>2</sup> As reported in a newspaper article (*Sunday Times*, 1 December 2002) on Mozambique, other parts of the Southern African Development Community (SADC) have since 1999 been investigating a concept that was pioneered in the 1980s in Asia, namely the "development triangle". Development triangles, such as the proposed United Nations, Lusaka-based Zambia-Malawi-Mozambique (ZMM) Triangle, the apex of which would be the port of Beira in Mozambique, are being investigated for possible implementation parallel to the SDI model, one example of which is the spatially coinciding Nacala Corridor that connects Mozambique to Malawi and Zambia. In Mozambique there are two further SDIs (apart from the Nacala and Maputo Corridors), namely the well-developed Zambezi Valley, which capitalises on the fact that a significant part of Mozambique's economic resources are located along the Zambezi River, and the new Beira Corridor Development Initiatives. Development triangles

impact not only on South Africa and Mozambique, but also indirectly on Swaziland, Zimbabwe and Botswana (see [http://www.sahc-india.com/b\\_feature.html](http://www.sahc-india.com/b_feature.html)). Similar high-level support initiatives to foster industrial development have since been introduced in other parts of the country, specifically also – but not exclusively – in areas where poverty and unemployment are highest (see for example [http://www.safrica.info/doing\\_business/economy/development/-SDI.htm](http://www.safrica.info/doing_business/economy/development/-SDI.htm)).

This paper attempts to provide answers to the following two questions:

- (a) To what extent have migrants responded to spatial development initiatives in their most recent migration decisions?
- (b) To what extent do the SDI areas attract migrants that can contribute significantly to development initiatives there (especially through potential entrepreneurship)? At this stage the question can only be answered partially, but the data generated by a recent HSRC migration survey promises soon to provide a meaningful answer to this question.

In the next section the South African spatial development initiatives will be reviewed briefly, followed by a description of the relevant results from the recent HSRC migration survey. In Section 3 a model will be developed for the purposes of analysing the effectiveness of spatial development on people's most recent migration decisions, and this will be followed by a summary and some conclusions.

## 1 SOUTH AFRICA'S REGIONAL DEVELOPMENT INITIATIVES

According to the official website of the International Marketing Council (IMC) of South Africa, [http://www.safrica.info/doing\\_business/economy/development/SDI.htm](http://www.safrica.info/doing_business/economy/development/SDI.htm), the country's spatial development programme currently consists of 11 local SDIs, four industrial development zones (IDZs) and one special economic zone (SEZ) at various stages of delivery. Other initiatives include local industrial parks and metropolitan corridors (e.g. the Cape Town corridor from Philippi to Wynberg), and the "cluster initiatives" in terms of clusters that are identified in specific areas for government support. According to one report (see <http://www.helio-international.org/Helio/Reports/2001/SouthAfrica/Indicator7Discussions.html>) these initiatives have so far led to 800 investment opportunities worth US \$33 billion and that have the capacity to create more than 85 000 jobs. The current investment levels are therefore enormous.

The general SDI programme is an interdepartmental investment strategy led by two national departments (Trade & Industry and Transport) and involves strategic initiatives by government that are reportedly aimed at generating long-term, internationally competitive growth and development and at restructuring the apartheid space economy, which created a dualistic social and economic situation. During the apartheid era the emphasis was on import substitution and because of the massive concentration of industrial investment in Gauteng thereby

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are considered an effective way to promote development and growth through economic co-operation between neighbouring countries, and they are designed to focus on a core area with economic spin-offs also facilitating development in the peripheries of the triangle (*Sunday Times*, 1 December 2002).

Another SDI initiatives in the SADC region are the (a) Okavango Upper Zambezi International Tourist (OUZIT) SDI, which aims to market southern Africa as a single, attractive long-haul destination to foreign visitors, (b) Tazara Corridor connecting Tanzania to Zambia, and (c) Benguela Corridor connecting Angola to the southern part of the Democratic Republic of Congo, Zambia and the Tazara Corridor (cf. Mbeki 1998).

“...disadvantaging other parts of the country more suited to supporting export-oriented production” (Taylor 1999). Projects under these new initiatives are expected to bring economic activity to areas with inherent economic potential but neglected in the past, and must be viable, sustainable and profitable. Cross-border SDIs are seen as one way to create the “economic critical mass” that is attractive to investors and therefore help to achieve regional integration.

The 11 SDIs are the following: (a) Maputo Development Corridor, (b) Lubombo SDI, (c) Richards Bay SDI (including the Durban and Pietermaritzburg nodes), (d) Wild Coast SDI, (e) Fish River SDI (including the two development nodes around Port Elizabeth and East London), (f) West Coast Investment Initiative, (g) Platinum SDI, (h) Phalaborwa SDI, and (i) the recently identified Coast-to-Coast Corridor (which links Mozambique and Namibia via South Africa and Botswana, and includes the Trans-Kalahari transport corridor). The major projects in SDIs are based on a partnership between the public and private sectors, and are set to provide opportunities for such collaboration in sectors such as agriculture, mining, tourism, environment, forestry, infrastructure and ports. These SDIs have a variety of focuses, namely (a) industrial (as in the KwaZulu-Natal and Fish River SDIs), (b) agro-tourism (as in the Lubombo and Wild Coast SDIs), and (c) sectoral mixes (as in the Maputo Development Corridor). For a detailed description of these initiatives see Lefakane (1999).

The four IDZs are: (a) Coega IDZ, (b) East London IDZ, (c) Saldanha IDZ, and (d) Richards Bay IDZ. These are designed to boost exports and job creation. The development and the management of IDZs will be done by the private sector. The Coega IDZ is being established 30 km north of Port Elizabeth in the Eastern Cape, and is reportedly one of the largest infrastructure and development initiatives ever undertaken in South Africa. The Gauteng SEZ focuses mainly on high-technology manufacturing, information technology, telecommunications, food processing and cultural activities.

Local economic development (LED) requirements are contained under the developmental duties of municipalities in terms of Section 152.1c of the Constitution of South Africa (Act 108 of 1996) “...to promote the social and economic development of the community”. Since January 2000 municipalities can tap into the Local Economic Development Fund for job creation, support for small, medium and micro enterprises (SMMEs) and strategic planning, as part of the central government’s poverty alleviation project (see <http://www.worldbank.org/html/fpd/urban/led/natsaled.html>).

The SDI concept and some of its specific initiatives have been criticised by many as based on neo-liberal “trickle-down” prescriptions (cf. Taylor 1999). For example, a recent study by the University of the Western Cape in the Wild Coast SDI area has shown that the SDI model applied there, and in particular its agri-tourism initiatives, may not have the promised benefits of a tourism “boom” and the expected “spin-offs” in areas surrounding the “anchor” areas. This would have a negative impact on rural development, thereby making the poor even more vulnerable (Kepe, Ntsebeza & Pithers 2001).

Van Zuydam (1998) points out that of the then 10 SDIs, only four (the Lubombo, Wild Coast, Fish River and Phalaborwa SDIs) were in areas most in need of development, namely in or near the former homeland areas. In the context of the requirement that SDI areas must have “inherent economic potential” and that projects undertaken there must be “viable, sustainable and profitable”, this was almost inevitable. Investors will always be attracted to the metro-

poles and other already developed (i.e. predominantly the former “white”-designated) areas. These conclusions should be a cause of great concern in government circles. He (1998) argues furthermore that merely “kick-starting” the economy in underdeveloped regions – as in the Reconstruction and Development Programme (RDP) philosophy – by infrastructure provision and other construction job creation, thereby relying for the most part on labour migration, such as in the Coega IDZ (which he included in his Fish River SDI case study), cannot be regarded as sufficient and sustainable.

The emphasis in these initiatives on profitability, with the latter being emphasised instead of equity, along with viability and sustainability – the latter three being essential components of a successful development initiative (Kok & Gelderblom 1994) – is precisely where a major problem with the new initiatives has so far identified.

## **2 PEOPLE’S PERCEPTIONS ABOUT THE EFFECTS OF SPATIAL DEVELOPMENT INITIATIVES ON THEIR LATEST MIGRATORY MOVE**

In a recent HSRC migration survey a battery of questions was asked in an attempt to obtain answers to the first question regarding the extent to which former migrants had responded to spatial development initiatives in their most recent migration decisions. Other batteries of questions were meant to deal with the second question regarding the ability of SDIs to attract migrants, and especially those with entrepreneurial skills. As mentioned before, the latter question can only be answered partially at this point in time.

The next sub-sections provide brief descriptions of the findings from the migration survey.

### **2.1 Perceived impact of spatial development initiatives on migration decisions**

Respondents were asked about their prior knowledge of economic and other circumstances in the current area of residence before they had left their previous area of residence. They were also asked specifically whether or not they had responded to specific development initiatives and services when deciding to move away from their previous area to the current area of residence. If the response was affirmative, they were asked to what extent these initiatives and services had influenced their migration decisions (to move away and to move the specific area in which they resided at the time of the survey).

As correctly pointed out by Van Zuydam (1998), the new development initiatives cover areas that spatially include many of the pre-1995 development initiatives (namely the “growth points” and “deconcentration points” of the apartheid era). It seems therefore that it would, after all, be meaningful to compare people’s migration-related responses to development initiatives of both the previous (apartheid) and the current (democratic) governments.

The following initiatives and services were covered: (a) awareness of development initiatives elsewhere (i.e. a broad category to indicate general knowledge of the existence of spatial development initiatives), (b) government-declared development region/corridor at the destination, (c) local development initiatives by the government or the private sector, (d) comparative quality of employment opportunities, (e) comparative quality of educational opportunities, (f) comparative quality of housing opportunities, and (g) comparative level and quality of services

in general. Each one of these response categories will be described briefly in the next sub-sections.

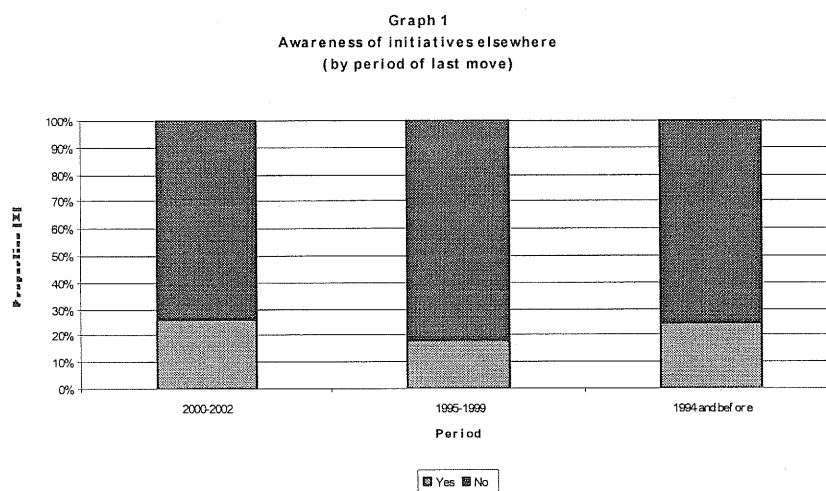
The important contributions by Gardner (1981) on the impact of macro-level factors and by Goodman (1981) on the role and influence of information will be utilised to some extent in the approach followed here, but these would only be fully utilised when De Jong and Fawcett's (1981) value-expectancy model can be applied. Unfortunately the confirmatory factor analyses to make it viable to use that model have not yet been completed.

### 2.1.1 Past perceptions regarding development initiatives elsewhere

*Questions asked:* (a) "Were you aware at the time of development initiatives in *other* areas?" (b) [IF YES]: "To what extent did this awareness influence your decision to move away from the area where you lived before?"

#### (a) Awareness of initiatives elsewhere

A mere 23% indicated that they had been aware of such initiatives elsewhere. Of course the period of time that had lapsed since the move is important, especially in terms of memory lapse, and in Graph 1 these responses are consequently illustrated in terms of the length of time since the (last) migration.

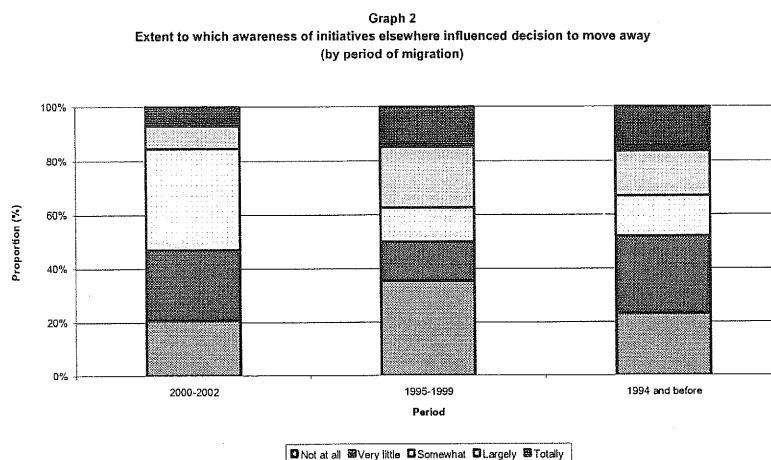


It is clear from Graph 1 that there is no clear relationship between awareness and the time that had passed since the last migratory move to the current area of residence. More than a quarter (26%) of moves that have taken place during the latest period (2000–02) have been undertaken by people who were aware of initiatives elsewhere, compared to the 18 per cent of migrants who moved during the period 1995–99. One-quarter (25%) of the respondents who moved during 1994 or earlier, had been aware of initiatives in other areas.

#### (b) Extent to which decision to move away was influenced by the awareness of initiatives elsewhere

Graph 2 illustrates the distribution of responses to the question as to the extent to which the awareness of development initiatives influenced former migrants' decision to move away from their previous area of residence.

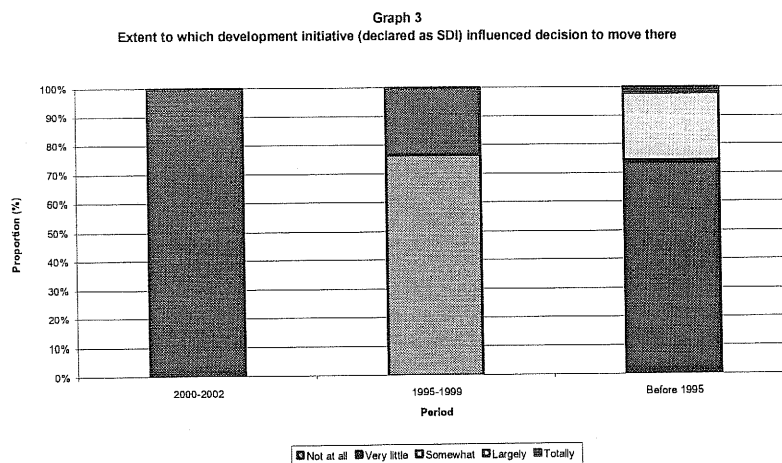
A slight majority (53%) of the most recent out-migration decisions were influenced at least “somewhat” by the awareness of initiatives elsewhere, compared to the 50% in the period 1995–1999 and the slight minority (48%) of moves that occurred before 1995.



## 2.1.2 Perceptions regarding the prior declaration of the current area as a development region/corridor

*Questions asked:* (a) “Did you *know or think* at the time that the government had declared this area as part of a development region (or a so-called ‘development corridor’?” (b) [IF YES]: “To what extent did this knowledge or belief influence your decision to move here?”

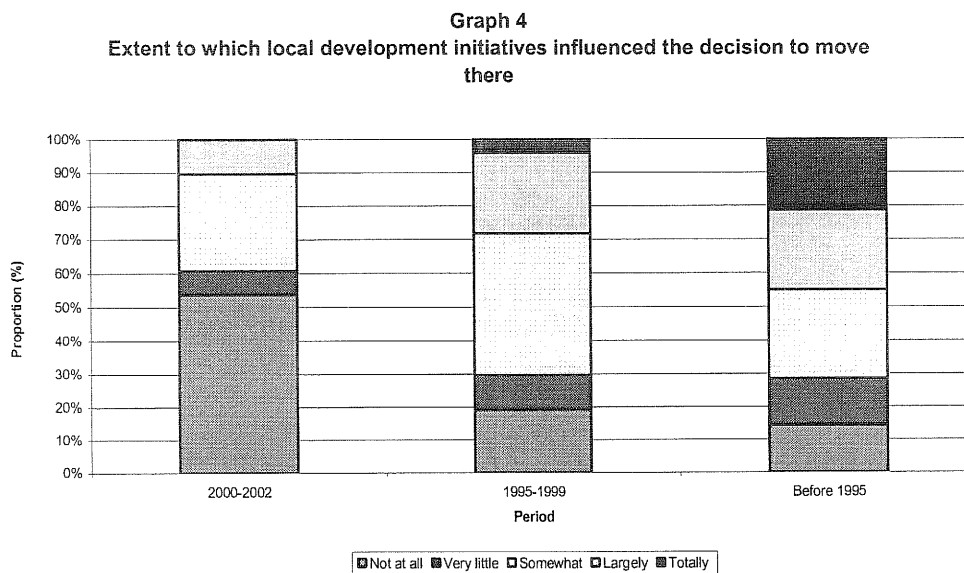
Only one-tenth of the respondents knew or thought at the time that their current area of residence had been declared a development region. In Graph 3 the corresponding distribution of responses for SDI areas only is illustrated. Clearly, of those few who had been under the correct impression that the destination had received SDI “status”, not a single one had actually been influenced much by this fact. At best, those who moved to an area forming part of a declared SDI at any time since 1995 had been influenced only to a very small extent (“very little”) by the fact that the destination had received such a “status”. This information may not bode well for the potential success of these initiatives.



### 2.1.3 Perceptions regarding local development initiatives by the government or the private sector

*Questions asked:* (a) “Were you aware of any local development initiatives here by the government or the private sector?” (b) [IF YES]: “To what extent did this awareness influence your decision to move here?”

In this case slightly more than one-eighth (13%) of the former migrants had been aware of such initiatives at the destination. Of these, one-fifth (20%) indicated that their decision to move there had “not at all” been influenced by these initiatives. A slight majority (53%) had been influenced “largely” (22%) or “totally” (14%). This picture is somewhat more encouraging than the one relating to SDIs, but the fact remains that seven-eighth of the population had not been aware of such initiatives. The response distribution for SDIs is illustrated in Graph 4.



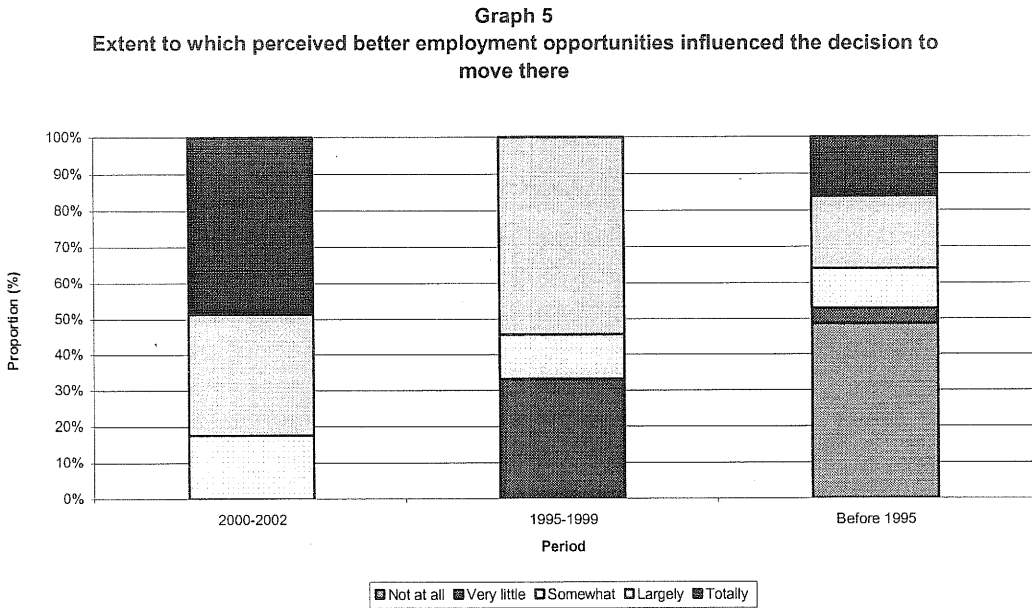
Perceived local development initiatives in SDI areas clearly played a more important role in influencing migration decisions than the SDI “status” of the area, but still the majority of those who had recently (2000–2002) moved to SDI areas had “not at all” been influenced by these initiatives. A majority (70%) of those who had migrated between 1995 and 1999 had been influenced at least “somewhat” by the local development initiatives. About the same proportion of those migrating before 1995 had also been influenced “somewhat”, “largely” or “totally”.

### 2.1.4 Perceptions regarding local employment opportunities

*Questions asked:* (a) “Did you believe at the time that the employment opportunities in this area were good, compared to other areas?” (b) [IF YES]: “To what extent did this belief influence your decision to move here?”

Slightly more than two-fifths (42%) of the respondents indicated that they had believed the employment opportunities would be better at the destination than elsewhere. Of these, more than two-thirds (68%) had been influenced “largely” (54%) or “totally” (14%) by this perception. Graph 5 illustrates the response distribution for SDI areas. Perceived better employ-

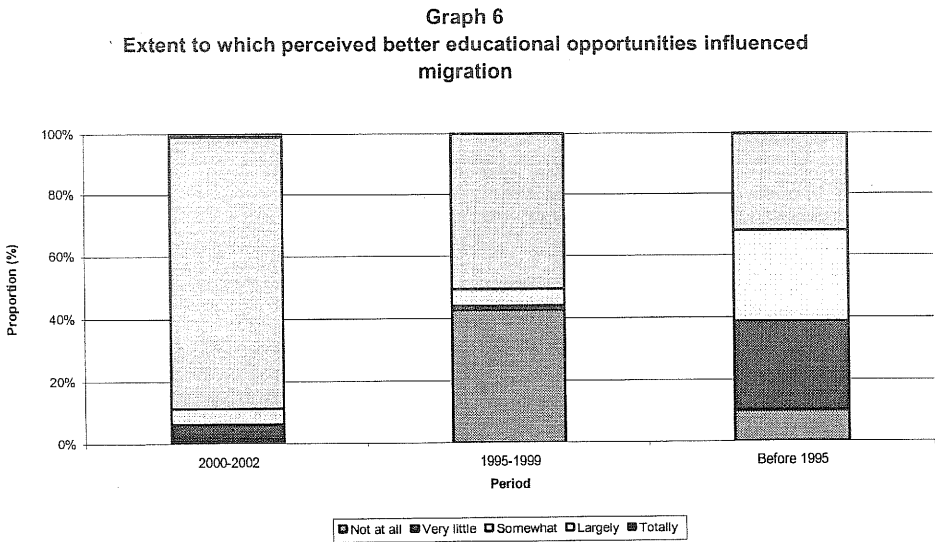
ment opportunities in the SDI areas had clearly influenced the majority of recent (2000–2002) decisions to migrate to those areas, and an inspection of the data showed that SDI areas performed even better than the metropolitan areas in this period. The SDIs had also performed comparatively well in the preceding five-year period.



It would be interesting what impact more socially relevant developments might have had on migration decisions. These are discussed in the sections that follow.

### 2.1.5 Perceptions regarding local educational opportunities

*Questions asked:* (a) “Did you believe at the time that the educational opportunities in this area were good, compared to other areas?” (b) [IF YES]: “To what extent did this belief influence your decision to move here?”





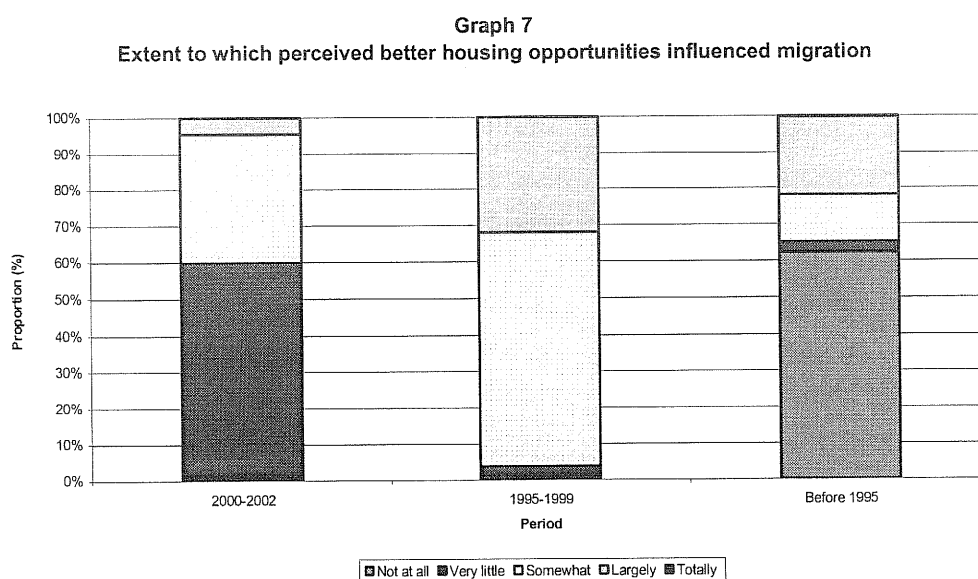
More than one-third (35%) of the respondents indicated that they had believed the educational opportunities at the destination to be better than elsewhere. Of these only 15 per cent indicated that they had “not at all” been influenced by these perceived opportunities in their migration decision.

Graph 6 shows the response distribution in respect of SDI destinations. The majority of migratory moves since 1995 had been influenced “largely” or “totally” by the perceived better educational opportunities in SDI areas than elsewhere, and at the same the SDIs compared favourably to metropolitan areas.

## 2.1.6 Perceptions regarding local housing opportunities

*Questions asked:* (a) “Did you believe at the time that the housing opportunities in this area were good, compared to other areas?” (b) [IF YES]: “To what extent did this belief influence your decision to move here?”

About one-third of the respondents (34%) indicated that they had believed the housing opportunities in the destination would be better than elsewhere, and of these one-tenth (10%) had “not at all” been influenced by this belief.



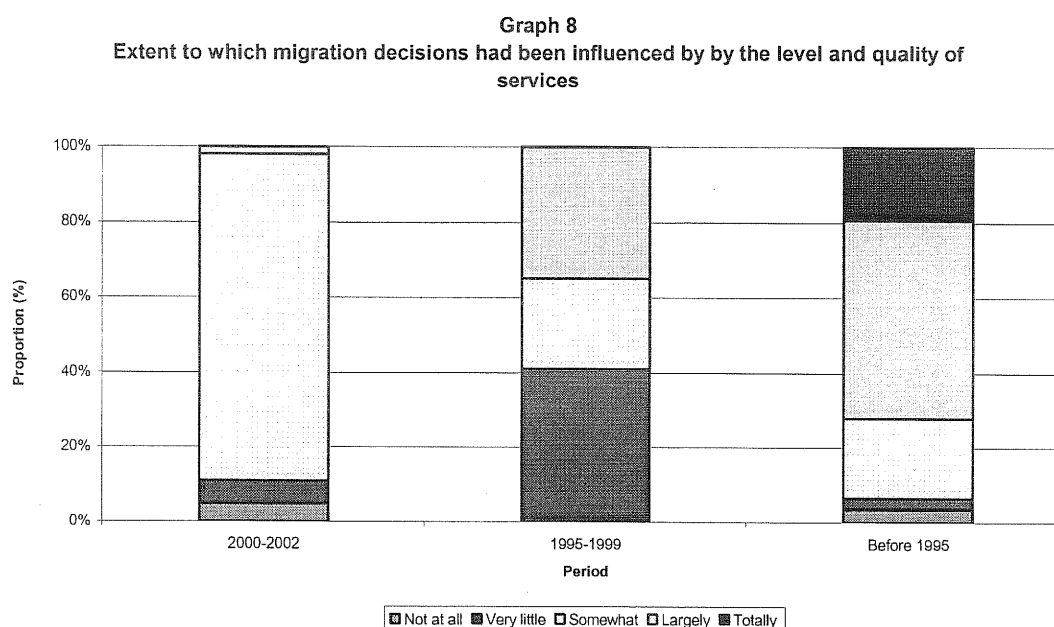
Graph 7 illustrates the response distribution in respect of SDI destinations. Although most of the recent (2000–2002) migration decisions were influenced only to a small extent (“very little”) by perceived better housing opportunities in SDI areas, moves to SDI areas taking place between 1995 and 1999 had been influenced to a far greater extent by housing opportunities.

## 2.1.7 Perceptions regarding the level and quality of local services

*Questions asked:* (a) “Did you believe at the time that the level and quality of services in this area were good, compared to other areas?” (b) [IF YES]: “To what extent did this belief influence your decision to move here?”

One-quarter of the respondents (25%) had been under the impression that the level and quality of services would be better in the destination than elsewhere, and 91 per cent of these had been influenced at least to some extent by this belief in their decision to move there.

SDI areas performed rather badly in terms of the level and quality of services when compared to metropolitan areas, but that the SDIs are still more attractive than other (non-metropolitan and non-SDI) areas. The response distribution for SDIs is illustrated in Graph 8.



#### 2.1.4 Potential impact of post facto rationalisations

It should be remembered that people's responses to the questions listed above might have been affected by a so-called "post facto rationalisation" of the decisions that they had taken. This is a typical problem with questions on past motivations:

*Post facto* rationalizations will dominate responses to questions such as 'Why did you leave your previous place of residence?'; 'Why did you move to this place?' As a number of researchers have found, motives adduced by migrants for moves in the past may hide, rather than reveal, underlying causes for movement. Not only do memories get blurred, but a concrete objective or some dramatic event may stand out in a migrant's narrative, rather than the cumulative effects of hopes and fears which are probably the real causes pushing a man [sic] to leave his home for another (Bedford, in De Jong & Fawcett 1981: 44).

Bedford (in De Jong & Fawcett 1981) also stated that there is no simple way to overcome this problem, but as De Jong and Fawcett (1981:44) correctly point out, research that seeks to identify the full range of motives for migration and aims to fully understand the processes involved, would reduce the impact of this problem more adequately. A complementary possibility is to use social desirability scales to help control for the effect of post facto rationalisa-

analyses because the confirmatory factor analyses have not yet been completed at the time of writing, is "social desirability" (i.e. the differential need among different respondents to "look good" in the eyes of the interviewer or researcher).

All the profile variables included in the analyses are to some extent expected to be both predictive and control factors, but some were expected to be more of a control factor than others. For every predictor listed below it will be indicated whether it has been included mainly as a control variable or not.

Another predictor, which was expected to be not only an important predictive but to some extent also a control variable, is whether the respondent's move at the time was to an area where development initiatives were almost certainly being implemented (namely "**metropolitan or SDI area**") or not. The categories involved here are: (a) "neither" (i.e. not a metropolitan nor an SDI area), (b) "metropolitan area", (c) "SDI area", which indicates that the respondent lived in a (non-metropolitan) SDI area at the time of the survey.

The "**level of prior information about the current area of residence**", which was considered to be both a predictive and a control variable (to about the same extent), has the following categories in these analyses: (a) "nothing whatsoever" or "too little" (where a combination of these two levels was, once again, necessitated by the interaction with other variables), (b) "enough", (c) "a great deal", and (d) "everything there was to know". The predictor "**extent to which the prior information about the current area had been relied on**" was included mainly as a control variable but it was expected to have some predictive power in its own right as well. The categories are: (a) "not at all", (b) "only a little", (c) "sufficiently", and (d) "a great deal".<sup>3</sup> "**Whether the prior information about the current area proved to be accurate or not**" was included as mainly a control variable, and the same applied to the predictors "main reason for moving to the current area" and "whether or not the respondent had the final say in the decision to move to the current area". The categories for the predictor "main reason for moving" used here are: (a) "economic situation" (in either the origin or the destination), (b) "job/work or income", (c) "education" (of self or children), (d) "affiliation/autonomy" (which includes marriage-related reasons), (e) "forced/housing/crime" (a broad category that represents a combination of reasons lumped together to eliminate the observed interaction with other variables), and (f) other".

The predictor "**satisfaction with life in general**" was included mainly as a predictive but to some extent also as a control variable. Its categories are: (a) "very dissatisfied", (b) "dissatisfied", (c) "neither satisfied nor dissatisfied", (d) "satisfied", and (e) "very satisfied". A predictor that was expected to relate closely with satisfaction/dissatisfaction is "**whether or not moving away from the current area had ever been considered**".

While "**highest educational attainment**" was expected to be a relatively important predictor in its own right, it was also included for its expected controlling function. The categories used are: (a) "Grade 7 or lower" (denoting either no education or primary-level schooling only), (b) "Grades 8–11" (representing secondary-level schooling only), and (c) "Grade 12 and higher" (which would indicate that one has been prepared best for the information-related demands of adult life).

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<sup>3</sup> In the sample used for these analyses there was not a single case of someone indicating that s/he relied "entirely" on the prior information obtained about the current area of residence.

The ordinal-scaled predictor denoting current or previous **“occupational status”** has the following categories in these analyses: (a) “independent professional / high managerial position” represents the top level in the hierarchy of occupations, (b) “other professional”, (c) “clerical/sales worker”, (d) “skilled/white-collar worker”, (e) “semi-skilled worker”, and (f) “unskilled/other labourer”. This predictor was expected to indicate to what extent the individual concerned had responded to specialised instead of more general opportunities being available in the current area of residence, and it would, as such, be expected to be an important predictor as well as a control variable (albeit to a lesser extent). The associated predictor, **“whether or not the respondent was working (for pay or family gain) at the time of the survey”**, was included exclusively as a control variable.

An obvious control (and to some extent also a predictive) variable is the length of time that had passed since the respondent's last migratory move. In these analyses the predictor used is **“duration of stay in current area of residence”**, and the following three rather broad categories were used: (a) 0–4,9 years (representing the most recent moves), (b) 5–9,9 years (indicating an intermediate category), and (c) 10 years or longer (denoting moves that took place a long time ago). (Although it would have been more useful to disaggregate the first category into more than one level, this broad categorisation was necessitated by the observed interactions with the other variables.)

The demographic predictors **“age at time of last migration”** and **“gender”** were expected to be predominantly control variables, but they were regarded as potentially important predictors in their own right as well. “Age at time of last migration” was categorised into the five key stages of the adult life cycle<sup>4</sup>: (a) 18–24 years (denoting entry into the labour market), (b) 25–34 years (generally representing entry into marriage and the birth of a first child), (c) 35–44 years (covering the ages when children make specific demands on the size of the accommodation and have to attend school), (d) 45–54 years (representing the ages when children generally leave the parents' home), and (e) 55–69 years (which are usually associated with retirement). The other demographic predictor **“population group”** (or “race”), which was included mainly as a control variable, has the following (census-based) categories: (a) “African/Black”, (b) “Coloured”, (c) Indian/Asian, and (d) “white”.

The predictors mentioned above were used in all the analyses described below, and it is important to mention that the very same respondents were used in all these model applications.

### 3.2 Analyses of the differential effects of development initiatives

An interval-scaled “effectiveness index” was constructed to serve as the dependent variable for an MCA-based model<sup>5</sup> to study the effectiveness of development initiatives on migration decisions for different categories of former migrants. The index is the sum of the seven development-related factors described earlier, after allocating the value zero to a factor if respondents indicated that they had not been aware of the specific initiative or action. Since there is no certainty that this index measures what it is purported to, the seven nominal-

<sup>4</sup> Various researchers, such as Speare (1974), De Jong & Fawcett (1981), Speare et al. (1982), and De Jong (2000), have identified life-cycle changes as important determinants of migration.

<sup>5</sup> For a detailed discussion of MCA, see Andrews, Morgan, Sondquist & Klem (1973).

scaled development-related factors would also be studied individually by means of a series of MNA-based models<sup>6</sup> to determine whether they produced any notably different results from those obtained from the general MCA model. (If these individual MNAs were to produce basically the same results, the “effectiveness index” could be regarded as valid.)

### 3.2.1 Overall analysis

In Table 1 the detailed results of the multiple classification analysis (MCA) are presented.

**TABLE 1: EFFECTIVENESS OF SPATIAL DEVELOPMENT INITIATIVES: RESULTS OF THE MULTIPLE CLASSIFICATION ANALYSIS (MCA)**

Independent variables (in order of importance)	Category of the independent variable concerned	Number of cases	Sum of weights	Coefficient	Dependent variable (“effectiveness index”) mean	
					Unadjusted (raw)	Adjusted (partial)
Duration of stay in the current area	0–4,9 years	197	1 615 319	-9,562	12%	10%
	5–9,9 years	120	948 189	2,055	20%	21%
	10 years or longer	268	1 573 995	8,575	26%	28%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,30**	0,38*
Metropolitan or SDI area?	Neither	260	2 108 857	-4,322	14%	15%
	Metropolitan area	249	1 457 141	9,157	29%	28%
	SDI area	76	571 505	-7,398	12%	12%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,35**	0,32*
Occupational status	Indep. professional/Managerial	70	277 930	14,015	34%	33%
	Other professional	97	565 675	-4,372	18%	15%
	Clerical/Sales worker	90	320 561	-1,916	21%	17%
	Skilled/White-collar worker	82	392 597	1,097	19%	20%
	Semi-skilled worker	56	472 674	-1,231	13%	18%
	Unskilled/Other	190	2 108 066	-0,311	18%	19%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,21**	0,19*
Age at time of last migration	18–24 years	26	191 860	2,299	15%	21%
	25–34 years	148	1 515 727	4,376	20%	23%
	35–44 years	174	1 050 261	-1,791	17%	17%
	45–54 years	120	637 152	-6,228	18%	13%
	55–69 years	117	742 503	-1,649	21%	17%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,07**	0,18*
Level of information about the possible destination	Nothing whatsoever / Too little	118	876 107	-1,187	18%	18%
	Enough	171	1 348 892	0,303	19%	19%
	A great deal	112	699 830	-5,305	12%	14%
	Everything there is to know	184	1 212 674	3,581	24%	23%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,19**	0,14*

Table continues/...

\* The beta value is equivalent to a partial correlation coefficient.

\*\* The eta value is equivalent to an ordinary (simple) correlation coefficient, and was adjusted for the number of variables in the model.

<sup>6</sup> For a detailed description of MNA, see Andrews & Messenger (1973).

Independent variables (in order of importance)	Category of the independent variable concerned	Number of cases	Sum of weights	Coefficient	Dependent variable ("effectiveness index") mean	
					Unadjusted (raw)	Adjusted (partial)
Extent to which relied on information about current area	Not at all	65	375 161	-8,646	14%	10%
	Only a little	88	483 041	-0,853	18%	18%
	Sufficiently	223	1 817 980	0,868	17%	20%
	A great deal	209	1 461 321	1,421	23%	21%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,14**	0,13*
Main reason for moving to the current area of residence	Economic situation	85	489 374	-0,954	21%	18%
	Job/Work/Income	200	1 623 919	1,384	17%	20%
	Education (self or children)	17	147 193	-2,166	21%	17%
	Affiliation/Autonomy	147	1 054 561	1,755	22%	21%
	Forced/Housing/Crime	68	352 829	-4,235	18%	15%
	Other	68	469 627	-3,871	15%	15%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,12**	0,10*
Gender	Male	285	2 463 447	-1,200	15%	18%
	Female	300	1 674 056	1,766	25%	21%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,21**	0,07*
Information accurate?	Yes	503	3 590 062	-0,530	19%	19%
	No	82	547 441	3,474	19%	23%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,01**	0,06*
Highest educational attainment	Grade 7 or lower	123	1 881 052	-1,127	17%	18%
	Grades 8–11	175	1 046 112	-0,202	19%	19%
	Grade 12 or higher	287	1 210 339	1,926	22%	21%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,11**	0,06*
Final say in decision to move?	Yes	519	3 809 179	0,377	20%	19%
	No	66	328 324	-4,375	13%	15%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,09**	0,06*
Population group	African/Black	229	2 971 889	0,776	18%	20%
	'Coloured'	120	338 207	-2,038	18%	17%
	Indian/Asian	65	86 916	-1,483	19%	18%
	White	171	740 491	-2,009	22%	17%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,07**	0,06*
Ever considered moving away?	Yes	110	518 824	2,086	22%	21%
	No	475	3 618 679	-0,299	19%	19%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,06**	0,04*
Currently working?	Yes	320	2 125 068	0,080	19%	19%
	No	265	2 012 435	-0,085	19%	19%
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,01**	0,00*
Number of cases on which the analysis is based: 585 (Total sum of weights: 4 137 503)						
Mean of the dependent variable (perception index): 19%						
Standard deviation of the dependent variable: 21%						
Proportion of variation in the dependent variable explained by this model: 38%						
Multiple correlation coefficient (adjusted for the number of variables in the model): 0,58						

\* The *beta* value is equivalent to a partial correlation coefficient.

\*\* The *eta* value is equivalent to an ordinary (simple) correlation coefficient, and was adjusted for the number of variables in the model.

“Duration of stay in the current locality” (beta value 0,38) is clearly a control variable, but since it also reflects the period during which the last move took place it may be considered an important predictor of the effectiveness of spatial development initiatives in its own right. The adjusted figures show a monotone increase in the effectiveness with duration (from 10% to 28%), which is the opposite of what might have been expected. One would probably be inclined to think of the most recent initiatives as having the greatest effect, but this is clearly not the case – even in terms of the raw (unadjusted) means.

Development initiatives are clearly more effective (28%) in the metropolitan areas than in other areas (notably also in the SDIs, with 12%), and the associated beta value is relatively high – 0,32. This would be a frustrating conclusion to everyone who wishes to see a reduction in the “urban bias” as far as development priorities are concerned, but one should perhaps never be expecting anything different. Metropolises are the areas where the opportunities (especially markets) are concentrated, and therefore they provide more opportunities for employment, education, housing and services, which are also the factors featuring prominently in the “effectiveness index”.

Development initiatives were clearly most effective (33%) to people who were currently (or previously, if not currently working) finding themselves in the top-most occupational categories (independent professionals and high-level managers), but for the remaining occupational status categories the effectiveness was about the same (15%–20%). The comparatively high beta value of 0,19 shows that this conclusion holds an interesting promise for those responsible for development initiatives – they may in fact be able to attract and retain the entrepreneurs after all!

The persons responsible for development initiatives would probably like to attract and retain the younger adults, and this is clearly happening (beta value 0,18). The effectiveness index among the younger adults (aged 18–34 years) ranged from 21% to 23%, whereas the index for their older counterparts ranged from 13% to 17%. This is yet another indication of development initiatives bearing fruit where they should.

Prior information about the destination and the extent to which this information is relied upon are covered in the next two predictors (with beta values of 0,14 and 0,13 respectively). The effectiveness of development initiatives for those who had known “everything there was to know” about the area to which they migrated was 23% (which is slightly higher than for the other categories where it ranged from 14% to 19%). As the degree of reliance on this information the effectiveness index increases monotonely.

The effectiveness index was highest for persons who had migrated primarily for reasons related to affiliation/autonomy (21%) and job/work/income-related reasons (20%) to about the same extent. For the other main reasons the effectiveness index ranged from 15% to 18%. (The associated beta value is 0,10.)

Women were somewhat more influenced by development initiatives (21%) than men (18%) – beta value 0,07 – and this may be ascribed to the higher effectiveness of the non-economic initiatives for women than for men (from the MNA models, summarised in the appendix).

Whether or not the prior information proved to be accurate (beta value 0,06) affects the effectiveness index to some extent, with the effectiveness level (19%) being slightly lower for respondents whose information had been accurate (19%) than for those whose information had been inaccurate (23%).

There is a monotone increase in the effectiveness level as educational level increases (beta value 0,06). Persons with a Grade 12 or higher education have a mean effectiveness index of 21 per cent compared to those with only a primary-school education (18%). Although the differences are small, the implications are important, because better-educated persons would be influenced slightly more by development initiatives than less-educated individuals.

Whether or not the migrant had the final say in the decision to move, turned out to be important, not only as a control variable but also as a predictor (beta value 0,06). The effectiveness index is notably higher for those who had the final say (19%) than for those who did not (15%).

The effectiveness of development initiatives was slightly higher for African respondents (20%) than for the minority groups (17%–18%) – beta value: 0,06 – and those who had considered moving away (again) had a slightly higher mean effectiveness level (21%) than those who had not (19%) – beta value: 0,04.

The remaining independent variable (whether or not currently employed) had no effect on the degree to which the variation in the dependent was explained (beta value: zero), with both categories being 19 per cent.

### 3.2.2 Comparing the results

Unfortunately, due to the large proportions of respondents who had been unaware of the first three factors – (a) development initiatives elsewhere (72%), (b) whether or not the destination had been declared an SDI area (88%), and (c) local initiatives by government or the private sector (84%) – prior to leaving their previous area of residence, MNA could not be applied effectively in those three cases. The validation of the perception index will therefore remain somewhat inconclusive irrespective of the degree of correspondence between the results of the remaining four MNA applications and those obtained from the MCA.

It should be clear from the appendix that the best prediction is obtained in the model dealing with the extent to which perceived better local services influenced the decision to migrate to the current area (with an R-squared value of 27%), followed closely by the model for predicting the extent to which prior awareness of perceived better local employment opportunities influenced the migration decision (R-squared = 25%). The two models that aim to predict the extent to which perceived better local *educational* and *housing* opportunities influenced the decision to migrate, the predictive power is somewhat weaker (both R-squares = 21%). Consequently, although the variables included here are better suited to predict the past impacts of better services and better employment opportunities than the impacts of perceived educational and housing opportunities, they do not account for much more than one-quarter of the variation in place perceptions in any of the models. Other factors, not covered by the models, account for more than 60 per cent of that variation.



The validity of the “effectiveness index” could therefore not be established beyond all doubt, but it can certainly not be refuted on the basis of the results of the MNA models (covering exactly the same respondents) reported in the appendix. The order of importance of the predictors in the four MNA models differed and also differed from that of the MCA model described in Section 3.2.1 above, but an inspection of the detailed results (available from the author) showed that the general patterns regarding the effectiveness of the different development initiatives/actions are very similar to those found in the MCA model. It could therefore be argued that the effectiveness index developed here is likely to be sufficiently valid for these purposes.

### **3.3 The proven extent to which SDIs attracted “sought-after” migrants**

The only available census data on migration that are available at this point are those generated by Census '96. It would, however, serve no purpose to study these data in any detail, because the SDI concept really only saw the light in South Africa during 1995, and people might not have had sufficient time to respond to these new initiatives by the time the census took place (i.e. October 1996). Census 2001 should provide very useful data, however.

This leaves us with the sample survey, which cannot be expected to provide a comprehensive picture, except in so far as the characteristics of the migrants are concerned. In the survey a battery of items was included to test for risk-taking ability and efficacy (i.e. the ability to “get things done”), but the confirmatory factor analyses have not been completed. At this stage the effectiveness of SDIs to attract people with these two personality traits can therefore not be analysed.

We can, however, provide a general socio-demographic and economic profile of the migrants who had moved to SDI areas since 1995. For this purpose a multiple classification analysis (MCA) model was developed.

The question to be answered was: What were the main characteristics of the migrants who were inclined to move to SDI areas? The dependent variable was whether the destination of the last move was an SDI area or not. The following independent variables (predictors) were included in the model: (a) whether or not the origin was a metropolitan or SDI area (neither or either), (b) age at the last migration (18-24, 25-34, 35-44, 45-69 years), (c) period during which the last move took place (before or since 1995), (d) level of information about the destination (nothing, intermediate or everything), (e) awareness of development initiatives in the destination (yes or no), (f) gender (male or female), (g) population group (African, “coloured”, Indian/Asian or white), and (h) highest educational attainment (Grade 7 or lower, Grades 8-11 or Grade 12 and higher).

Although the model (which was based on only 250 cases) explained merely 12 per cent of the variation in the dependent variable, a few interesting patterns emerge when one considers the adjusted (partial) figures:

- (a) Education proved to be the most important predictor (beta value 0,32), with those having the lowest qualifications (Grade 7 or lower) being far more inclined to move to SDI destinations (29%) than those who had passed between Grade 8 and Grade 11 (11%). Those with matric or a higher qualification were the least inclined (2%) to move to SDI destinations.

- (b) Population group was the second best predictor (beta 0,23), with whites being most inclined to move to SDI areas (15%) and Africans the least inclined (0%). Indians/Asians (9%) and "coloureds" (7%) were somewhere in between.
- (c) Age at migration (the third best predictor, with a beta value of 0,17) produced mixed a bi-modal distribution, with those in the age groups 18-24 years (14%) and 35-44 years (11%) being far more inclined to move to SDI area than those in the age group 25-34 years (8%). Those who moved while aged 45 years and older had the lowest inclination to move to SDI areas (1%).
- (d) The level of information about the destination also proved to be important (beta value 0,14), with those knowing something about the area (i.e. the middle categories) being far more inclined to move to SDI areas (14%) than those who knew "nothing whatsoever" (5%) and those who knew "everything there was to know" (6%).
- (e) Awareness of development initiatives at the destination turned out to be another important predictor (beta 0,12), and here those who had been aware of such initiatives were far more inclined to move to an SDI area (10%) than those not being aware (0%).

The remaining independent variables (i.e. period of the move, whether or not the origin was a metropolitan or SDI area, and gender) had far smaller contributions to make (with beta values of 0,05, 0,05 and 0,02 respectively).

From the above it would appear that the SDIs were not particularly successful in attracting the much-needed, highly skilled human resources. They were, however, successful in attracting the young (18–24 years of age) as well as the more established (35–44 year-old) adults, which would probably lead to future population and economic growth of the SDI areas.

## 4 SUMMARY AND CONCLUSIONS

More than US\$33 billion has so far been invested as part of South Africa's spatial development initiatives (SDIs). Unfortunately, the emphasis in these initiatives on profitability, with the latter being emphasised instead of equity, is precisely where a major problem with the new initiatives has so far been identified.

This paper attempted to provide an answer to the question whether migrants were attracted to SDI areas by the various development initiatives taking shape in these areas. The analyses produced mixed results, but it seems clear that migrants were, in fact, attracted by the employment, education and housing opportunities found in the SDI areas, and in some cases the SDIs were at least as attractive as the country's metropolitan areas. The same does not apply, however, in respect of the mere SDI "status" of an area or the level and quality of services provided there.

Another question, which has only been partially answered by this paper, is to what extent the SDI areas attracted – and therefore, by implication, also managed to retain – the human resources that are necessary for development. The multiple classification analysis (MCA) showed that the SDIs did manage to attract young adults, but not the better-educated ones. These mixed results makes it difficult to draw firm conclusions in this regard, and it is hoped that further analyses of the data would include sought-after personality traits such as risk-taking ability and efficacy, both of which are characteristics that are particularly important requirements for entrepreneurial development.

The paper also investigated the extent to which development initiatives in general are perceived to be effective in attracting (and therefore perhaps also retaining) people with the skills needed for development. An "effectiveness index" was constructed and used in another MCA-based model. Since the index seems to be sufficiently valid, based on conclusions from a series of multivariate nominal-scale analyses (MNAs), the results of the MCA can be used with a great deal of confidence. Development initiatives are clearly attractive to persons in the highest occupational status categories, young adults and better-educated persons (in this order). However, they are much more effective in attracting people to metropolitan areas than to other parts of the country, including SDI areas.

Spatial development initiatives (in their various forms and at different time periods) have been important instruments for bringing development to areas where development is most needed. It would therefore be both appropriate and necessary to further investigate these initiatives when additional, more suitable, explanatory variables (such as risk-taking ability, efficacy and social desirability) generated by the HSRC migration survey have been properly tested and made available for analyses of that nature.

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## APPENDIX

### MULTIVARIATE NOMINAL-SCALE ANALYSES OF THE EXTENT TO WHICH PRIOR AWARENESS OF PERCEIVED BETTER LOCAL OPPORTUNITIES INFLUENCED MIGRATION DECISIONS

**TABLE A: EXTENT TO WHICH PRIOR AWARENESS OF PERCEIVED BETTER LOCAL EMPLOYMENT OPPORTUNITIES INFLUENCED THE MIGRATION DECISION: STATISTICS PRODUCED BY THE MNA MODEL**

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Main reason for the last move	57%	6%
Duration of stay in current area	57%	4%
Satisfaction with life in general	57%	3%
Level of information about the possible destination	57%	3%
Occupational status	57%	3%
Metropolitan or SDI location?	57%	3%
Currently working?	57%	3%
Extent to which prior information about current area was relied on	57%	2%
Age at (last) migration to the current area	57%	1%
Gender	57%	1%
Final say in the decision to move to the current area?	57%	1%
Highest educational attainment	57%	1%
Population group	57%	0%
Prior information about the current area accurate?	57%	0%
Ever considered moving away from the current area?	57%	0%
Complete model (overall analysis)	73%*	25%**

\* For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

\*\* For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

In Table A the statistics in respect of the overall model for employment opportunities are provided. Since not one of the bivariate Thetas in Table A (all 57%) is as high as the multivariate Theta (73%) nor the generalised Eta-squared values as high as the generalised R-squared (25%), one may conclude that the predictors in combination contribute something to the prediction of the dependent variable over and above the predictive power of any one predictor on its own. The generalised Eta-square values indicate that population group, whether or not migration has ever been considered and the accuracy of the prior information about the current area have virtually nothing to contribute in terms of predictive power. These three variables should thus be treated as control variables.

Table B gives the statistics in respect of educational opportunities for the overall model, and again not one of the bivariate Thetas in Table B (all 62% except for the predictor "main reason for the last move" whose bivariate Theta is 63%) is as high as the multivariate Theta (68%) nor the generalised Eta-squared values as high as the generalised R-squared (21%), one may conclude that the predictors in combination contribute something to the prediction of the

dependent variable over and above the predictive power of any one predictor on its own. The generalised Eta-square values indicate that whether or not migration has ever been considered, whether or not the respondent had the final say in the last migration decision and the accuracy of the prior information about the current area have virtually nothing to contribute in terms of predictive power.

**TABLE B: EXTENT TO WHICH PRIOR AWARENESS OF PERCEIVED BETTER LOCAL EDUCATIONAL OPPORTUNITIES INFLUENCED THE MIGRATION DECISION: STATISTICS PRODUCED BY THE MNA MODEL**

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Metropolitan or SDI location?	62%	5%
Main reason for the last move	63%	4%
Duration of stay in current area	62%	4%
Satisfaction with life in general	62%	3%
Level of information about the possible destination	62%	2%
Gender	62%	1%
Age at (last) migration to the current area	62%	1%
Highest educational attainment	62%	1%
Occupational status	62%	1%
Extent to which prior information about current area was relied on	62%	1%
Population group	62%	1%
Currently working?	62%	1%
Prior information about the current area accurate?	62%	0%
Final say in the decision to move to the current area?	62%	0%
Ever considered moving away from the current area?	62%	0%
Complete model (overall analysis)	68%*	21%**

\* For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

\*\* For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

**TABLE C: EXTENT TO WHICH PRIOR AWARENESS OF PERCEIVED BETTER LOCAL HOUSING OPPORTUNITIES INFLUENCED THE MIGRATION DECISION: STATISTICS PRODUCED BY THE MNA MODEL**

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Metropolitan or SDI location?	60%	5%
Occupational status	62%	5%
Population group	60%	3%
Main reason for the last move	60%	3%
Duration of stay in current area	60%	3%
Satisfaction with life in general	60%	2%
Age at (last) migration to the current area	60%	2%
Highest educational attainment	60%	2%
Extent to which prior information about current area was relied on	60%	2%
Level of information about the possible destination	60%	1%
Prior information about the current area accurate?	60%	1%
Gender	60%	1%

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Ever considered moving away from the current area?	60%	0%
Currently working?	60%	0%
Final say in the decision to move to the current area?	60%	0%
Complete model (overall analysis)	65%*	21%**

\* For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

\*\* For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

The statistics in respect of the overall model for housing opportunities are provided in Table C. Once again not one of the bivariate Thetas in Table C (all 60% except for the predictor "main reason for the last move" whose bivariate Theta is 62%) is as high as the multivariate Theta (65%) nor the generalised Eta-squared values as high as the generalised R-squared (21%), one may conclude that the predictors in combination contribute something to the prediction of the dependent variable over and above the predictive power of any one predictor on its own. The generalised Eta-square values indicate that whether or not the respondent had the final say in the last migration decision, whether or not the respondent was working at the time of the survey and whether or not migration has ever been considered have virtually nothing to contribute in terms of predictive power.

**TABLE D: EXTENT TO WHICH PRIOR AWARENESS OF PERCEIVED BETTER LOCAL SERVICES INFLUENCED THE MIGRATION DECISION: STATISTICS PRODUCED BY THE MNA MODEL**

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Duration of stay in current area	67%	5%
Metropolitan or SDI location?	67%	5%
Occupational status	67%	4%
Satisfaction with life in general	67%	3%
Highest educational attainment	67%	3%
Age at (last) migration to the current area	67%	2%
Population group	67%	2%
Level of information about the possible destination	67%	2%
Gender	67%	2%
Main reason for the last move	67%	2%
Extent to which prior information about current area was relied on	67%	1%
Currently working?	67%	1%
Ever considered moving away from the current area?	67%	1%
Final say in the decision to move to the current area?	67%	0%
Prior information about the current area accurate?	67%	0%
Complete model (overall analysis)	76%*	27%**

\* For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

\*\* For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

Since not one of the bivariate Thetas in Table D (all 67%) is nearly as high as the multivariate Theta (76%) nor the generalised Eta-squared values nearly as high as the generalised R-squared (27%), one may conclude that the predictors in combination contribute something to the prediction of the dependent variable over and above the predictive power of any one predictor on its own. The generalised Eta-square values indicate that whether or not the prior information about the current area and whether or not the respondent had the final say in the last migration decision have virtually nothing to contribute in terms of predictive power.