Measuring perceived black economic empowerment in the South African wine industry

W Janssens, N Sefoko, J van Rooyen & F Bostyn[1]

Abstract

The aim of this study is to develop a scale to measure perceived black economic empowerment (BEE) as reported by beneficiaries themselves. Two scale development procedures were carried out on randomly selected samples of 213 and 322 previously disadvantaged individual respondents within 14 and 11wine business that cover the larger part of the wine industry chain. The results led to a 'feeling' self-report scale (5-dimensions) and an 'evolution' self-report scale (6-dimensions). The emerged dimensions are: Business ownership and control (BOC), Access to finance (ATF), Employment and Human Resources Management (EMP) [internal and external], Social capital/enabling environment (SOC) and Lobbying power and collective action (LOB). First measurement results indicate that respondents feel less empowered with respect to BOC and ATF as compared to EMP, SOC and LOB. There appears to be no gender or age differences, but there are geographical differences. The latter is mostly per farm, that is, a lot of variation in BEE is observed at the firm level. The scale can be used at the firm and industry level as a diagnostic tool to monitor BEE progress as a complementary and not a substitutive framework to the wine industry scorecard as an objective measure of BEE. Future research should focus on the gap between the two definitions and assessment tools in order to comprehensively capture BEE in its entirety. The scale can also be adapted to fit the context, for example, its use in the agricultural sector at large.

1. Introduction

To define black economic empowerment (BEE) as the percentage change or increase in the number of black South Africans in specific positions appears to be a narrow definition of empowerment that subsequently led to a 'one-sided'

[1] *Respectively PhD student, Department of Marketing, Faculty of Applied Economics, University of Antwerp; Assistant Researcher, Department of Management, Faculty of Applied Economics, University of Antwerp, and University of Pretoria; Professor, Department of Agricultural Economics, Rural Development and Extension, University of Pretoria; CEO, South African Wine and Brandy Company (SAWB); and Professor, Department of Management, Faculty of Applied Economics, University of Antwerp; Dean, University of Antwerp Management School (UAMS).*

measurement tool (objective part). Even with the broad-based definition of BEE that encompasses both the creation of the black middle class and the socio-economic upliftment of the majority of poor South Africans (DTI, 2003), narrow assessment tools are still being applied to monitor and evaluate the socio-economic transformation process. Therefore, there is a need to find alternative measurement tools that complement the objective criterion in order to effectively determine BEE outcomes as feedback mechanisms to policy-makers and practitioners. Hence, like welfare (Pradhan and Ravallion, 2000) and poverty (Ravallion and Lokshin, 2001) it is of interest therefore to consider other useful evaluation tools of empowerment apart from objective trends. Thus, subjectivity needs to be acknowledged.

An interest in the study of subjective perceptions of well-being has grown during the previous thirty years (Lokshin *et al*, 2004). This is because most of the literature in economics and psychology has sought to understand why some people purport to feel well-off in interviews, while others do not. However, it is only recently that economists have turned their attention to the analysis of subjective well-being in developing and transition economies, where income is not a well defined concept, particularly in rural areas (Pradhan and Ravallion, 2000). A similar analysis is to be performed here in terms of the development of a perceived self-reported scale of empowerment apart from the objective part.

Empowerment is argued to be multidimensional in nature. Economic empowerment has an overlap in dimensions that are embedded in social issues as well (Zippay, 1995). This paper therefore argues for both the conceptual and analytical interests of a perceptual approach to empowerment.

The primary purpose of this paper therefore is to develop a self-reported quantitative scale in order to measure perceived BEE and its sub-dimensions, which allows one to identify the perceived empowerment level alongside the objective criterion.

2. Subjectivity reviewed

It seems paradoxical that when economists analyse the welfare impacts of policies, they typically assume that individuals are the best judges of their own welfare, yet they resist directly asking individuals themselves whether they are better-off or not (Ravallion and Lokshin, 2002). It is assumed instead that an economist knows the answer on the basis of objective data. While early notions of 'utility' were explicitly subjective, the modern approach in economics has generally ignored perceptions of respondents about their own

socio-economic conditions. Responses to survey questions on perceived empowerment may well be a source of additional information needed for identifying the level of an individual's empowerment (Kapetyn, 1994; Van Praag, 1991).

The basis for subjective assessments of empowerment is embedded, in part, within the social mobility and societal transformation literature. Socialism was founded on Soviet imperial policy and a denial of the subjectivity of individuals and institutions. Subsequently, its historical pitfall arose in the form of liberation of subjectivity in societal transformation (Kabele and Radzai, 1993).

Subjective mobility has also been largely independent of objective mobility (Mateju, 1999). This emanates from a fact finding that objective criterion such as class does not take into account the feelings of change in one's socio-economic position – a personal interpretation of social stratification (Attias-Donfut and Wolff, 2001). Research done by Mateju (1999) was later complemented by Webb (1999) from a pilot survey on household perceptions of mobility in Peru. Like Mateju (1999), Webb (1999) found that there is, indeed, a striking absence of correlation between an Index of Perceived Mobility (IPM) and Living Standard Measures (LSM). Thus, respondents took a more pessimistic view of their own experience than was confirmed by the facts. Stemming from this, Graham's (1999, p. 248) recognition is that 'it is useful to consider information about expectations in the light of actual trends […] as perceptions may or may not conform with reality'.

In general, the literature on social mobility seems to suggest that subjective assessments of mobility would very often go against objective criteria (Mateju, 1999). An exploration of any socio-economic phenomenon reveals the plurality of its components and indicates the limitations to approach such a phenomenon in uniquely occupational terms (Attias-Donfut and Wolff, 2001). Therefore, people's perceptions of their own empowerment and that of others, and access to opportunity are critical to their opinion about verifiable conditions, and thus to their expectations.

Based on the literature, it is important to acknowledge the subjective empowerment measurement, as it is perceived to be an alternative, supplementary measurement tool to the more standard objective criterion. That is, the downward (upward) the socio-economic mobility of an individual the less (more) empowered he/she becomes, subsequently, the less (more) positive is his/her perception outlook on the empowerment policy in general.

3. Economic empowerment in South Africa

Although affirmative action has been earlier viewed as a genuine option for transformation (Maphai, 1989), the restructuring policy of empowerment of previously disadvantaged black communities in South Africa has been widely acknowledged as an important driving force to address unfair inequalities formulated by the apartheid regime. However, the meanings and terminologies associated with this concept vary, and methods to systematically measure and track progress in general are not well established (World Bank, 2002). The current objective measurement tool is narrow, and therefore largely ignores a considerable set of effects – human perceptions (West, 1973). By so doing, it has neglected the more urgent socio-economic upliftment of the impoverished and unemployed black majority in South Africa (Terreblanche, 2002).

Despite the poor performance of the BEE program because of its failure to accrue benefits to the majority of South Africans, the government's broad-based BEE strategy (DTI, 2003) still focuses on the objective definition in order to measure the performance of the BEE program. Such a process still narrows empowerment to a privileged black minority. Besides, it also ignores the role and importance of the subjective measurement of BEE; that is, the way in which empowerment beneficiaries perceive their own empowerment (under-) achievements is sidelined. In spite of the importance of the subjective measurement of BEE, the literature on both economic and women empowerment shows that there currently is no measurement scale for this phenomenon (World Bank, 2002). Thus, the development of a scale to measure perceived economic empowerment in the South African context is, to our knowledge, an imperative task to carry out, especially in agriculture as a priority sector due to its ability to empower marginalised groups through primary agriculture and economic development.

It is, nonetheless, often expected that the definition of a particular phenomenon influences its measurement (Rubin and Babbie, 1993; Wils, 2001). Thus, the need to further understand empowerment in the South African context spans its analysis at three major levels, namely, (i) the BEE definition, (ii) BEE risks, and (iii) the racial component. An essential observation is that BEE is not simply a matter of equity sharing (property rights); it is also an issue of socio-economic mobility, social relations, and social inclusion.

BEE has, however, manifested itself into three basic pitfalls. Firstly, there was the risk that BEE will be limited in scope, where the white elite would be replaced by the black elite, which in fact has little to do with a broad-based

BEE notion. Secondly, there was an emergence of an empowerment that lacked depth, and this has led to black employees being dependent on the 'goodwill' of their employers – hence the connotation 'pseudo-empowerment'. Thirdly, it became clear that assigning PDIs to positions or tasks without possession of relevant qualifications and skills led to frustration and an effect on economic efficiency of businesses, and has led to bankruptcy in others. BEE is also a colour concept. The determination of when a company is empowered is objectively defined, for example, when 25.1 per cent of the entity's management are black then the entity is referred to as black-empowered. The perception of the actual empowerment status is, however, an elusive and far more complex construct to measure (Birdsall and Graham, 1999).

All needed transformations within the South African wine industry (agribusiness reform, land transformation and social development) are contextualised within BEE. The relevance of empowerment and transformation in the wine industry is justified based on several reasons. The wine industry i) had had a skewed resource base (skills, ownership and control), ii) has been perceived to be the most conservative, sexist, and elitist by all stakeholders (Wetherspoon *et al*, 1999), iii) there are deeply rooted vested interests within empowerment initiatives, iv) it has an unstable environment due to the on-going market innovation process, v) it has linkages with other industries, vi) South Africa is a global player in wine trading and wants to rebuild its image domestically and abroad, and v) historically affected the human capital structure with regard to labour relations more than any other industry in the South African agricultural sector (SAWB, 2005).

The response to such socio-economic disparities came in the form of the Land Reform Act 3 of 1996 and the BEE Act 53 of 2003. The planning and implementation of the BEE policy follows a streamlined charter process (DTI, 2003). From Figure 1 in the next section, it is depicted that it is at the operating and evaluative levels that individual organisations have to voluntarily agree to be bound by the legislation in terms of the Wine Industry Charter and the Wine Industry Scorecard of BEE. These tools are the mechanisms by with BEE goals are to be achieved. It is this process that is on-going. However, it is clear that all measures to assess progress have at best focused on the objective part, while ignoring the importance of perceptions in the process (West, 1973). This paper addresses the latter issue by developing a perceived BEE measure for the wine industry with a view to complement and not to substitute the objective indicator for a comprehensive assessment of progress on BEE.

4. Conceptual framework

Broadly, empowerment has become a buzzword in the 1980s and 1990s. However, it has become difficult to distinguish it from concepts such as development, access, emancipation, social mobility, transformation, equality to opportunity, and so on. For clarity, focus of how empowerment is to be studied is essential; a clear operational definition is required. Conceptually and analytically, an investigation into how perceived empowerment can be defined and therefore measured in South Africa's disempowerment context is, in part, outlined by Birdsall and Graham (1999). They emphasise their central argument that mobility provides a better measure of changing (equal) opportunities than do the traditional measures of inequality (earnings, income, class, and so forth), and that understanding mobility is critical to the discussion of progressive change and of what to do about it (Churchman, 1971). In our study, a similar argument is adopted with a slightly different terminology; that is, empowerment in an economic sense. This is relevant in South Africa where early, major political and now socio-economic transformations are unfolding (Taylor, 2000; Terreblanche, 2002). Hence, attempts to accurately measure empowerment in the South African context are crucial in order to understand development and change as on-going processes.

Although empowerment studies have been wide in scope the concept itself has lacked assessment tools of the construct (Speer and Peterson, 2000). The development of such tools is therefore paramount. Measurement development is, however, a time-intensive process and requires careful articulation of the construct and its related terms. The empowerment definition adopted in this paper encompasses the broad-based empowerment, which includes the development of the black middle class and the black impoverished majority based on social mobility, inclusion, and relations – hence 'genuine empowerment' (Edigheji, 1999). This, however, is measured and analysed at an individual level, where one's perception about one's level of empowerment and that of black South Africans in general given political and objective changes from the policy level is central to the analysis (see Figure 1).

In Figure 1 Bromley (1985) puts emphasis on the institutional bases of development as a process. However, our focus asks the fundamental question: how are socio-economic outcomes measured at the evaluative level? An important part of Figure 1 to acknowledge is the incompleteness of the objective criterion to fully assess outcomes of the socio-economic transformation process. Such a measurement tool requires an alternative and/or a supplementary measure for a complete evaluation of empowerment.

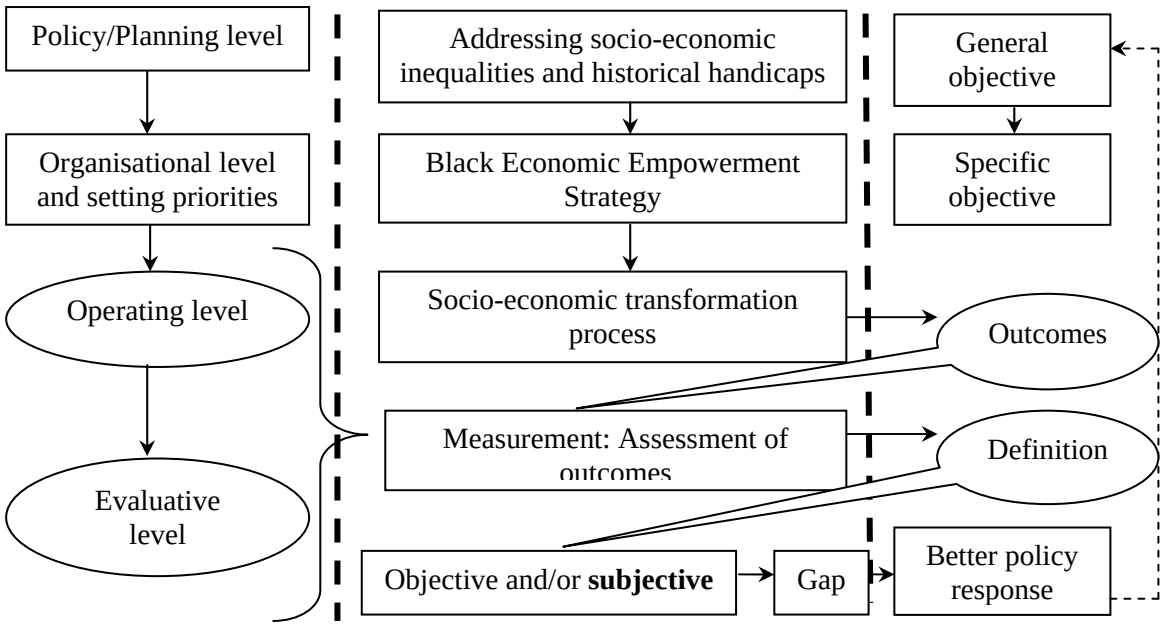

Figure 1: The basic empowerment analysis framework

Source: Adapted from Bromley (1985)

5. Method and sampling

5.1 Methodology

The consecutive steps in the scale development procedure were as follows. First, as the BEE concept is not broadly described in the literature and certainly not its perception part, the literature had to be extended by qualitative research. The empowerment literature and other forms of it, three focus groups, and a workshop were therefore pursued to generate a relevant set of dimensions and items. Secondly, departing from these generated dimensions and item pool, it must be checked as to what extent these items are judged to be reflective of, or theoretically linked to, the respective dimensions under consideration. Therefore, a substantive validity test was performed. Thirdly, based on the substantive validity test results, the final survey was completed and pilot-tested. After data collection, scale purification was attained by means of exploratory and confirmatory factor analysis. As discussed later in this paper, two scale development procedures were carried out. In the first, focus was on the perception of the feeling of empowerment while in the second focus was on the perception of empowerment evolution.

5.1.1 Focus groups and workshop

As literature about BEE is not yet well developed, this qualitative approach enabled the researchers to try to capture attitudes and opinions of the group

members with regard to BEE and to fully explore the BEE concept with its underlying dimensions and fitting items. Departing from the literature review (BEE and other empowerment literature), a topic guide was prepared for the moderators. In a focus group, even with a good moderator, there is a possibility that a subgroup of the individuals concerned feel more at ease and are more open for interaction when discussing with people with whom they can recognise. Therefore, one focus group was organised with only black workers without substantial responsibility on the farm/company. A second focus group was organised with only black foremen and managers. Useful information could, however, be gathered by the different viewpoints of two groups mentioned. Therefore, the third focus group was a mixed group. In every focus group there was a gender balance (of the eight individuals, a minimum of three were of one gender). After the focus groups, this information was processed in terms of dimensions and underlying items. Then a workshop was organised with a broad range of empowerment experts (from the wine industry): black and white managers, professors in (agricultural) economics, consultants, and so forth. From the discussions, feedback was gathered on the proposed dimensions and items. Based upon this input a final set of dimensions and an item pool were determined.

5.1.2 Substantive validity test

In the data analysis of the final survey, exploratory and confirmatory factor analyses that discover simple patterns in the patterns of relationships among variables are used. By means of a pre-test assessment, one is able to predict the performance of items in a confirmatory factor analysis. In this pre-test, assessment of substantive validity is computed, defined as the extent to which an item is judged to be reflective of, or theoretically linked to, some construct (=dimension) of interest (Andersen and Gerbing, 1991; Holden and Jackson, 1979; Loevinger, 1957). Operationally, each respondent in this test received two documents. The first document is a separate page describing the different dimensions, and each dimension has a (randomly assigned) number in front of it. The second document contains a number of pages with the items each preceded with a blank space. On the blank space respondents can write the number corresponding to the chosen dimension mentioned on the first page. For instance, the first item can be presented as follows:

1. Workers in our farm/company are well represented by a union.

On this line, respondents have to write (according to them) the corresponding number of the dimension mentioned on the page listing the dimensions.

All items were translated in Afrikaans by a jury of five individuals of which three were bilingual (English/Afrikaans). Thus, the survey was presented in two languages out of which the respondents could choose. Two substantive validity tests were conducted with workers. Based upon two indices of substantive validity (proportion of substantive agreement and the substantive-validity coefficient) indications for item rephrasing or redefinition of the constructs were determined. A final substantive validity test was performed with managers; the (ameliorated) dimensions retained in this test with their respective description are listed below.

1. Business ownership and control (BOC)
   = Ownership means to have something that belongs to you or your group with regard to business. Control means to have the power or authority to direct, order, manage or make business decisions.

2. Access to finance (ATF)
   = Access to finance (such as access to savings and credits) that makes it possible for you or your group to have better control over your finances.

3. Employment and Human Resources Management (EMP)
   = This is about whether you are feeling empowered, feeling good or feeling satisfied and respected in your job.

4. Social capital/enabling environment (SOC)
   = Ability to access the social and/or economic structures and networks in your community and then use the knowledge gained and the contacts made to create new possibilities for your own economic initiatives.

5. Lobbying power and collective action (LOB)
   = The possibility to organise yourselves to enable you to defend and promote your interests at company and industry level.

6. Autonomy (AUT)
   = An extent to which you feel you can change the direction of your livelihood. The extent to which your non-working interactions are unrestricted by your relationship with your employer.

Based upon the feedback of the three substantive validity tests, the researchers tried to rephrase the constructs and the items reflecting low substantive validity as much as possible. Hence, given the exploratory nature of the

research, the test results were primarily used for rephrasing items rather than eliminating them. It must, however, be noted that the items of the Autonomy (AUT) dimension scored low on substantive validity, even after careful rephrasing of the construct and items. In total the final survey for procedure one contained 65 items. In procedure two a total of 54 items were retained. These initial item-pools are available from the corresponding author on request.

5.2 Scale development procedure one (feeling)

5.2.1 Pilot test and final survey

The adapted item list was then converted into a survey. In this survey, respondents had to give a score on a five-point balanced Likert-type scale, where one = totally disagree, two = disagree, three = neutral, four = agree, and five = totally agree. The survey was pilot-tested with six individuals. Together with preliminary discussions (focus groups and workshop), it was strongly indicated that given the average education level of the target population a five-point score mechanism was feasible. The scale used in measuring the respondents' scores is very important. In this first scale development procedure, carried out during August and September 2003, the scale used in measuring the way black people 'feel' about empowerment was a balanced scale. Although a seven-point Likert-type scale could be preferred over a five-item scale, pilot-testing indicated that a seven-point scale was too abstract for the target population. It appeared that these people have a more bipolar reflection state, that is, yes or no. After presenting them with a five-point scale (strongly disagree, disagree, neutral, agree, strongly agree), they indicated that this was acceptable, and that more categories were not relevant to them, not so much in terms of being able to indicate the subtle difference, but more in terms of irritation.

Furthermore, the overall evaluation of the survey quality was positive. The length of the survey was acceptable, but also perceived as a potential limitation. The sensitivity of specific wording may not be underestimated. For example, although there was an explicit note included at the beginning of the survey ("In this survey 'black' people means blacks, coloureds and other people of colour"), reactions of respondents motivated us to also change within the items themselves the word 'swart mense' (blacks) to 'swart/bruin mense' (black/coloured people), especially in the Western Cape province.

5.2.2 Sample

The survey was conducted at 14 different wine farms, especially those in Stellenbosch and Robertson. Most respondents were between 25 and 44 years old, and 40 per cent of them were female. Most surveys were in Afrikaans (92.1%), and 81.3 per cent of the respondents were workers. Surveys were filled-in during lunch break or in the evening. Average fill-in time was about 20 to 30 minutes. The effective sample size was 203.[2]

5.2.3 Procedure

A first step was a Principal Components Analysis (PCA) with Varimax rotation per supposed dimension. Scree plot and parallel analysis (Lautenschlager *et al*, 1989) were used to explore the assumption of only one dimension. This one dimension was found for BOC, ATF, SOC and AUT. The rotated loadings on AUT were low confirming the results of the substantive validity pre-test that this dimension was barely viewed as separate. Nonetheless, researchers opted to include the AUT dimension in the start-up model of the confirmatory factor analysis. For EMP and LOB, substantive validity indices and feedback from respondents indicated that the employment concept can be closely related to the lobbying power concept. Therefore, the EMP and LOB items were bundled in the PCA-analysis, which revealed two underlying dimensions. For the BOC, ATF, SOC and AUT dimensions, only those items with a loading larger than 0.5 were upheld for inclusion in the start-up model of the CFA analysis (six-construct first-order CFA). For the EMP and LOB items, only those items in the theoretical constructs with a loading larger than 0.5 but at the same time less than 0.3 on the other construct were upheld. Thirty three items were included in the CFA start-up model.

Maximum Likelihood (ML) estimation procedure was used. However, checking the data revealed non-normality thereby violating the assumption of Joint MultiVariate Normality (JMVN) needed for ML estimation. Although parameter estimates are rather robust against JMVN violations, chi-square

---

[2] *This total encapsulates all respondents that fully cooperated. The cooperation rate from AAPOR (2004) is slightly different from the one used in this study. Historically, the farmer makes final decisions, that is, his/her farm workers will cooperate if they are asked to do so. Therefore, for our on-site survey, the farmers' agreement to participate in the study consequently secured the research team full cooperation of their employees. In addition, due to the fact that farms were randomly requested to participate in the study at their own will and convenience, our final samples may have constituted of farms with positive BEE outcomes and may have been somewhat biased.*

values and parameter standard errors can be severely biased. A possible way to deal with non-normal data is bootstrapping, where the computed chi-square is tested against a recomputed bootstrapped chi-square value. An analogous procedure is applied for the parameter estimates. For reporting, the (Bollen-Stine) bootstrapping results will be reported. As this kind of analysis can only be performed on data files with non-missing data; missing values for some variables were replaced by their respective variable mean (10 was the highest replacement number in a single variable) (Bollen and Stine, 1993).

Unidimensionality. Based on loadings, information on standardised residual covariances, and modification indices (see Bagozzi and Baumgartner, 1994; Steenkamp and van Trijp, 1991), disturbing items were revised for their role in the model. AUT has shown to be a weak construct and was excluded from the model. The final model has a chi-square value of 111.415 (Bollen-Stine bootstrapped p=0.02, thus, the null hypothesis that the model is correct cannot be rejected at a 99 per cent confidence level). Chi-square over degrees of freedom is 1.66, and is smaller than the desired ratio of two (Bollen, 1989). The Root Mean Square Error of Approximation (RMSEA) is smaller than 0.057, which is below the desired value of 0.06 as recommended by Hu and Bentler (1999). Comparative Fit Index (CFI=0.93) and Non-Normed Fit Index (NNFI or TLI[3] = 0.91) are both higher than the cut-off value of 0.90. The highest percentile-corrected and bias-corrected p-value for the regression weight estimates is <0.001, indicating unidimensionality.

Convergent validity. All factor regression coefficients are significant (lowest p-value = 0.001) and substantial: the lowest item-construct correlation is 0.528, which is higher than the recommended value of 0.50 (Hildebrandt, 1987), supporting the assumptions for convergent validity (Steenkamp and van Trijp, 1991).

Reliability. The reliability of the measures is examined by two indicators. Firstly, composite construct reliability is calculated. An acceptable, but absolutely minimum threshold value is 0.60. (0.70 is preferred). Secondly, average variance extracted is calculated and here it is recommended that values should exceed 0.50 for a construct (Steenkamp and van Trijp, 1991). As indicated in Table 1, all constructs meet the first criterion; the constructs do not meet the second indicator threshold except for EMP. Although reliability is weak, given that the composite construct reliability threshold is met, that each construct consists of few items (two or three) and that the research is exploratory in nature, we consider reliability as low but acceptable.

[3] *TLI=Tucker and Lewis Non-Normed Fit Index.*

Discriminant validity. Discriminant validity is checked by an inspection of the correlation matrix of the latent variables (see Table 2). Rather high correlations can be found between BOC and SOC (0.861), ATF and SOC (0.842) and between BOC and ATF (0.786). However, none of the percentile-corrected correlation intervals include (minus) one, indicating acceptable discriminant validity.

Table 1: Items and reliabilities of BEE-feeling constructs

Business Ownership and Control [BOC] *(construct reliability: 0.62, variance extracted: 0.36)*
I have the feeling that there are more and more black farm/company owners. I have the feeling that now it is easier to become an owner of business assets. It is possible for me to buy shares.
Access To Finance [ATF] *(construct reliability: 0.68, variance extracted : 0.42)*
I can easily open a bank account. When applying for credit, the bank offers me fair conditions. I can under reasonable conditions get a loan from the bank for personal use.
Employment and Human Resources Management [EMP] *(construct reliability: 0.66, variance extracted : 0.50)*
I have enough skills to get a well-paid job. I do not fear to lose my job because I say my opinion. The work I do is very important to me.
Social capital/enabling environment [SOC] *(construct reliability: 0.60, variance extracted : 0.34)*
I have the opportunity to participate in educational learning programs which improve my skills. It is easy for black people to join an organisation which can provide useful contacts to improve own economic initiatives. I feel that I can have access to social and economic structures and networks in my community.
Lobbying power and collective action [LOB] *(construct reliability: 0.65, variance extracted : 0.39)*
All workers on this farm/company are well represented as a group to which our boss listens. Propositions made by a group of workers are taken into account by our boss.

Table 2: Correlations between BEE-feeling constructs[a]

	BOC	ATF	EMP	SOC	LOB
BOC	1				
ATF	0.786 [0.649, 0.903]	1			
EMP	0.656 [0.436, 0.825]	0.521 [0.361, 0.671]	1		
SOC	0.861 [0.722, 0.993]	0.842 [0.720, 0.953]	0.534 [0.352, 0.721]	1	
LOB	0.482 [0.300, 0.673]	0.522 [0.373, 0.673]	0.351 [0.118, 0.529]	-0.249 [-0.353, -0.134]	1

[a] Confidence intervals between brackets

For each of the constructs (see Table 1), a summated scale by calculating the mean of the respective items was used for further description.

5.2.4 Descriptive results

Using the scale development sample as a first measurement sample, it can be noted from Table 3 that the lowest scores can be found for BOC (2.99) and ATF (3.11). SOC and LOB have an average score of 3.39 and EMP has the highest score (3.92) meaning that respondents on average 'agree' with the statements mentioned in Table 2. There appears to be an insignificant effect of gender [only for the ATF construct; females (3.27) score significantly higher than males (3.00, p=0.069)]. There appears to be no score difference over age categories either. However geographic location appears to have some influence on the dimension scores. Respondents from Stellenbosch score higher than those from Robertson. This higher score is significant for BOC (M_S=3.09 vs. M_R=2.72; p=0.013), ATF (M_S=3.23 vs. M_R=2.74; p=0.002) and EMP (M_S=3.96 vs. M_R=3.81; p=0.003).

Table 3: Scores on BEE-feeling constructs and difference tests

			Whole sample	Gender		Place*		Age		
		Construct		Male (117)	Female (77)	Stellenbosch (146)	Robertson (55)	-25 (29)	25-44 (120)	45+ (46)
BEE	1.	BOC	2.99	3.00	2.98	3.09	2.72	2.97	3.02	2.97
	2.	ATF	3.11	3.00	3.27	3.23	2.74	2.91	3.18	3.10
	3.	EMP	3.92	3.95	3.87	3.96	3.81	3.83	3.99	3.83
	4.	SOC	3.39	3.44	3.30	3.43	3.26	3.38	3.40	3.38
	5.	LOB	3.39	3.29	3.50	3.55	2.98	3.19	3.39	3.46

*Grey marked cells indicate a significant difference test between all groups at 95% level (post-hoc test)

5.3 Scale development procedure two (evolution)

5.3.1 Pilot test and final survey

In the second scale development procedure, carried out during May to June 2004, focus was more on the social mobility part. Instead of focusing on how empowered respondents felt, focus was now on how empowerment has evolved in their view. For this purpose, researchers opted not to use a 'disagree - agree' scale, but a 'less the case - more the case' scale to reflect the time aspect of empowerment (Khosa, 2001). However, as empowerment can be expected to be a positively evolving process, a balanced scale could result in skewed answers. Therefore, an unbalanced five-point Likert-type scale was used (one = less the case, two = same, three = a bit more the case, four = more the case, and five = much more the case), as supported by feedback from a pilot test with 20 respondents. For a lot of scales the word 'slightly' is often used as a 'pre-word' to indicate a category between the neutral category (for example, 'neutral' or 'same') and the unstressed answer direction (for example, agree). Here, based on common terminology used in South Africa, the wording 'a bit' was preferred over 'slightly'. Items were also refined as per socio-economic mobility focus with a reference of 10 years of democracy.

5.3.2 Sample

The survey was conducted at 11 farms in five different regions (Stellenbosch, Constantia, Paarl, Somerset West, and Worcester). Respondents were mostly between 25 and 44 years old and 46.9 per cent of them were female. All surveys were in Afrikaans, and 78.3 per cent of the respondents were workers. Surveys were filled-in during lunch break or in the evening, mostly at the farm manager's donated time, which is to be preferred over the former two

arrangements, as in the first procedure because of less time pressure. Average fill-in time was about 15 minutes. The effective sample size was 322.[4]

5.3.3 Procedure

The same procedure as in scale development procedure one was applied to the data. In contrast to procedure one, Autonomy (AUT) was now not envisaged as an independent dimension anymore, but as a component in some of the dimensions. For the constructs BOC, ATF, SOC and LOB one underlying dimension was indeed expected.

Analogous to procedure one, the EMP and LOB items were also brought in one PCA-analysis because of probable close relatedness of the two constructs. However, it was difficult to attribute items to constructs based on the rotated factor loadings, already indicating that the two constructs could have a high correlation. For EMP, two sub-dimensions were found, that is, an internal employment relation outlook (EMP_I) and an external employment relation outlook (EMP_E). The first has more to do with job skills and capabilities the respondents claim to have, whereas the latter deals more with job-related respect and opportunities they receive. This partitioning was not detected in the first procedure.

For the BOC, ATF, SOC and LOB dimensions, only those items with a loading larger than 0.5 were upheld for inclusion in the start-up model of the CFA analysis (six-construct first-order CFA). For the EMP_I and EMP_E items, only those items in the theoretical constructs with a loading larger than 0.5 but at the same time less than 0.3 on the other construct were upheld. Forty six items were included in the CFA start-up model. Analogous to procedure one, because of violation of the assumption of Joint MultiVariate Normality (JMVN), bootstrapped (Maximum Likelihood) results are reported. Missing values for some variables were replaced by their respective variable mean as well.

Unidimensionality. Following the same procedure as in the first scale development, disturbing items were revised about their role in the model, based on loadings, information on standardised residual covariances and modification indices (see Bagozzi and Baumgartner, 1994; Steenkamp and van Trijp, 1991). The final model has a chi-square value of 441.88 (Bollen-Stine bootstrapped p=0.005 indicating that the null hypothesis that the model is correct cannot be rejected at a 99.5 per cent confidence level). Chi-square over

[4] *The same process as in the first procedure.*

degrees of freedom is 1.70, which is smaller than the desired ratio of two (Bollen, 1989). The Root Mean Square Error of Approximation (RMSEA) is 0.047, which is below the desired value of 0.06 as recommended by Hu and Bentler (1999). Comparative Fit Index (CFI=0.94) and Non-Normed Fit Index (NNFI or TLI = 0.931) are both slightly below the cut-off value of 0.95 as recommended by Hu and Bentler (1999), but they are still above the less stringent cut-off value of 0.90. The highest percentile-corrected and bias-corrected p-value for the regression weight estimates is 0.002. These measures indicate unidimensionality.

Convergent validity. As all factor regression coefficients are significant (lowest p-value = 0.002) and substantial (lowest item-construct correlation is 0.550) which is higher than the recommended value of 0.50 (Hildebrandt, 1987), the assumptions for convergent validity are met (Steenkamp and van Trijp, 1991).

Reliability. Both composite construct reliability and variance extracted for each construct are reported in Table 4. Except for LOB (0.66), all composite construct reliabilities are above the recommended value of 0.70. For two constructs (EMP_I and SOC) the average variance extracted exceed the recommended value of 0.50, the other constructs score lower (lowest AVE=0.33) (Steenkamp and van Trijp, 1991). Although there are lower scores for AVE, the composite construct reliability scores indicate acceptable construct reliability.

Table 4: Items and reliabilities of BEE-evolution constructs

Business Ownership and Control [BOC] *(construct reliability: 0.72, variance extracted: 0.34)*
Black/Coloured people in charge or in management positions have a real influence on business. If I have the money, it would then be possible to participate in business/to buy shares. There are more and more black/coloured owners of farms/companies. More and more farms/companies have black/coloured people in charge or in management positions. I have control over business decisions.
Access To Finance [ATF] *(construct reliability: 0.76, variance extracted : 0.45)*
When applying for credit, the bank offers me fair conditions. I can under reasonable conditions get a loan from the bank for personal use. Black/Coloured people can under reasonable conditions get a loan from the bank to start a business. Black/Coloured workers are offered enough possibilities to buy shares of the farm/company (for example farmer-equity schemes).
Employment and Human Resources Management – External [EMP_E] *(construct reliability: 0.82, variance extracted : 0.43)*
I am well informed about what is going-on on this farm/company. At my work my boss listens to and values my opinion. On this farm/company black/coloured workers have the opportunity to learn new job skills. Employers are more willing to employ black/coloured workers on a full time basis. My boss is more prepared to respect the labour laws with regard to my job. I receive fair job earnings for my work.
Employment and Human Resources Management [EMP_I] *(construct reliability: 0.80, variance extracted : 0.66)*
I am confident about my capabilities to do my job well. I have the skills to perform my job well. I am responsible for my job and the results of it.
Social capital/enabling environment [SOC] *(construct reliability: 0.75, variance extracted : 0.51)*
I can have access to social and/or economic structures and networks in my community. I can have regular access to information from outside my farm/company, when I need it. I can have regular access to advice from outside my farm/company, when I need it. Contacts outside my job/business can help me to improve my job/business conditions.
Lobbying power and collective action [LOB] *(construct reliability: 0.66, variance extracted : 0.33)*
All black/coloured workers on this farm/company are well represented as a group to which our boss listens. Suggestions made by a group of workers are taken into account by our boss. Employers are taking into account suggestions made by black/coloured labour unions. It is possible for black/coloured people to become members of an industry-wide organisation.

Discriminant validity. Table 5 shows the correlation matrix of the latent variables. There are some very high correlations, especially with the constructs LOB, EMP_E and SOC. Although there is only one (problematic) percentile corrected correlation interval (between EMP_E and LOB) that includes one, one could state that discriminant validity for BOC with EMP_E and LOB and/or LOB with EMP_E and SOC is not present.

Table 5: Correlations between BEE-evolution constructs[a]

	BOC	**ATF**	**EMP_E**	**EMP_I**	**SOC**	**LOB**
BOC	1					
ATF	0.877 [0.796, 0.948]	1				
EMP_E	.916 [0.853, 0.971]	0.673 [0.579, 0.762]	1			
EMP_I	0.235 [0.057, 0.378]	0.129 [-0.008, 0.247]	0.349 [0.170, 0.448]	1		
SOC	0.899 [0.831, 0.966]	0.726 [0.632, 0.809]	0.886 [0.827, 0.941]	0.191 [0.022, 0.331]	1	
LOB	0.914 [0.832, 0.991]	0.824 [0.737, 0.913]	0.997 [0.940, 1.057]	0.331 [0.139, 0.460]	0.901 [0.823, 0.976]	1

[a] Confidence intervals between brackets

For each of the constructs (see Table 4), a summated scale (mean of scores) was calculated for further description.

5.3.4 Descriptive results

If the scale development sample is used as a first measurement sample, similar results to the first study are found, as indicated in Table 6. Relatively low scores are found for BOC (2.51) and ATF (2.43). SOC and LOB have an average score of 2.75 and 2.78, respectively. EMP_E (3.00) and especially EMP_I (4.23) have the highest scores. It should be emphasised that the scale is different in the two studies. In the first study, three indicated the neutral point (balanced scale) and in the second study two indicated the neutral point (unbalanced scale), so the lower scores in study two do not interfere with the results of study one. Another remarkable analogous result is that no gender and/or age effects are found, but geographic location effects are present, predominantly on a region basis. Worcester and to a lesser extent Stellenbosch have relatively high scores, whereas Paarl has relatively low scores.

Table 6: Scores on BEE-evolution constructs and difference tests

			Whole sample	Gender		Place*					Age		
		Con-struct		Male (171)	Female (151)	Constantia[1] (76)	Stellenbosch[2] (82)	Somerset West[3] (50)	Paarl[4] (56)	Worcester[5] (58)	-25 (29)	25-44 (120)	45+ (46)
BEE	1.	BOC	2.51	2.52	2.51	2.15[2,5]	2.75[1,4]	2.59[4]	2.06[2,3,5]	3.02[1,4]	2.44	2.57	2.40
	2.	ATF	2.43	2.42	2.45	2.24[5]	2.53	2.49	2.07[5]	2.84[1,4]	2.39	2.40	2.57
	3.	EMP_E	3.00	2.97	3.05	2.52[2,5]	3.20[1,4,5]	3.01[5]	2.60[2,5]	3.75[1,2,3,4]	2.94	3.08	2.83
	4.	EMP_I	4.23	4.23	4.24	4.29	4.17	4.44[4]	3.77[3,5]	4.50[4]	4.34	4.24	4.09
	5.	SOC	2.75	2.67	2.84	2.48[2,5]	3.00[1,4]	2.66[5]	2.29[2,5]	3.27[1,4]	2.65	2.78	2.73
	6.	LOB	2.78	2.78	2.79	2.47[2,5]	2.92[1,4,5]	2.86[4]	2.34[2,4,5]	3.38[1,2,4]	2.74	2.81	2.72

* Grey marked cells indicate a significant difference test between all groups (95% level, ANNOVA); superscripts indicate significant differences between specific groups (95% level, post-hoc tests). In case of equal variances, the Tukey test statistics is used, in case of unequal variance, the Dunnett T3 test statistic is used.

Apart from the fact that in the second scale development procedure employment was split-up into two dimensions, the fact that the same dimensions were found in both scale development procedures adds to the robustness of the multidimensionality that is found, which was expected (except for the Autonomy dimension that appeared to be embedded in empowerment as such). Nonetheless, the different focuses of the procedures imply different applications of the scales. We will focus on the evolution of BEE because of its relevance in the dynamic wine industry.

6. Potential scale applications

The following bulleted statements are potential applications of the perceived empowerment scales developed in this research project.

1. The scale as a diagnostic tool for:
    a. Determining the scope of change (existing situation and future needs).
    b. Determining the readiness and capacity to undertake reform (resources).
    c. Assessing the extent of empowerment (defining empowerment success).

2. Tool for monitoring progress (value of comparison):
    a. A firm can use the scale to track its BEE progress periodically on each dimension and overall (internal) and as compared to competitors (external) in order to improve its BEE status.
    b. It can provide a complementary framework of BEE measurement to the Balanced Scorecard (objective measure).[5]

3. It can be adapted and supplemented to fit the context, for example, other agricultural industries.

4. It can also be used to categorise BEE beneficiaries into perceived empowerment segments:
    a. Segments (profiles) to be contrasted based on demographics and psychographic characteristics to gain managerial insights.

5. Wine industry body (SAWB), wine supply chain stakeholders such as Cooperatives or government departments (National Department of Agriculture):
    a. Track level of empowerment of individual entities.
    b. Rank entities (e.g. farms) with varying empowerment statuses.

7. Conclusions and suggestions for further research

In this paper, the analysis of a perceived economic empowerment of previously disadvantaged individuals in South Africa was put forth. The challenge was to gain more insight into the perception of the concept of BEE. Alongside objective measurement systems is the role and importance of perceptions on the level of empowerment. One can be artificially empowered but have no empowerment in the field. To be able to measure the latter (perceived economic empowerment); a scale development procedure was followed. Departing from a literature search, qualitative research (focus groups and workshop) was pursued from which a survey was set up. Two scale development procedures were carried out. In the first, focus was on the perception of the empowerment feeling while in the second focus was on the perception of the empowerment evolution. After scale purification for the first procedure (empowerment feeling) a five dimensional self-report scale to measure perceived BEE was developed. The dimensions retained were

[5] *The balanced scorecard was developed by the South African Department of Trade and Industry (DTI) as a basic framework to assess empowerment.*

Business ownership and control (BOC), Access to finance (ATF), Employment and Human Resources Management (EMP), Social capital/enabling environment (SOC), and Lobbying power and collective action (LOB). Similar dimensions were found in the second procedure (empowerment evolution); however, the EMP dimension was split up into two dimensions: internal employment relation outlook (EMP_I) and external employment relation outlook (EMP_E). Consequently, the five components are present in both multidimensional scales. Substantive and convergent validities were present in both procedures, but discriminant validity could not be found for all dimensions. Construct reliability is indicated in the second procedure. In the first procedure, construct reliability is also acceptable, but just above the minimal acceptable threshold. When the scale development samples are also used as first measurement samples, it is noticed that the lowest scores are found for BOC and ATF and the highest for EMP. There are little gender and no age differences over the constructs. However, geographical location, mostly per farm, appears to have a significant effect for BOC, ATF and EMP.

This subjective lever of empowerment measurement can serve as a complementary framework to the objective criterion in monitoring the effectiveness of an empowerment program in order to inform government and operatives as to whether their targeted policies are equitable and efficient. Such a framework needs to be adapted given settings under which it is to be applied. Further [gap] analysis or cross validation between the perceived and the objective BEE is necessary in order to better assess and manage empowerment. Nonetheless, what is lacking may be as equally essential as what has been presented.

Acknowledgements

This paper is based on the project about the tension between equity and efficiency in socio-economic transformation initiatives, funded by the bilateral (joint) scientific co-operation programme between South Africa and Belgium, and pursued by the Universities of Antwerp, Ghent and Pretoria. Constructive comments by Professor Johann Kirsten and Professor Luc D'Haese are greatly appreciated.

References

American Association for Public Opinion Research (AAPOR) (2004). *Standard definitions: Final dispositions of case codes and outcome rates for surveys.* 3rd Edition, The American Association for Public Opinion Research, Lenexa, Kansas.

Anderson JC & Gerbing DW (1991). Predicting the performance of measures in a confirmatory factor analysis with a pre-test assessment of their substantive validities. *Journal of Applied Psychology* 76(5):732-740.

Attias-Donfut C & Wolff FC (2001). The subjective dimension of social mobility. *Population* 56(6):919-958.

Bagozzi RP & Baumgartner H (1994). *The evaluation of structural equation models and hypothesis testing.* In: Bagozzi RP (ed), Principles of marketing research. Cambridge MA, Blackwell, pp 386-422.

Birdsall N & Graham C (eds) (1999). *New markets, new opportunities? Economic and social mobility in a changing world.* Brookings Institution Press, Washington DC.

Bollen KA (1989). *Structural equations with latent variables.* Wiley-Interscience.

Bollen KA & Stine RA (1993). *Bootstrapping goodness-of-fit measures in structural equation models.* In: Bollen KA & Long JS (eds), Testing structural equation models. Sage Publications, Newbury Park, California, pp 111-135.

Bromley DW (1985). Resources and economic development: An institutional perspective. *Journal of Economic Issues* XIX(3):779-796.

Churchman WC (1971). On the facility, felicity and morality of measuring social change. *The Accounting Review* 46(1):30-35.

Department of Trade and Industry (DTI) (2003). *South Africa's economic transformation: A strategy for broad-based black economic empowerment.* The Department of Trade and Industry, Pretoria, South Africa.

Edigheji OE (1999). *Rethinking black economic empowerment in the post-apartheid South Africa.* Paper presented at the TIPS 1999 Annual Forum, Glenburn Lodge, Muldersdrift, 19-22 September.

Graham C (1999). *The political economy of mobility: Perceptions and objective trends in Latin America.* In: Birdsall N & Graham C (eds), New markets, new opportunities? Economic and social mobility in a changing world. Brookings Institution Press, Washington DC, pp 225-266.

Hildebrandt L (1987). Consumer retail satisfaction in rural areas: A reanalysis of survey data. *Journal of Economic Psychology* 8:19-42.

Holden RR & Jackson DN (1979). Item subtlety and face validity in personality assessment. *Journal of Consulting and Clinical Psychology* 47:459-468.

Hu L & Bentler PM (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling* 6(1):1-55.

Kabele J & Radzai R (1993). The dynamics of social problems and transformations of Czechoslovak society. *Social Research* 60(4):763-784.

Kapteyn A (1994). The measurement of household cost functions: Revealed preference versus subjective measures. *Journal of Population Economics* 7:333-350.

Khosa MM (ed) (2001). *Empowerment through economic transformation.* Human Sciences Research Council, Pretoria, South Africa.

Lautenschlager GJ, Lance CE & Flaherty VL (1989). Parallel analysis criteria: Revised regression equations for estimating the latent roots of random data correlation matrices. *Educational and Psychological Measurement* 49:339-345.

Loevinger J (1957). Objective tests as instruments of psychological theory. *Psychological Reports* 3:635-694.

Lokshin M, Umapathi N & Paternostro S (2004). *Robustness of subjective welfare analysis in a poor developing country: Madagascar 2001.* World Bank Policy Research Working Paper No 3191.

Maphai VT (1989). Affirmative action in South Africa: A genuine option. *Social Dynamics* 15:1-24.

Mateju P (1999). *Mobility and perceived change in life chances in post communist countries.* In: Birdsall N & Graham C (eds), New markets, new opportunities? Economic and social mobility in a changing world. Brookings Institution Press, Washington DC, pp 291-325.

Pradhan M & Ravallion M (2000). Measuring poverty using qualitative perceptions of consumption adequacy. *Review of Economics and Statistics* 82:462-471.

Ravallion M & Lokshin M (2001). Identifying welfare effects using subjective questions. *Economica* 68(271):335-357.

Ravallion M & Lokshin M (2002). Self-rated economic welfare in Russia. *European Economic Review* 46:1453-1473.

Rubin A & Babbie ER (1993). *Research methods for social work.* 2nd Edition, Brooks/Cole, Pacific Grove, California.

South African Wine and Brandy Company (SAWB) (2005). *A roadmap towards the wine-BEE charter and industry scorecard*. South African Wine and Brandy Company, Draft No 7. Available from World Wide Web: (http://www.sawb.co.za/docs/ visited on the 17th March 2006.

Steenkamp JEM & Van Trijp HCM (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in Marketing* 8(4):283-299.

Speer PW & Peterson AN (2000). Psychometric properties of an empowerment scale: Testing cognitive, emotional and behavioural domains. *Social Work Research* 24(2):109-118.

Taylor J (2000). *So now they are going to measure empowerment!* Community Development Resource Association. Available from World Wide Web: http://www.cdra.org.za/articles.htm visited on the 25th June 2006.

Terreblanche S. (2002). *A history of inequality in South Africa (1652-2002).* University of Natal Press, Pietermaritzburg.

Van Praag BMS (1991). Ordinal and cardinal utility: An integration of the two dimensions of the welfare concept. *Journal of Econometrics* 50:69-89.

Weatherspoon DD, Alade JA & Danley C (1999). *Emerging business: The South African wine industry case.* Department of Agricultural Economics, Michigan State University Staff Paper No 99-54.

Webb R (1999). *Pilot study on household perceptions of mobility: Peru 1998.* In: Birdsall N & Graham C (eds), New markets, new opportunities? Economic and social mobility in a changing world. Brookings Institution Press, Washington DC, pp 267-290.

West QM (1973). Economic research trade-offs between efficiency and equity. *Southern Journal of Agricultural Economics Special Review (July)*:9-12.

Wils F (2001). *Empowerment and its evaluation: A framework for analysis and application.* Institute of Social Studies Working Paper Series No 340.

World Bank (2002). *A framework for empowerment: Summary*. Poverty Reduction Group, World Bank Conference, May 2002. Based on Narayan D (ed), Empowerment and poverty reduction: A sourcebook. World Bank.

Zippay A (1995). The politics of empowerment. *Social Work* 40:263-267.