

# Conspicuous Consumption in South Africa: Race, Assets and Reference Groups\*

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## Abstract:

There is a great deal of anecdotal evidence for the existence of marked differences in consumption between race groups in South Africa, particularly in relation to the new Black Middle Class. Thorstein Veblen's (1899) notion of conspicuous consumption has recently been used by Charles et al (2009) to account for the differences in visible consumption across race groups in the United States. One recent attempt to do this with South African data is Kaus (2010), which essentially replicates the analysis of Charles et al using the StatsSA Income and Expenditure surveys. The present paper begins by assessing the merits of these approaches, which seek to explain consumption differences in terms of status seeking. It assesses the relevance of the asset deficit between race groups, which is a consequence of South Africa's specific history. We begin by replicating Kaus's results, using the Income and Expenditure Surveys of 1995, 2000 and 2005/6. Some potentially problematic elements of the econometric specification are discussed and an improvement is proposed and estimated. In that regard, the insights of Manski (1993) concerning the difficulties of assessing behaviour in terms of reference groups are applied to the status-seeking model initially formulated by Charles et al (2009). The second part of the paper then considers work by Burger et al (2004), which attributes the major differences in expenditure between race groups in South Africa's Middle Class to the asset deficit faced by many Black families in comparison to White families of a similar income. We attempt to extend the earlier econometric specification in order to determine whether there is a relationship between the asset deficit<sup>†</sup> and visible consumption.

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† This part of the analysis has yet to be included in the paper.

## Introduction

Conspicuous Consumption has been the subject of much debate in South Africa, since it's first democratic elections. There is a great deal of anecdotal evidence for differences in Conspicuous Consumption between race groups. Building upon the work of Charles et al (2009), where racial differences in consumption patterns were identified in the United States, Wolfhard Kaus (2010) finds similar trends in South Africa. Charles et al create a status signalling model based upon the theory of Conspicuous Consumption of Thorstein Veblen to explain these differences. This status signalling model allows for differences in visible consumption between race groups in United States and South Africa to be explained without relying on a notion of cultural differences, argue Charles et al and Kaus respectively. In the present paper we discuss these analyses and critique their conceptual and theoretical underpinnings.

## 1 Theoretical Framework

Writing toward the end of the 19<sup>th</sup> century in the industrialized West, Thorstein Veblen (1899) made a number of insightful observations regarding human beings, their social interactions and their consumption decisions, particularly in his major work *The Theory of the Leisure Class*. Firstly, he claimed that the admiration bestowed upon an individual by his peers is the basis for self-esteem (Veblen 1899: 22). Furthermore, that - while in periods preceding established ownership rights- predatory activity and overt use of force were considered to be honorific in the eyes of society. Since the advent of ownership, the accumulation of property has become a more relevant measure of status within peer-groups. Since it is not always possible to establish the level of wealth that individuals have accumulated, Veblen claimed that it is through individuals' observable consumption that they signal to their peers that they are worthy of recognition. He dubbed such actions, "conspicuous consumption" (Veblen 1899: 47).

Veblen held that, in modern society, only consumption of superfluous goods was worthy of recognition, since "In order [for consumption] to be reputable, it must be wasteful" (1899: 66). He uses the word waste in the sense that the consumption does not contribute to human well being or

productivity *per se*. From the individual point of view, the consumption is of course not wasteful; the utility gained from purely conspicuous consumption is a result not of the act of consumption itself, but rather the status, which is bestowed on the consumer, through the eyes of observers.

Veblen noted that though the human race perpetually advances towards higher levels of wealth and standards of living, there is no indication that the desire to do so can ever be satisfied. He reasoned as follows: the advancement of wealth is not motivated by a desire for wealth alone, but rather by individuals wishing to outdo one another. Since observable consumption provides a mechanism for men to judge one another, it follows that the desire for visible consumption goods is insatiable (Veblen 1899: 23).

Veblen's contribution provides a powerful critique of neoclassical consumption theory (Trigg 2001: 99). The basic neoclassical theory of consumption largely disregarded the effect of interpersonal effects on individual consumption decisions (Fullbrook 2002: 89). Recently, however, there have been economists who have revived Veblen's ideas (Charles, 2009), (Arrow and Dasgupta 2009), (Kaus, 2010) (Leibenstein 1950).

For our purposes the most important of these contributions is the one made by Charles, Hurst & Roussanov (2009) who published a paper entitled *Conspicuous Consumption and Race*. This was an investigation into the differences in consumption spending between Blacks, Whites and Hispanics in contemporary United States of America. Charles et al confirm the anecdotal evidence that the minority race groups devote significantly more of their income to visible consumption items, than do White people (2009: 457). The authors go on to make use of Veblen's notion of conspicuous consumption to create a model of status-seeking, in order to construct a possible explanation of the marked differences in consumption between race groups. While many may ascribe the higher proportion of spending on visible consumption within race groups to cultural differences in consumer preferences, the status-seeking model enables Charles et al to argue against this thesis. Rather, they attribute the significant difference in consumption patterns to the desire of individuals to signal their pecuniary wealth within their reference group, in an effort to obtain the esteem of their peers.

Building upon Veblen's insights, Charles et al create a signalling model of visible consumption. Their initial claim is that although income is unobserved by the public, outsiders associate individuals with a particular reference group and know the income distribution of that group. Individuals then allocate their income between consumption goods that are visible to the public and those that are not. According to the model, consumers maximize the following utility equation:

$$(1) \quad v(y_i^k - c_i^k) + u(c_i^k) + w(s_i^k)$$

Consumers allocate their income between two consumer goods, visible consumption ( $c$ ) and non-visible consumption ( $y - c$ ). Visible consumption goods are those consumption items, which are readily observable to outsiders and form part of society's inference ( $s$ ) about an individual's wealth (Charles 2009: 445).

A separating equilibrium, as explained by Spence (1973), is established when individuals maximize their utility, whilst being constrained by their budgets, and society's inference about an individual's level of income is accurate (Charles 2009: 445-447).

In order for the signalling model to reflect a role for status seeking in an individual's consumption decisions, two phenomena are expected to occur.

Firstly, as an individual's income rises, there should be a subsequent rise in visible consumption. Secondly, that as the mean income of a reference group rises, visible consumption should fall.

The intuition behind the first of these two effects is relatively straightforward. Since consumers allocate a particular portion of their expenditures to visible consumption, if income rises, in order to signal this to observers, expenditure on visible consumption goods will similarly rise. Furthermore, visible consumption goods are often luxury goods, consumption of which will increase with income.

Regarding the second effect, Charles et al reason as follows: people will attempt to differentiate themselves from others who are less financially endowed through visible consumption. As poorer people enter a reference group, so the mean income of that reference group will fall. Since the public observes this distribution, individuals at every level of income in that reference group will allocate a greater portion of their income towards

signalling their economic status to those around them. This is because greater signalling is required in order for individuals to differentiate themselves from those immediately poorer than them (Charles 2009: 445-447)

Thus, as the mean income of a reference group falls, so we would expect visible consumption to increase at every level within the reference group. Conversely, an increase in the mean of a reference group's income should lead to a decrease in visible consumption.

Having set out the theoretical framework for this status-signalling model, Charles et al proceed to assess their theory using the United States Consumer Expenditure Survey (CEX) data. Their empirical claims are laid out in section 2 below.

## **2 Empirical Findings of Charles (2009) & Kaus (2010)**

The topic of conspicuous consumption in South Africa is often the subject of much media attention. Wolfhard Kaus (2010) has attempted to conduct a formal study of conspicuous consumption in South Africa. Much of this paper will discuss his findings as well as various issues regarding that analysis.

Kaus (2010) follows the methodology of Charles et al very closely, as he examines the differences in visible consumption between race groups in contemporary South Africa, using data from the Income and Expenditure Surveys for 1995, 2000 and 2005/6. Kaus first ascertains that there are differences in visible consumption spending between race groups. He then attempts to provide empirical support for Charles' status-signalling model using the South African data. Finally, he claims to show that the status-seeking model explains the differences in consumption spending between races.

In order to assess the analysis of Kaus with regards to the South African data, we sought to replicate those findings using the Income and Expenditure Surveys from 1995, 2000 and 2005. In this section we outline the broad empirical findings of both Charles et al (2009) and Kaus (2010), identifying

the similarities and differences along the way. Secondly, we discuss our own replication of Kaus' results.

By using the same method of analysis applied by Charles et al to United States Consumer Expenditure Survey (CEX) data, Kaus reaches similar qualitative results. The important outcomes of both papers can be summarized as follows:

- i) There is a significant gap in expenditure on visible consumption goods between White households and other race group households in both the United States and South Africa.
- ii) The empirical investigation corroborates the status-seeking model outlined by Charles et al (2009) and discussed in section 1. Specifically, this requires identifying a negative relationship between an individual's visible consumption and the mean income of his reference group.
- iii) The status-signalling model explains the differences in visible consumption patterns between race groups.

In order to ascertain part i) of the above results, Charles et al (2009: 432) and, following their lead, Kaus (2010: 8), begin with the following specification for regression analysis:

$$(2) \quad \ln(\text{VisibleConsumption}_i) = \beta_0 + \beta_1 \text{Black}_i + \beta_2 \text{Hispanic/Coloured}_i + \varphi(\text{Permanent Income}_i) + \lambda X_i + \varepsilon_i$$

The dependent variable (the log of Visible Consumption) in the above specification is comprised of expenditures on apparel, jewellery, personal care and vehicles. Charles et al consider visible consumption items to be those that are highly portable across a variety of interactions and readily observable (2009: 431). Furthermore, the authors conducted a survey involving 320 Chicago students in order to identify the above-mentioned categories of consumption as visible consumption items. Kaus, performed no similar survey in South Africa, but placed the same group of goods into the category of visible consumption expenditures.

The race indicators  $Black_i$  and  $Hispanic/Coloured_i$  specify whether the household head is of that particular race. In both papers, the White population group forms the base category and there is an indicator variable for households headed by a Black person. However, the papers differ in that in the South African case, the third race group is Coloured, whilst in the United States it is Hispanic.

The control variables in the specification above are for permanent income and demographic variables, contained in the vector  $X_i$ .<sup>‡</sup>

Due to the poor quality of the data on income, in the CEX, Charles et al choose to make use of a household's total expenditure as a proxy for permanent income. Furthermore, the endogeneity of total expenditure in such a model forces the authors to instrument for this variable. They choose to use current and permanent income controls, indicators for education level as well as a series of industry and occupation codes (Charles 2009: 434). Kaus utilizes the same strategy, deciding to instrument for total expenditure, which acts as a proxy for permanent income. Due to data constraints, the instruments are not identical, but very similar. In contrast to Charles et al, Kaus chooses to implement a second instrumentation strategy, where the education variables are excluded and only income controls remain as instruments for the log of expenditure (2010: 8-9). Kaus notes that education, like other characteristics such as age and family size, may directly influence visible consumption - the dependent variable. We agree with Kaus that education variables should not form part of this instrumentation set and it seems sensible that he continues to use this second instrumentation strategy throughout his analysis.

Despite the differences between the populations of the United States and South Africa, both Kaus and Charles et al reach similar results in their final specifications. In both cases, a White person is found to spend less money on visible consumption goods, holding other factors constant, than a person from another race group. According to Charles et al, United States households headed by a Black or Hispanic person spend 26 to 23 percent more on visible consumption goods than a household headed by a White

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<sup>‡</sup> The vector in Charles' specification consists of a quadratic in the age of the household head, household wealth controls, year effects, and indicator variables for the number of adults in the household, the total number of family members in the household, marital status, whether the household head is male, urban residence, MSA residence, and Census region. In Kaus' specification the demographic vector consists of area type, age, age squared, and family size as well as a vector of year dummies  $Yr_t$

person with comparable income and demographic status (2009: 435). Kaus finds that in South Africa Black people spend roughly 50 percent more and Coloured people 33 percent more than White people living in similar circumstances (2010: 9). Furthermore, that Black and Coloured people spend considerably less on other consumption goods, in particular, healthcare and medical services.

Table 1 below contains two of the important results from Kaus (2010) along with our own replicated results of his regressions. Kaus used specification I and VI to indicate that on average Black and Coloured households in South Africa spend more on visible consumption than do White people, when permanent income and other demographic information is controlled for. Specification I is simply a regression of the log of Visible Consumption on two race dummies, whilst specification VI is described above as (2). Results of both instrumentation strategies are reported, with the single variable instrumentation constituting the second result in each column. The replication yielded the same qualitative results, though the coefficients in the replication were slightly higher than Kaus' when the second instrumentation strategy was used.

Table 1: Differences in Log Visible Spending

Controls Included	Selection of Table 2 (Kaus 2009: 9)				Replication			
	Black		Coloured		Black		Coloured	
(I) No Controls - Race Dummies Only	-1.53*** (0.04)		-0.99*** (0.05)		-1.32*** (0.019)		-0.97*** (0.025)	
(VI) Spec. V plus demographics	0.50*** (0.04)	0.54*** (0.04)	0.33*** (0.04)	0.35*** (0.04)	0.52*** (0.019)	0.53*** (0.020)	0.34*** (0.022)	0.35*** (0.022)

The table is replicated from (Kaus 2009: 9)

\*\*\* Significant at the 0.1 percent level.

The full replication table including all six specifications is presented in Table I of the appendix.

Part ii) of the important results outlined above was that both Charles et al and Kaus manage to provide empirical evidence for the status signalling model, developed by Charles et al. The signalling model, explained in section 1, requires people to associate other individuals with a particular reference group and to have an idea of the income distribution of that reference group.

Charles et al (2009: 428) define an individual's reference group as those people of the same race, living in the same state as that individual.<sup>§</sup> For the status-signalling model to hold, visible consumption needs to be negatively correlated with the mean income of an individual's reference group. Theoretically, the effect of the dispersion of income within the reference group is ambiguous. Charles et al (2009: 431) provide the following argument for this outcome. If money is redistributed within a reference group from one person to a more wealthy person, dispersion of income increases. Since conspicuous consumption is positively effected by income, the wealthier person is expected to increase his visible consumption, while the poorer person is expected to allocate less of his income to visible consumption. The overall effect is ambiguous.

Charles et al ran the following regression on each race group separately to find out the impact of mean group income and dispersion of group income on visible consumption:

$$(3) \ln(\text{VisibleConsumption}_{ik}) = \beta_0 + \beta_1(\mu^{k_y}) + \beta_2(D^{k_y}) + \phi \ln(\text{Expenditure}_i) + \lambda X_i + \varepsilon_i$$

where  $\mu^{k_y}$  represents the log of the mean income of the individual's reference group, while  $D^{k_y}$  is the dispersion of income of the individual's reference group. Expenditure again acts as a proxy for permanent income and is instrumented for as above.

Charles et al find that for the White the population group in the US, all else equal, households spend 60 percent less on visible consumption goods in the event of a doubling of reference group mean income. Similarly, on a pooled sample of the Black and Hispanic populations, all else equal, households spend 44 percent less on visible consumption goods when reference group mean income doubles (2009: 449). Crucially, when the dependent variable is changed to any other consumption category, aside from visible consumption, the negative relationship falls away, and an increase in the mean income of an individual's reference group is coupled with an increase in consumption of the dependent variable.

Thus, Charles et al claim that the CEX data supports their status-signalling model (2009: 454)

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<sup>§</sup> This assumption is discussed at length in section 3.4

In Kaus' analysis, reference groups are defined along similar lines. Specifically, all members of the same race within a province are deemed to be part of the same reference group. Kaus defines a similar specification to that of Charles et al in order to test the accuracy of the status signalling model in South Africa.\*\*

Within the Black population group, Kaus finds that a doubling of mean income of a reference group leads to a 26 percent fall in spending on visible consumption. This result is in keeping with the predictions of the status-signalling model, though the effect of such a change is of a far smaller magnitude than that found to hold in the United States by Charles et al.

Kaus goes one step further and includes interaction terms of mean reference group and ten income decile dummies (2010: 13). Such an approach allows Kaus to partition the effect of mean reference group income across the income distribution. His results indicate that the effect of mean reference group income on visible consumption increases with a person's income. From this he infers that perhaps the desire for status amongst the Black population increases with income. While this may be the case, it seems more accurate to suggest that wealthier Black people are more prepared to spend money in order to signal their wealth to their peers. Regardless of the underlying cause, it certainly fits the view of the popular media (Goyal 2010), (Mawson 2007), who regularly comment on the high levels of consumption amongst the 'emerging Black middle class'.

With regards to the White population, however, Kaus finds that the inverse relationship predicted by the status-signalling model between the mean income of one's reference group and spending on visible consumption items does not hold. The coefficient on the reference group mean income variable fails to indicate a statistically significant negative relationship. Kaus advances two possible explanations for this. Firstly, that for historical reasons, White people in South Africa do not need to signal their wealth. Secondly, that White people use different means aside from the specific expenditures defined as visible consumption by Charles et al. The exclusion of housing from the category of visible consumption goods may help to explain this. We deal with

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\*\* In contrast to the regression run by Charles et al, Kaus omits the income dispersion variable.

the reasons proposed for excluding housing from visible consumption in section 3.2.

**Error! Reference source not found.** indicates both the results referred to above, as well as the results reached when attempting to replicate Kaus' findings. Again, the qualitative findings of the replication exercise are the same. Namely, that within the Black population group, the log of reference group mean income has a negative relationship with the log of visible consumption and that within the White population, there is no statistically significant relationship.

Table 2: Within-Group Differences in Log Visible Expenditures

	<b>Kaus</b>		<b>Replication</b>	
	(I)	(II)	(I)	(II)
Controls				
Log mean group income (Black)	-0.26*** (0.06)		-0.30*** (0.026)	
Log mean group income (White)		0.10 (0.13)		-0.05 (0.089)

\*\*\* Significant at the 0.1 percent level.

Both Charles et al and Kaus reach result (iii), outlined above, that the status-signalling model explains the differences in expenditure on visible consumption goods between races. In order to do so, Charles et al (2009: 432) defines a similar specification to the initial regression (specification (2)), which identified the differences in visible consumption between race groups, However, as well as the other controls, the individual's reference group mean income ( $\mu^k_y$ ) is included in the specification. Thus, specification (2) is altered and appears as follows:

$$(4) \quad \ln(\text{VisibleConsumption}_i) = \beta_0 + \beta_1 \text{Black}_i + \beta_2 \text{Hispanic/Coloured}_i + \varphi(\text{Permanent Income}_i) + \phi(\mu^k_y) + \lambda X_i + \varepsilon_i$$

In doing so, the coefficients on the race indicator variables fall from 0,26 and 0,23 for Black and Hispanic people, respectively, to very low and statistically insignificant values (Charles 2009: 455). As is also the case *within* each race group, the coefficient on the reference group mean income variable is negative. Charles et al ran more regressions, controlling for state fixed

effects (where state refers to the geographical state an individual resides in) as well as the variation of reference group income. These added controls do not significantly affect the results. Charles argument is that these results confirm that controlling for reference group mean income is in fact controlling for status-signalling as opposed to some traits of the state an individual lives in. This argument is discussed in greater detail in section 3.3

Based on the above, Charles et al claim that rather than the differences in consumption being due to differences in preferences between race groups, that their Veblen-inspired model of status signalling explains these. The only role played by race in the differences in expenditure on visible consumption goods is in the inferences that the public makes about an individual's income distribution (Charles 2009: 456). Since Charles et al define reference groups along race/state lines, and individuals are signalling their position in the income distribution of their reference group, then it follows that an individual's race plays a role in this aspect of their visible consumption spending. This relies heavily on the assumptions made by Charles et al regarding how reference groups are formed.

Kaus runs an identical regression including the reference group mean income as a control in specification 4, above. He finds that once this added control is included, the differences in visible consumption expenditure are not statistically different from zero (Kaus 2010: 14). Furthermore, that the coefficient on reference group mean income is negative and that therefore, the argument of differing preferences between races need not be relied upon in order to explain the differences in visible consumption in South Africa.

Table 3 below illustrates our replication of Kaus's final result. Column I indicates the coefficients of the race dummies when the log of mean group income is excluded from the specification. Column II outlines the results for the race dummies as well as the log of mean group income when the latter is included in the regression analysis. In both cases, the dependent variable is the log of visible consumption and demographic, time and permanent income controls are included.

Despite being able to replicate the other (qualitative) results, we were unable to obtain the outcome of Kaus, namely that controlling for reference

group mean income eliminates the differences in visible consumption between race groups.

In our analysis, the coefficients on the race dummy variables did fall substantially when the log of mean reference group income was included. Furthermore, the coefficient on the mean reference group income variable is negative, which is in line with the theoretical predictions of Charles et al and the empirical findings of Kaus. However, even controlling for reference group mean income, our analysis indicates that Black households still spent 25 percent more than White households with comparable incomes. Coloured households spent 14 percent more than White households, holding other factors constant.

In order to replicate the results of Kaus as accurately as possible, we were as consistent with Kaus as possible in our treatment of the data. Weights were applied across the three surveys and inflation was accounted for. Particular care was given to using the same variables to form the consumption categories such as visible consumption. Despite this, there remains a divergence in our latest result, which is unexplained. What our results indicate is that roughly 50 percent of the difference between White households and Black and Coloured households visible consumption is explained by the mean income of a household's reference group. This implies that the status signalling model does not eliminate the differences between races completely and there may be some additional reason for the differences, between race groups. In the following section we will discuss some potentially problematic areas of the analysis.

Table 3 Differences in Log Visible Expenditures

	<b>Kaus</b>		<b>Replication</b>	
	(I)	(II)	(I)	(II)
Controls				
Black Dummy	0.54*** (0.04)	0.08 (0.09)	0.53*** (0.020)	0.25*** (0.031)
Coloured Dummy	0.35*** (0.04)	0.01 (0.06)	0.35*** (0.022)	0.14*** (0.028)
Log mean own group income		-0.29***		-0.18***

(0.05)

(0.017)

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\*\*\* Significant at the 0.1 percent level.

### 3 Improvements

In the absence of academic literature regarding conspicuous consumption in South Africa, and in light of numerous anecdotal accounts of the differences in conspicuous consumption across races, Kaus' paper is the first (to our knowledge) to examine this issue rigorously. Burger et al (2004) examined the consumption patterns of different race groups in South Africa, with a particular emphasis on the emerging black middle class. Case (1998) also examined consumption patterns of black South Africans, but neither of these two papers, nor any other to our knowledge, have discussed Veblen-type effects in relation to consumption in South Africa.

Using data from the Income and Expenditure Surveys as well as the status-signalling model outlined by Charles et al allowed Kaus to confirm that there are differences in conspicuous consumption between South African race groups as well as attempt to explain those differences.

The broad structure and specifications of Kaus' and Charles et al' papers are very similar. Only where data restrictions have forced Kaus to differ from Charles et al has he done so<sup>††</sup>. His choice of reference groups and the methodology also follow Charles et al' lead. Importantly, Kaus also chooses to classify visible consumption spending using the same categories of expenditures. Broadly, this basket is comprised of personal care, jewellery, apparel and cars (Kaus 2010: 17).

While Kaus has managed to reach similar qualitative results to Charles et al it must be questioned how appropriate it is to replicate his analysis. Unlike the United States, South Africa has very recently been liberated from racial segregation. As a result of the Apartheid policies, there is a huge deal of economic inequality between race groups. The Black majority is far worse off than the White minority. This nuanced context needs to be considered in it's

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<sup>††</sup> This is except for the decision to use a second instrumentation strategy due to endogeneity worries, discussed earlier

own right and we argue that replicating Charles et al' analysis using South African data is problematic. In this section, we raise a number of concerns regarding Kaus' empirical analysis, as well as with the conceptual and theoretical model outlined by Charles et al, upon which the former analysis is based.

### **3.1 Year Indicators**

Both Charles et al (2009: 43) and Kaus (2010: 8) choose to include year controls in their analysis of the effects of race on visible consumption expenditures. Instead of interacting the year dummies with each of the explanatory variables, both authors choose instead to merely include dummy variables indicating the year of the survey. By holding the year in which the data was collected constant, the analysis fails to allow for trends in consumption patterns.

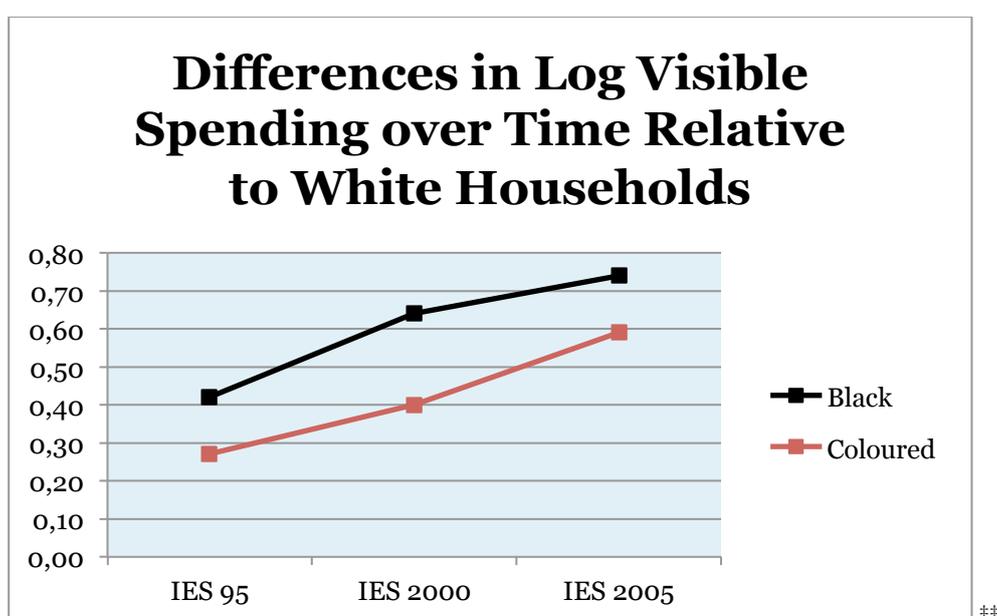
Given that the South African data spans a ten-year period beginning immediately after the country's first democratic election, it may be valuable to examine the changes in visible consumption spending over a period of significant social change. There exists a sentiment amongst some that the economic liberation of many Black South Africans has been coupled with a large increase in conspicuous consumption in those households. The term "Black Diamond" has been coined in reference to the emerging Black middle class in South Africa (Goyal 2010) and has entered popular usage.

Two separate strategies are available to improve the analysis. One option would be, instead of including a vector of year dummies, to interact the year dummies with each of the independent variables.

A second approach would be to perform the analysis on each of the datasets separately. Running an identical regression to specification (2) - with the obvious omission of the year dummy variables - an interesting pattern emerges in the coefficients on the race dummy variables. Figure 1, below, indicates the evolution of the coefficients of the race dummies over the three Income and Expenditure Surveys. The results indicate a clear upward trend in the differences in visible consumption spending over time. Controlling for

income and other demographic characteristics, Black households went from spending 42% more to 74% more than White households on visible consumption, from 1995 to 2005. Similarly, the difference between Coloured and White families in visible consumption spending steadily increased from 27% to 59%.

Figure 1



These results would seem to correspond with the view that conspicuous consumption, particularly amongst the Black population, has been on the rise since South Africa's democracy was formed.

### 3.2 Housing

In constructing a variable for visible consumption Charles et al choose consumption items, which are “readily observable and highly portable across a variety of interactions” (2009: 431). Through a mix of ‘common sense’ and the results of a survey conducted with 320 Chicago students, the broad categories of apparel, jewellery, personal care and vehicles were identified as visible consumption goods.

An important category of expenditure that was omitted from this group is expenditure on housing. In the survey conducted by Charles et al it was

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\*\* The full set of results can be accessed in Table II of the appendix

found that housing is considered to be “reasonably observable” and to have “high income elasticity” (2009: 431). However, the authors justify leaving it out of the bundle of visible consumption items by claiming that the differential treatment of race groups in attaining mortgages to purchase houses creates differences in housing expenditures across race. Black and Hispanic people have mortgage applications rejected more often than White people with similar income and other characteristics and as a result are more likely to rent as opposed to own a house. In the long run, renting is more expensive and thus, Black and Hispanic people spend more on housing than do White people, other factors constant (Charles 2009: 431).

Thus, labelling spending on housing as conspicuous, would only magnify the differences in spending on visible consumption between race groups in the United States.

It may be argued that housing is not portable enough to be considered an item of visible consumption, however, it is worth noting that variation may exist between reference groups with regards to the social interactions of their individuals and in particular how wealth is signalled. The assumption that visible consumption goods should be portable reflects a society where the majority of peoples’ social interactions are away from their homes. In a small community this may not be the case. This is perhaps problematic for the analysis of Charles et al, which requires that the manner of signalling is the same regardless of the reference group. Kaus’ analysis identified that the status signalling model was vindicated when attention was restricted to the Black population group, but that the predicted negative correlation between reference group mean income and visible consumption does not exist amongst South Africa’s White population. As he points out (Kaus 2010: 12-13) this may be explained by the fact that different reference groups use different methods of signalling wealth.

In South Africa, it may be argued that - particularly towards the top end of the income distribution scale - spending on housing is a very important component of status signalling. While a house provides obvious direct utility to its owners, it also provides indirect utility if seeing the house and its furnishings causes others to make inferences regarding an individual’s level of wealth. This certainly seems to be the case in South Africa, where many people

are prepared to pay a premium for a house being in a location well known for being an affluent area. We would argue that part of the decision to pay such a premium is in many cases motivated by a desire for peer recognition.

After pointing out that no survey has been conducted in South Africa regarding the classification of visible consumption goods, Kaus defines visible consumption goods identically to Charles et al. He maintains the same broad consumption categories, namely apparel, jewellery, personal care and vehicles, but notes that the items in these categories might be slightly different in the South African and United States data (Kaus 2010: 7).

Unlike the US data, where Black and Hispanic people spend more on housing than White people with comparable incomes – perhaps, as Charles et al claim, due to differential treatment in the housing market – the South African data indicates that White people spend more on housing than Black and Coloured people with comparable incomes.

Table 4 below indicates the results of substituting the dependent variable from Kaus' analysis with the log of Housing Spending. Row I indicates the results of a regression of race indicator variables on the log of spending on housing, with no other explanatory variables. A second regression (II) is run with the same explanatory variables as those found in (2) above. As is the case with visible consumption spending, Black and Coloured people spend less on housing than do White people when there are no other control variables. This is expected due to the much lower average income of the Black population. However, even when permanent income, demographic characteristics and the year of the survey are controlled for, it is still the case that Black and Coloured people spend less than White people. The results are significant, with Black households spending 73% less than White households with comparable income on their homes. The difference between Coloured and White families is 30%.

Table 4: Differences in the Log of Housing Spending

Controls Included	Black	Coloured
(I) No Controls - Race Dummies Only	-1.99*** (0.012)	-1.13*** (0.016)
(II) IV Treatment, Year Dummies & Demographics	-0.73*** (0.012)	-0.30*** (0.014)

\*\*\* Significant at the 0,1% level

Thus, unlike in the US, where (according to the CEX data) including housing in visible consumption will most likely increase the differences in visible consumption spending between race groups, including housing in this consumption category should narrow the gap in South Africa.

Table 5 indicates how including housing in the category of visible consumption significantly changes the impact of race on visible consumption spending. In stark contrast to the result that Black and Coloured people spend roughly 50% and 35% more than White people with comparable incomes, respectively, broadening our definition of visible consumption to include housing yields the result that in fact Black people spend less than White people, holding income and demographic characteristics constant. Coloured people's visible consumption is only 5% higher than White people with comparable incomes.

Table 5: Differences in the Log of Visible Spending (Including Housing)

Controls Included	Black	Coloured
(I) No Controls - Race Dummies Only	-1.82*** (0.016)	-1.19*** (0.022)
(II) Log expenditure with IV Treatment, Year Dummies & Demographics	-0.05* (0.015)	0.05*** (0.017)

\*\*\* Significant at the 0,1% level

\* Significant at the 5% level

Such a finding indicates the importance of the assumption that housing should be excluded from the category of visible consumption spending. The analyses of Charles et al and Kaus require the choice of reference groups as well as the choice of how wealth is signalled by people in those reference groups. Due to the marked economic differences between the reference groups chosen by Kaus, it is questionable whether or not all reference groups signal wealth in the same ways.

### 3.3 Fixed Effects

Charles et al' final result is that once an individual's reference group mean income is controlled for (in addition to an individual's permanent income and demographic information) that the differences in visible consumption between races fall away. Charles et al run regressions with and without controls for state fixed effects. The specification for their final result is as follows:

$$(5) \quad \ln(\text{VisibleConsumption}_i) = \beta_0 + \beta_1 \text{Black}_i + \beta_2 \text{Hispanic/Coloured}_i + \phi(\text{Permanent Income}_i) + \phi_1(\mu^k_y) + \phi_2(D^k_y) + \lambda X_i + \alpha(\text{State}_i) + \varepsilon_i$$

where  $\text{State}_i$  refers to a vector of dummies for the State in which the household is situated and  $D^k_y$  represents the dispersion of income in a reference group. Charles et al find that including these additional controls has no significant impact on the other coefficients in the regression and therefore do not change the qualitative results (2009: 455). Importantly, this illustrates that the result that socially contingent factors are responsible for the differences in visible consumption across race is not merely a consequence of some other trait of the state.

Arguably a more comprehensive approach would have been to assess the effect of controlling for reference group fixed effects – i.e. race/state interaction dummy variables - as opposed to only state fixed effects. This would ensure that controlling for mean reference group income is not simply picking-up some other important aspect of the reference group.

This approach may be problematic though, since if dummy variables are included to represent each race/state cell, there may be collinearity between these and the variables of interest (the race dummy variables). However, failing to include dummy variables for each reference group is also problematic. Without such controls, it may be the case that the reference group mean income variable is simply representing some other reference group effect, as opposed to the mean group income effect derived from the status-signalling model.

Thus there is a tension between controlling appropriately for reference group fixed effects and utilizing race dummy variables as the variables of interest. This is inherent to the approach of Charles et al. Essentially, their analysis aims to show that there are differences in conspicuous consumption between races, but that these differences are a result of an omitted variable bias. That omitted variable is group mean income, which by the explanation given by Charles et al impacts on visible consumption spending negatively as a result of the status signalling model.

Kaus on the other hand, in the South African context, refrains from including any controls for either province fixed effects or reference group fixed effects, in his final analysis. Thus, although those regressions seem to indicate that controlling for reference group mean income erases the differences in visible consumption spending between race groups, one cannot definitively claim that the differences are a result of the status-signalling model.

Controls	(I)	(II)	(III)	(IV)
Black Dummy	0.53***	0.53***	0.25***	0.27***
	(0.019)	(0.019)	(0.031)	(0.037)
Coloured Dummy	0.35***	0.37***	0.14***	0.19***
	(0.022)	(0.023)	(0.028)	(0.032)
Log mean own group income			-0.18***	-0.17***
			(0.017)	(0.020)
Province Fixed Effects Included	No	Yes	No	Yes

\*\*\* Significant at the 0,1% level

Table 6, above, indicates the impact that including province fixed effects variables has on specifications (2) and (3). Columns I and II of the table indicate the results of regressing the log of visible consumption on demographic, time and permanent income controls as well as the two race dummies, with and without fixed effects controls respectively. Columns III and IV correspond to specification (3), where the log of reference group mean income is included as an explanatory variable, again with and without fixed effects controls.

Similarly to the findings of Charles et al regarding the United States data, including province fixed effects has no impact on the qualitative results. The coefficients on each of the race variables in both regressions are slightly greater when province fixed effects are included. Furthermore, the impact of log own group mean income increases from -0.20 to -0.18. This is in line with the findings of Charles et al (2009: 455) and perhaps with the exception of the “Coloured” dummy variable in specification (2), whose coefficient increases from 0.15 to 0.20, it is clear that the impact of own group mean income on visible consumption spending is not simply masking the effects of some other trait of the province individuals live in.

Thus, although our analysis indicates that in South Africa it is not the case that reference group mean income can explain all of the differences in

visible consumption spending, the explanatory variable derived from the status-seeking model does appear to eliminate a good deal of the differences in visible consumption spending. However, such a conclusion may be premature in the absence of a thorough account of the difficulties in estimating 'endogenous social effects'.

### 3.4 Reference Groups

In *Identification of Endogenous Social Effects: The Reflection Problem*, Charles Manski outlines his theoretical observations regarding the effect of the behaviour of a group on the behaviour of its members. Manski (1993: 532-533) identifies three hypotheses for why individuals in a group behave in a similar fashion:

- i) The claim that individuals in a group behave similarly because of some intrinsic features, which they share, or because of shared circumstances. Manski calls these *correlated effects*.
- ii) A second phenomenon, which he calls *endogenous effects*, when an individual's disposition to behave in a certain fashion varies with the behaviour of the group.
- iii) Finally, he defines *exogenous effects* as those situations where an individual's disposition to behave in a certain fashion varies with exogenous characteristics of the group.

Based on this delineation, Manski outlines a model specification, which can be applied to the model of Charles et al. In Manski's model, each observation in the population can be defined by values for the vector  $(y, x, z, u)$ , where  $y$  is a scalar outcome,  $x$  are attribute's characterizing an individual's reference group,  $z$  are observed attributes that directly effect  $y$  and  $u$  are unobserved attributes that directly effect  $y$ . He then assumes that the characterization of these variables is as follows:

$$(6) \quad y = \alpha + \beta E(y|x) + E(z|x)' \gamma + z' \eta + u, \quad E(u | x, z) = x' \delta$$

Thus, the mean regression has the form

$$(7) \quad E(y | x, z) = \alpha + \beta E(y|x) + E(z|x)' \gamma + z' \eta + x' \delta$$

In regression (7),  $\beta \neq 0$  implies that there are endogenous effects,  $\gamma \neq 0$  implies that there are exogenous effects and if  $\delta \neq 0$  then there are correlated effects.

Applying this model to the analysis of Charles et al and in particular, specification (3) in this paper, we notice that the dependent variable,  $\ln(\text{VisibleConsumption})$  is a scalar outcome of interest, like  $y$ . Furthermore, under the Charles et al' hypothesis the variables Black and Hispanic, are examples of  $x$ : attribute's characterizing an individual's reference group. Permanent income and demographic controls are examples of  $z$ , since they are attributes that directly effect  $y$ .

In this case,  $E(y|x)$  is the average level of visible consumption within each race group. While this variable does not explicitly appear in specification (3), the story, which Charles et al tell concerning the effect of Reference Group Mean Income entails that it affects an individual's visible consumption decision through the visible consumption decisions of others in his reference group. Thus, Mean Reference Group Income works through average visible consumption. According to Charles et al, when the income distribution changes within a reference group, so that the mean income is lower, then at every level of income, visible consumption is higher within that reference group. Individuals raise their level of visible consumption in order to signal to the public that they are wealthier than the person immediately below them in the income distribution. A potential problem for this theory is that if a below average income person enters a reference group, people poorer than him will not have any incentive to change their visible consumption, only those who are wealthier will. Thus, under a sympathetic interpretation of the Charles et al methodology, a negative statistically significant coefficient on the Reference Group Mean Income variable indicates a Manski-type *endogenous effect*.

If the relationship between Manski's model and the model of Charles et al is as has been characterised, then non-negative statistically significant coefficients on the race indicator variables imply that the similar behaviour of members of a reference group are at least partly a result of *correlated effects*.

Such coefficients emerged in both Charles et al and Kaus' initial analysis, where Reference Group Mean Income was omitted from the regression analysis. However, once Reference Group Mean Income was

controlled for, the coefficients on the race dummy variables were not statistically different from zero. Thus, both Charles et al and Kaus may argue that in the United States and South Africa, respectively, the differences in conspicuous consumption are a result of *endogenous* and *exogenous effects*, as opposed to *correlated effects*. Thus, rather than explaining the differences in consumption by relying on the argument of differing preferences between race groups, both authors claim that visible consumption decisions are based on a status-signalling model and that therefore the behaviour of other members of an individual's reference group influences his behaviour.

The major thrust of Manski's argument is that a great deal of work needs to be done in order to demonstrate empirically that social effects do have an impact on people. Furthermore, that the choice of the reference group is a vital part of this process. He points out that "the prevailing practice is simply to assume that individuals are influenced by  $E(y|x)$  and  $E(z|x)$  for some specified  $x$ ." (Manski 1993: 536)

This seems to be the approach of Charles et al. The status-signalling model relies upon the public having knowledge of the distribution of income of any given reference group, for example White people in California. Furthermore, individuals within a reference group maximize their utility – of which social recognition is a component – based upon the level of visible consumption spending of the rest of their reference group. Thus  $E(\text{visible consumption} | \text{White} = 1, \text{California} = 1)$  is assumed from the outset to affect the level of visible consumption spending by a White person in California. However, there is no indication that Charles et al have any independent empirical or other support for the claim that race/state cells constitute reference groups. Furthermore, Charles et al claim, "at a minimum, the observer knows that the person's income is likely drawn from the Black (White) income distribution in the state where the person resides" (Charles 2009: 446). They note that the choice of the state as the level of spatial aggregation is a result of the data available.

Manski (1993: 536) questions whether or not researcher's assumptions about how people form reference groups are accurate as well as whether or not individuals actually have knowledge of the mean outcomes of these supposed reference groups. This is a particular problem for the analysis of

Charles et al. As discussed earlier in this paper, including reference group control variables in Charles' final specification is important in order to ensure that the mean reference group income variable is not proxying for other traits of the reference group. However, including these controls proves to be problematic, due to the collinearity between the race group indicators and the reference group indicators. The option of removing the race group indicator variables is not available, as they are the variables of interest. Thus in light of this and Manski's concerns, showing that the mean outcome of reference group income does have an impact, in its own right, on individuals' visible consumption decisions is a challenge that Charles et al do not seem to be able to overcome.

### **Conclusion**

Accounting for the differences in conspicuous consumption across race groups remains a challenge. Charles et al (2009) and Kaus (2010) analyses provide explanations for these differences in the United States and South Africa, respectively. They rely on a status signalling model inspired by Veblen as opposed to cultural differences. Though such an attempt marks a positive contribution to the literature regarding conspicuous consumption, our analysis shows the sensitivity to changes in certain assumptions, such as the choice of variables to include in the category of visible consumption. Furthermore, the choice of reference groups is problematic in light of the work of Manski.

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## Appendix

Table I

### Differences in Log Visible Spending

Controls Included	Kaus				Replication			
	Black		Coloured		Black		Coloured	
(I) No Controls - Race Dummies Only	-1.53***		-0.99***		-1.32***		-0.97***	
	(0.04)		(0.05)		(0.019)		(0.025)	
(II) Current Income Controls	0.06		0.11**		0.29***		0.18***	
	(0.04)		(0.04)		(0.019)		(0.023)	
(III) Log Total Expenditure	0.56***		0.41***		0.65***		0.46***	
	(0.03)		(0.03)		(0.017)		(0.020)	
(IV) IV Specifications	0.60***	0.63***	0.44***	0.47***	0.69***	0.69***	0.49***	0.49***
	(0.04)	(0.04)	(0.03)	(0.03)	(0.018)	(0.019)	(0.021)	(0.022)
(V) Spec. IV plus time dummies	0.62***	0.67***	0.46***	0.49***	0.64***	0.64***	0.46***	0.46***
	(0.04)	(0.04)	(0.03)	(0.03)	(0.018)	(0.019)	(0.021)	(0.021)
(VI) Spec. V plus demographics	0.50***	0.54***	0.33***	0.35***	0.52***	0.53***	0.34***	0.35***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.019)	(0.020)	(0.022)	(0.022)

Table 2

Differences in Log Visible Spending Over Time						
Controls Included	IES 95		IES 2000		IES 2005	
	Black	Coloured	Black	Coloured	Black	Coloured
(I) No Controls - Race Dummies Only	-1.24*** (0.030)	-0.95*** (0.042)	-1.55*** (0.034)	-1.08*** (0.044)	-1.33*** (0.039)	-1.03*** (0.048)
(II) Current Income Controls	0.41*** (0.030)	0.29*** (0.038)	0.02 (0.031)	-0.03 (0.037)	0.34*** (0.040)	0.25*** (0.046)
(III) Log Total Expenditure	0.50*** (0.029)	0.35*** (0.036)	0.66*** (0.026)	0.43*** -0.031	0.95*** (0.032)	0.80*** (0.037)
(IV) IV Specifications	0.54*** (0.030)	0.39*** (0.037)	0.81*** (0.032)	0.53*** (0.033)	0.92*** (0.036)	0.78*** (0.039)
(V) Spec. IV plus demographics	0.43*** (0.033)	0.28*** (0.039)	0.73*** (0.032)	0.46*** (0.034)	0.74*** (0.037)	0.59*** (0.040)