The Impact of Outcome Orientation and Justice Concerns on Tax Compliance: The Role of Taxpayers' Identity

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Abstract

Previous research has yielded inconsistent evidence for the impact of justice perceptions on tax compliance. This paper suggests a more differentiated view on the basis of two congenial theories of procedural and distributive justice. The group-value model and a categorization approach argue that taxpayers are more concerned about justice, and less about personal outcomes, when they identify strongly with the inclusive category within which procedures and distributions apply.

Regression analyses of survey data from 2040 Australian citizens showed that two forms of tax compliance (pay income reporting and tax minimization) were determined by self-interest variables. For two other forms (non-pay income and deductions), inclusive identification had an additional effect and moderated the effects of self-interest and justice variables as predicted. Implications for theories of justice motivation and the practice of compliance enforcement are discussed.

The Impact of Outcome Orientation and Justice Concerns on Tax Compliance: The Role of Taxpayers' Identity

Human life is organized in various more or less abstract collectives, from families, clubs, work organizations, and communities to nations and supranational associations. These collectives have their own goals, agendas, and policies. Their realization, however, depends on contributions from and cooperation between its members. Rules and laws may explicitly prescribe such contributions and cooperation, but they are ineffectual if not obeyed. Noncompliance jeopardizes the collective project and, at least from the point of view of the collective, can be utterly destructive.

A prime example is noncompliance in the area of taxation (Andreoni, Erard, & Feinstein, 1998). A tax system is meant to provide the revenue necessary for pursuing collective goals like social security, economic prosperity and redistribution of wealth, internal and national safety, and cultural life. Noncompliance not only jeopardizes funding for these projects, but insofar as it differs between social groups, noncompliance may also directly contribute to social inequality. Tax noncompliance is indeed considered a significant problem, even though its magnitude can only be estimated. For instance, for the year 1992, the U.S. Internal Revenue Service estimated a "gross individual income tax gap", that is, the difference between individual income taxes owed and taxes paid voluntarily and on time, of $93 to $95 billion (Internal Revenue Service, 1997). This translates into an individual noncompliance rate of 17 percent whereas 83 percent of taxes owed were paid voluntarily and on time.

The problem of tax noncompliance is substantial and has therefore stimulated a lot of research into the underlying factors and processes (Roth, Scholz, & Witte, 1989). This research has been dominated by economic models that conceive of taxpayers as rational actors who are basically (non)compliant if this pays off for them (e.g., Allingham & Sandmo, 1972). However, more recent research pointed to the limitations of this perspective and the

relevance of more social factors like norms, trust, and morality (e.g., Cowell, 1992; Cullis & Lewis, 1997; Gordon, 1989; Grasmick & Bursik, 1990; Scholz & Lubell, 1998). More specifically, researchers stressed the role of perceptions of justice and fairness, finding that taxpayers are less likely to be compliant with a tax system they consider unjust, unfair, and thus illegitimate (e.g., Alm, Jackson, & McKee, 1993; Cowell, 1992; Falkinger, 1995; Kinsey, Grasmick, & Smith, 1991; Roberts & Hite, 1994).

Not surprisingly, empirical research was mainly concerned with demonstrating the general relevance of social factors such as perceived justice and fairness. However, it now seems vital to address the more precise conditions of their relevance. When do justice concerns matter more than factors of individual outcome maximization? For whom is the justice of the tax system relevant and why? We cannot assume that processes of tax compliance are the same for all taxpayers and under all conditions, implying the need for "responsive regulation" (Braithwaite & Braithwaite, 2000). The present research attempts to contribute to the theoretical differentiation required. It builds particularly on recent theories of procedural and distributive justice that stress the role of social identity for justice motivation versus outcome orientation.

The attempted differentiation will be threefold. First, we will distinguish various aspects of instrumental and justice considerations and test for their comparative predictive value for tax compliance. Second, we will distinguish between various forms of tax compliance and test for the generality of the effects. Third, we will test for the moderating impact of taxpayers' social identity in terms of the inclusive category within which the tax system is applied; that is, the nation.

Forms of Tax Compliance

Researchers usually distinguish between tax noncompliance, tax evasion, and tax avoidance. While tax noncompliance includes intended as well as unintended failures to meet

tax obligations, for instance, due to misinformation, misunderstanding, or calculation errors (Hessing, Kinsey, Elffers, & Weigel, 1988), the present research deals only with self-reported intentional behaviors. Tax evasion refers to such deliberate criminal non-fulfillment of tax liabilities. In contrast, tax avoidance refers to deliberate acts of reducing one's taxes by legal means. However, the distinction is not always clear because tax laws are not always precise. Moreover, when taxpayers try to find loopholes with the intention to pay less tax, even if technically legal, their actions may be against the spirit of the law and in this sense considered noncompliant (James, Hasseldine, Hite, & Toumi, 2001). The present research will deal with both evasion and avoidance and, based on the premise that either is unfavorable to the tax-system and uncooperative towards the collective, subsume both under the concept of tax noncompliance. Its primary form is of course tax evasion.

However, even types of tax evasion may be further differentiated, not only because different types may be available to different groups of taxpayers, but also because these types could have different qualities and involve different processes. Interventions to increase compliance would then have to be specifically addressed at each of them (Kidder & McEwen, 1989). First, while some acts of evasion involve an unlawful commission (e.g., a false statement on deductions), others may involve an omission (e.g., not reporting some cash income); the latter could be considered less serious (Christensen & Hite, 1997; see also Kahneman & Miller, 1986). Second, perceptions of lawfulness and legitimacy can diverge (objective vs. subjective justice; see Lind & Tyler, 1988). While people may find some unlawful acts of evasion illegitimate according to their concept of right and wrong (e.g., exaggerating deductions), they may consider some laws to be wrong and regard respective acts of evasion, even though unlawful, as morally justified (e.g., underreporting social security allowances). Third, some acts of evasion may be clearly illegal whereas others may be borderline cases and their illegality unclear (e.g., certain tax minimization strategies). To

test for the generality or specificity of underlying processes, the present research used a variety of measures of tax noncompliance, from underreporting of various forms of income, to exaggerations of deduction and rebate claims, and the pursuit of tax minimization strategies.

The Rational Actor

Most research on tax evasion follows an economic self-interest model as initially outlined by Allingham and Sandmo (1972). It understands taxpayers as rational actors who want to maximize their individual outcomes. The taxpayer's choice is between compliance with a certain loss in the form of the taxes paid and tax evasion with the chance of a relative gain if the evasion is undetected or the chance of an even greater loss if the evasion is detected and penalized. In line with the model, empirical studies found that tax compliance increased with detection probability or audit probability (note that the latter does not strictly imply detection; e.g., De Juan, Lasheras, & Mayo, 1994; Friedland, 1982; Kinsey & Grasmick, 1993; Mason & Calvin, 1984; Webley & Halstead, 1986); however, there were also some negative findings (Dubin, Graetz, & Wilde, 1987; Dubin & Wilde, 1988; for a review, see Fischer, Wartick, & Mark, 1992). There is also some evidence that tax compliance increases with penalty rates (De Juan et al., 1994; Friedland, Maital, & Rutenberg, 1978; Klepper & Nagin, 1989; Schwartz & Orleans, 1967). However, the evidence is even more ambiguous on this question (Friedland, 1982; Spicer & Lundstedt, 1976; Varma & Doob, 1998).

Despite its apparent plausibility, the self-interest model and its implied regulatory approach of deterrence may be criticized for its one-sided focus on individual outcome maximization (see Lewis, 1982). It ignores the fact that voluntary tax compliance requires some degree of cooperation between taxpayers and tax authorities that may be undermined by a heavy-handed regulatory approach (Sheffrin & Triest, 1992; Strümpel, 1969). Furthermore, the self-interest model is overly individualistic (Cowell, 1992) in that it denies that taxpayers

might not only be concerned with their individual outcomes, but also with their social reputation (Grasmick & Bursik, 1990), the tax-funded outcomes for the collective (Alm et al., 1993), and justice and fairness (Kinsey et al., 1991). Thus, the important question is: When are taxpayers primarily interested in maximizing their individual outcomes by evading taxes while avoiding penalties, and when is their taxpaying behavior more based on social motives?

Taxpaying behavior can be regarded as a social dilemma (Dawes, 1980) where it appears economically most rational for individuals to evade taxes if possible and yet profit from the public goods funded by the tax system. However, if all individuals followed this rationality, the tax system would collapse, public goods would not be available, and everybody would be even worse off than if they cooperated by paying their taxes (Elffers, 2000; Weigel, Hessing, & Elffers, 1987). Social psychological research on cooperation and social dilemmas suggests that cooperation is greater when participants share membership in a relevant social group (Brewer & Kramer, 1986; Brewer & Schneider, 1990). In fact, it is argued that social identification transforms the self and thus actual self-interest, with a more collective self-definition implying a greater concern for outcomes of the collective and the welfare of other members of the collective (Brewer, 1991; Morrison, 1997).

In the context of taxation, it is therefore predicted that (H1) identification with the collective to which taxes are contributed and within which public goods are shared, that is national identification, will be related to more cooperative taxpaying behavior and compliance. Following the self-interest model, (H2a) deterrence and outcome favorability should increase tax compliance. However, assuming that collective identification transforms self-interest so that taxpayers are less concerned with maximizing their immediate individual outcomes, it is predicted more specifically that (H2b) deterrence and individual outcome favorability will have a more positive impact on tax compliance when taxpayers identify less rather than more strongly with the relevant collective (i.e., their nation). In the present study,

deterrence follows an expectancy-value model and is conceptualized as a multiplicative combination of perceived probability of detection, perceived probability of certain legal consequences, and the evaluation of the severity of these consequences (Grasmick & Bursik, 1990). While deterrence refers to anticipated consequences of noncompliance and may be conceived as reactive, a more proactive aspect of individual self-interest is the perceived favorability of the tax system for oneself, or here the degree to which decisions of the tax authority are favorable to oneself. The more taxpayers think tax decisions are favorable to themselves, the less they should expect to further gain from tax noncompliance. Despite the distinction between proactive and reactive self-interest considerations, there is no theoretical reason why H2a and H2b should not hold for both outcome favorability and deterrence.

Whether in regard to individual or collective self-interest, so far we have assumed that taxpayers would be solely concerned about maximizing their self-interest (even though in relation to differently defined selves and self-interests). However, taxpayers may also be concerned with issues of justice and fairness.

Concerns for Procedural Justice

There is strong evidence across various contexts that perceived fairness of the procedures involved in decision-making and allocation processes affect general satisfaction, support for decision-makers, and acceptance of, or compliance with, their decisions (see Tyler, Boeckmann, Smith, & Huo, 1997). In an early approach to procedural justice, Thibaut and Walker (1975) viewed process and decision control as core criteria of procedural fairness; that is, the possibility to voice one's view and have an input in the final decision, respectively. People would desire process and decision control because it would give them control over outcomes. From this perspective, procedural justice would not be truly independent from self-interest but rather instrumental to outcome maximization. More recently, Lind and Tyler (1988) criticized the instrumental approach for its limitations; for instance, it cannot explain

procedural justice effects that are by methodological design independent from outcomes (Lind, Kanfer, & Earley, 1990). Moreover, it cannot easily account for a broader concept of procedural justice that includes both formal process and decision control and interpersonally fair and respectful treatment (Bies & Moag, 1986; Tyler & Bies, 1990). Based on social identity theory (Tajfel & Turner, 1986), Lind and Tyler argue that people want to be treated fairly as members of a group they share with the decision-maker, because fair treatment acknowledges their membership and status in the group and maintains the values of the group. The group value approach (Tyler, 1989, 1994; Tyler et al., 1997; Tyler & Smith, 1999) thus argues that procedural justice – in terms of neutrality, trustworthiness, and respect (or status recognition) – is sought out of "relational concerns" about one's relationship to group representatives and one's social identity as a member of the group.

Importantly, the group value approach allows for the prediction that a procedural justice motivation out of relational concerns depends on one's degree of identification with the social category that the authorities represent and within which the procedures are applied (Huo, Smith, Tyler, & Lind, 1996; Smith & Tyler, 1996). People should be only concerned about procedural justice as an indicator of their inclusion and status within their group when they identify with the group and their group membership relevant to their self-concept.

There are few studies so far on the impact of procedural fairness on tax compliance. Using a survey method, Porcano (1988) investigated the impact of procedural justice, relative to a number of other variables, on hypothetical or self-reported tax evasion. Procedural justice was measured by three items, asking whether taxpayers had some input in formulating tax laws, whether the input should be greater, and whether the enforcement procedures employed by the tax authority were fair. Procedural justice did not contribute significantly to the discrimination between evaders and non-evaders as far as the hypothetical situation was concerned; self-reported past evaders even perceived the tax system to be procedurally fairer

than non-evaders did. A simulation study by Alm et al. (1993) investigated experimentally whether procedural qualities of the decision of how tax revenue should be spent affected tax compliance. As predicted, there was less tax compliance when the decision was imposed onto the participants rather than based on a (presumably fairer) majority rule. Similarly, in a scenario study by Tyler, Rasinski, and Spodick (1985), the opportunity to voice one's opinion to a city council about the allocation of tax money positively affected perceptions of fairness of the decision process and evaluations of the council. This was the case even when there was no decision control and thus presumably little instrumental motivation (although, of course, through voicing their opinion people would hope to influence the decision). However, compliance was not an issue in this study. Likewise, other studies investigated criteria of procedural fairness applied in the area of taxation but not their effects on tax compliance (e.g., Magner, Johnson, Sobery, & Welker, 2000; Stalans & Lind, 1997).

The present study will investigate the impact of perceived procedural fairness on tax compliance while controlling for outcome favorability and instrumental considerations (as discussed in the previous paragraph). Consistent with evidence in other areas, it is predicted that (H3a) perceived procedural justice will be related to tax compliance. Furthermore, we follow the group value approach in its more specific assumption concerning the role of inclusive social identity and predict that (H3b) perceived procedural justice will have a more positive impact on tax compliance when taxpayers identify more rather than less strongly with the relevant inclusive category (i.e., the nation).

Concerns for Distributive Justice

Even more so than procedural justice, distributive justice has been traditionally conceptualized as derivative to instrumental considerations (e.g., Walster, Walster, & Berscheid, 1978; see Tyler & Smith, 1998; Wenzel, 2000a). However, more recently Wenzel (2000a, 2001a, in press) proposed an approach to distributive justice, based on self-

categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), that complements very well the group value approach to procedural justice.

The categorization approach assumes that distributive justice involves categorization processes on various levels of abstraction. Central is the inclusive category of all those considered potential recipients of the distribution. Non-differentiating justice notions (e.g., equality; see Cohen, 1987) are derived from the perception that all potential recipients are the same, in that they share membership in the inclusive category, and are thus equally deserving (in an identity-defining way; Wenzel, 2000a). Conversely, equal treatment confirms their inclusion in this social category. Differentiating justice notions (e.g., equity; see Cohen, 1987) are derived from the perception that the potential recipients are differently prototypical for the inclusive category and represent to different degrees important values of that category (Wenzel, 2001a). Conversely, the differential treatment confirms the importance of the respective value dimension for the social category. In either situation, it is identification in terms of the inclusive category that motivates people towards justice, even at the cost of individual or group interests (Wenzel, in press).

Numerous studies have investigated effects of distributive justice on tax compliance; too many to review them all here. The findings are quite mixed. An integration of the findings is further complicated by the fact that taxation involves various aspects of distributive justice, while most studies select only one or few of them or use overall ratings of fairness. First, there is the fairness of one's tax burden; either one's personal tax burden compared to similar others (horizontal equity; Kinsey & Grasmick, 1993), or (largely neglected so far) the tax burden of one's group compared to other groups. For instance, Spicer and Becker (1980) found in a simulation study that disadvantageous inequity increased tax evasion and advantageous inequity decreased tax evasion (for a similar result using a survey methodology,

see De Juan et al., 1994). Webley, Robben, and Morris (1988) manipulated participants' relative tax-free allowances in a similar fashion but found no effect on tax evasion.

Second, there is the fairness of the relative tax burdens of different societal groups or strata (vertical equity; Kinsey & Grasmick, 1993). This issue does not concern one's personal or group treatment but rather the distribution of tax burdens across the collective as a whole; it is thus an aspect of macrojustice (Brickman, Folger, Goode, & Schul, 1981). A related issue, not addressed in the present study, refers to the fairness of progressivity of the tax rates (Hite & Roberts, 1991; Roberts & Hite, 1994). Using survey procedures, Kinsey and Grasmick (1993) found significant effects of vertical unfairness (and unfairness of progressivity) on future intentions of tax cheating, whereas Porcano (1988), using a different and possibly less specific measure, did not find significant effects on hypothetical or past evasion.

Third, there is the issue of fairness of the taxpayer-government exchange. This could be conceptualized as an aspect of microjustice (Brickman et al., 1981) when individuals or groups of taxpayers evaluate whether the government benefits and services they receive are a fair return for the taxes they pay, compared to the benefits received and taxes paid by others. For instance, Porcano (1988) found that self-reported past evaders perceived the exchange relationship as more unfair than non-evaders did. In the present research, however, the taxpayer-government exchange will be conceptualized as an aspect of macrojustice (Brickman et al., 1981). Taxpayers will be asked to evaluate government spending, overall and across a range of areas, irrespective of the benefits they receive and the taxes they pay. For instance, Wallschutzky (1984) used an overall indicator for macrojustice exchange but did not find a significant difference between convicted evaders and a control group (nor did he find a difference for microjustice exchange indicators).

Finally, using an overall rating, Song and Yarbrough (1978) found a significant relation between perceived fairness of the tax system and "tax ethics", whereas Kaplan and Reckers (1985) found no effect on evasion intention or recommended penalties for evasion. Roberts and Hite (1994) even found an unpredicted positive relation between overall fairness and admitted past noncompliance.

Unpredicted results like the latter suggest a more critical consideration of methodological issues. Generally, correlational analyses of survey data may of course always have the possible problem of omitted variables. More specifically, in the present context, fairness and justice judgments may be correlated with outcome favorability (as justice judgments are often self-serving and egocentric; Messick & Sentis, 1983; Walster et al. 1978). In the present study, we will therefore control statistically for outcome favorability and instrumental considerations, in order to establish the unique effects of justice and fairness. Furthermore, distributive justice is often operationalized as a bipolar dimension, from unfavorable inequity over equity to favorable inequity, and is thus inherently confounded with instrumental concerns (e.g., Spicer & Becker, 1980; Webley et al., 1988). A true effect of justice would be reflected in a curvilinear relationship between this bipolar dimension and tax compliance, with compliance being greatest at the point of equity. The present study used a bipolar measure for microjustice, but the measure was squared (and the linear effect controlled for) in order to test for the curvilinear relationship and thus the effect of genuine justice.

Given the inconsistent findings in the literature, the categorization approach (Wenzel, 2000a, 2001a, in press) with its more specific predictions about justice motivation seems promising for a further clarification of the role of distributive justice for tax compliance. It is predicted that (H4a) perceptions of distributive justice (micro and macrojustice) will be related to tax compliance. However, following the categorization approach, (H4b) perceived

distributive justice will have a more positive impact on tax compliance when taxpayers identify more rather than less strongly with the relevant inclusive category (i.e., their nation).

Method

Participants

The predictions were tested on the basis of data from the Community, Hopes, Fears, and Action Survey (Braithwaite, 2000). The self-completion questionnaire was sent to a sample of 7754 Australian citizens drawn from the Australian electoral roll. Subtracting cases where the mail was returned to sender, addressees were deceased, etc., in effect 7003 questionnaires were sent out (for procedural details, see Mearns & Braithwaite, 2001). After repeated appeals for participation, 2040 respondents, or 29%, returned their questionnaires. The response rate for this rather long questionnaire thus compares with experiences from other mail surveys on tax issues in Australia (Wallschutzky, 1984, 1996). Compared to census data, the sample proved broadly representative for the Australian population, but it tended to underrepresent people younger than 35 and overrepresent people between 40 and 65 years of age as well as those with higher education (Mearns & Braithwaite, 2001).

However, the number of valid cases for the present analyses was further reduced by a relatively large number of missing values (listwise N between 1292 and 1345). Inspection of differences between valid and missing cases, however, suggests that there were good reasons for this. Measures of tax compliance behavior require that respondents actually fill in tax returns, while the present sample was taken from registered voters, some of whom might have no obligation to lodge tax returns. Other respondents might leave it to their partners to fill in tax returns for them. In fact, large proportions of people aged 65 or older (65%) and respondents with low personal income of up to A$10,000 (50%) had missing values; together these accounted already for about 60% of missing cases. Also, a higher proportion of

respondents with missing cases were female (60%). Thus, the drop-out of cases seemed to render the valid sample more representative of respondents who actually made taxpaying decisions. However, some of the survey questions addressed sensitive issues (e.g., illegal behavior) that may also have caused certain respondents to omit answers.

The participants in the final sample (for the lowest listwise N) were between 18 and 88 years old (Mdn = 44); 50.5% were male, 49.5% were female. Their average family income of the previous year was about A$52,000 (currently about US$27,000). Concerning occupational status, 52% were full-time employed, 20% part-time employed, 4% unemployed, 13% retired from work, 2% full-time students, and 9% keeping house.

Procedure

A professional social survey company conducted the data collection. The questionnaire was sent to respondents with a reply-paid envelope and an accompanying letter signed by the Director of the research center. The letter explained the intent of the study, the relationship with the Australian Taxation Office, and guaranteed strict confidentiality of responses. An identification number on the questionnaire allowed a targeted follow-up of cases where the questionnaire was not returned by a certain deadline. Where the questionnaire was not returned within 2 weeks, a reminder postcard was sent out to respondents asking again for participation in the study; the procedure was repeated after another 2 weeks. About a month later, a new questionnaire was sent out to those who still had not returned their questionnaire and who might have lost it or thrown it away. Non-responders were sent reminder letters twice. The procedure aimed to ensure a reasonable response rate for a long questionnaire on a sensitive issue. Excluding breaks, which were explicitly recommended at various stages of the questionnaire, respondents would have needed an estimated 1.5 hours to fill it in.

Questionnaire

The present paper deals with those survey questions relevant to six categories of variables: tax compliance, inclusive (national) identification, outcome considerations, procedural justice, distributive justice, and demographic control variables.

Tax Compliance

A number of measures with different response formats were used to measure various aspects of tax noncompliance. The items of the present study referred to the underdeclaration of various forms of income (i.e., earnings, cash income, government payments, interest, and dividends), exaggerated claims for deductions and rebates, and general engagement in tax planning and use of specific forms of tax minimization. Exact wording and formats of the items are given in the Appendix.

Inclusive Identification

Two items measured inclusive identification, that is, national identification as Australians (see Haslam, 2001): "Being a member of the Australian community is important to me" and "I feel a sense of pride in being a member of the Australian community" (1 = do not agree at all, 7 = agree completely). The items were highly correlated (r = .87) and thus scores were averaged to obtain a measure of inclusive identification. However, the measure was highly skewed and truncated at the pole of high identification; 65% of respondents had a score of 6, 6.5, or 7 (Mdn = 6, M = 5.86). A large portion of the variance in inclusive identification would thus be located at the high identification end of the scale, which would be inappropriate for tests of predictions about the impact of a high versus low degree of inclusive identification. Therefore, the measure was dichotomized, with scores lower than or equal to the midpoint of the scale (4) defined as low identification (n = 250) and scores greater than the midpoint of the scale defined as high identification (n = 1718).[1]

Outcome Considerations

In the introduction, proactive and reactive aspects of self-interest were distinguished. The reactive aspect refers to the perceived risk of being caught and punished for evading tax; the extent to which one feels deterred from tax evasion. Following an expectancy-value model, deterrence was defined as the product of perceived probability of detection, perceived probability of certain legal consequences, and the evaluation of the severity of these consequences (see Grasmick & Bursik, 1990). The precise wording and format of the questions are given in the Appendix. This procedure was followed for two instances of tax evasion, namely underreporting of cash income and untruthful claims for work-related expenses (deductions). Hence, we obtained a deterrence measure for both underreporting of cash income and exaggerations of deductions. The measures were highly correlated (r = .74).

The proactive aspect of self-interest refers to the perceived outcome favorability to oneself of the tax authority's decisions. Items were adopted from research on the group value model of procedural justice (e.g., Tyler, 1997): "How often do you agree with the decisions made by the Tax Office?" and "How often are the decisions of the Tax Office favorable to you?" (1 = almost never, 5 = almost always). The measures were highly correlated (r = .65). Note that this measure refers to the favorability of the tax authority's decision processes rather than the tax system in a wider sense; its inclusion in the analysis should thus primarily control for self-interest concerns in procedural justice evaluations.

Procedural Justice

The formulation of procedural justice measures followed previous research on the group value model (e.g., Tyler, 1997) with its distinction between the sub-concepts respect, trustworthiness, and neutrality. Again, the Appendix details all the measures. Note that these measures are consistent with previous research and theorizing on the group value model. However, recent research findings have reinvigorated the view that the procedural justice

concept could be differentiated further (Blader & Tyler, 2000; Colquitt, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001).

Distributive Justice

The present study investigated issues of microjustice and macrojustice (Brickman et al., 1981). With regard to issues of microjustice, one item measured the perceived fairness of one's own tax burden, while two further items referred to the fairness of tax burdens of one's membership groups. One item asked about the tax burden of one's occupational/industry group; the other item asked respondents to think of the group they considered themselves a member of in the context of taxation and to rate the fairness of its tax burden (see Appendix).

With regard to issues of macrojustice, respondents were asked to rate for 16 societal categories (e.g., owner-managers of large companies, unskilled factory workers) the extent to which they paid their fair share (see Appendix). Following the procedure used by Kinsey and Grasmick (1993), for each respondent the standard deviation over these ratings was calculated and used as an indicator for vertical justice. A low standard deviation means that the tax burdens of the different groups were judged similarly fair or unfair; hence unfairness would be distributed equally over the society and there would be few relative advantages of certain groups in that regard. A high standard deviation, by contrast, indicates large differences in perceived fairness of the tax burdens and thus an unfair distribution of tax fairness.

A second issue of macrojustice referred to government spending. One item asked respondents whether the government should spend more or less money on a number of policies and portfolios (see Appendix). If respondents indicated the government should spend either more or less, this was defined as dissatisfaction with government spending; if they indicated the government should continue spending the same amount, this was defined as satisfaction. Ratings were averaged across the different policies to obtain a single score.

Another item asked about one's global satisfaction with the government's spending of taxpayers' money. The two measures were significantly correlated with each other (r = .31)

Background Variables

Respondents were asked to indicate their age, sex (1 = male, 2 = female), personal income, and family income (each on a scale from none, 5, 10, 15, etc. to 75, 100, 250+ thousand dollars).

Results

Factor Analyses

Tax compliance. The 14 tax compliance measures used in this study were factor-analyzed using a Principal Component Analysis with Varimax rotation (see Table 1). The analysis yielded four factors explaining 57% of the variance. All items loaded clearly on one factor each, except for two items with substantial loadings on two factors. Factor 1 comprised four items that referred to the reporting of (1) all earned money, (2) cash-in-hand money, (3) salary and wages, and (4) honorariums, etc. This factor may thus be termed tax compliance with regard to remuneration Income. Items 3 and 4, however, had substantial cross-loadings on the second factor. These may be attributable to the fact that the two items were measured in one block together with the following five items, using a shared response format (see Appendix). Regarding their content, the two items seemed to better fit factor 1 as defined above. Rather than using just the first two unambiguous items, a four-item measure was maintained for reasons of conceptual plausibility and higher internal consistency ($\alpha = .62$).[2] Factor 2 comprised five items concerning the declaration of (1) eligible termination payments, (2) Australian government allowances, (3) Australian government pensions, (4) interest, and (5) dividends. This factor thus referred to compliance in the declaration of non-remuneration Extra Income ($\alpha = .78$). Factor 3 was defined by two items referring to exaggerations or confidence in the legitimacy of one's deduction claims. The factor thus reflects compliance in

Deduction claims (α = .51). Factor 4 comprised three items: Two measures asked about one's general efforts to plan one's financial affairs and minimize tax. The third item was the number of given tax minimization strategies respondents said they used. This factor thus reflects the use of Tax Minimization strategies (α = .62). For each factor, indicators were averaged to obtain compound indicators for the four factors. In cases where indicators of the same construct differed in their response formats, items were first standardized and then averaged.

Self-interest and justice variables. A factor analysis was also used to test for the assumed conceptual differentiation between self-interest and justice variables (see Table 2). The analysis yielded a five-factor solution explaining 63% of the variance. All items loaded as anticipated on their respective factors. Indicators of the same construct that differed in their response formats were standardized before they were averaged to obtain compound indicators for the five factors Deterrence (α = .85), Outcome Favorability (α = .76), Procedural Justice (α = .90), Distributive (Micro) Injustice (α = .74), and Macro-Injustice (α = .58). Interrelations and descriptive statistics (where measures were not based on standardized indicators) of all the constructs are given in Table 3.

Predicting Tax Compliance

Hierarchical regression analyses were applied to test the theoretical predictions. In a first step, the background variables Sex, Age, Personal Income, and Family Income were used as predictors to control for demographic differences between respondents. In a second step, self-interest, justice, and identification variables were introduced as predictors to test for main effects as predicted in H1, H2a, H3a, and H4a. In a third step, all product terms of self-interest and justice variables with the inclusive identification measure were introduced as predictors to test for interaction effects as predicted in H2b, H3b, and H4b. The results of step 3, however, are only considered when the introduction of the product terms led to a significant increase in explained variance; otherwise, we refer to step 2 for the statistics of

possible main effects (Cohen & Cohen, 1975). To reduce problems of multicollinearity due to the use of interaction terms, all predictor variables were standardized before the product terms were built. Together with a standardized criterion, this procedure also produced the appropriate standardized solution (reported here), even though the constants were non-zero (Aiken & West, 1991).

As discussed earlier, the measure for Distributive Injustice was bipolar, ranging from unfairly disadvantaged to unfairly advantaged, with perceived fairness as the midpoint of the scale. An effect of perceived justice independent from perceived favorability would be reflected in a curvilinear relationship with tax compliance. Therefore, the square of the standardized measure was considered the true indicator of Distributive Injustice effects and as such introduced as a predictor in step 2, next to the original measure that controlled for linear effects of favorability. Likewise, Outcome Favorability refers to the Tax Office's decision-making and should control for self-interest concerns in Procedural Justice evaluations (both measures were substantially correlated; $\underline{r} = .48$). The hierarchical regression procedure was applied to all four indicators of tax compliance.

Income-reporting. For noncompliance in Income-reporting, the regression analysis explained a significant portion of variance in steps 1 and 2, while the interaction terms in step 3 did not further contribute significantly to the prediction of noncompliance (see Table 4). Focussing therefore on step 2, first of all, three of the background variables had significant effects. Age had a negative impact ($\beta = -.15$; $\underline{p} < .001$), reflecting that younger respondents reported they were less compliant and more likely to underreport their income. The effect of sex ($\beta = -.11$; $\underline{p} < .001$) means that male respondents reported greater underreporting of income than females. Personal Income also had a negative effect ($\beta = -.14$; $\underline{p} < .001$), indicating that respondents with lower income were less compliant and reported their income less correctly than respondents with higher income. Moreover, there were significant negative

effects of the two self-interest variables, Deterrence (β = –.14; p < .001) and Outcome Favorability (β = –.12; p < .001). In accordance with H2a, perceived deterrence increased compliance; and respondents were more compliant with regard to income-reporting, the more favorable to themselves they perceived decisions of the tax office to be. None of the justice or identification variables had a significant impact on this form of tax compliance. The only other significant effect was a positive effect (β = .06; p = .041) of the original bipolar measure of Distributive Injustice that should not be interpreted. (It was included in the analysis merely to control for a linear effect in the squared measure and, if anything, could be regarded as another indicator of outcome favorability).

Reporting of extra income. For noncompliance in reporting Extra Income, all three steps of the regression analysis explained significant portions of variance. Thus, we focus on the most complete third step (see Table 5). Personal Income was the only background variable that had a significant effect (β = –.08; p = .034); it indicates that again respondents with lower income reported being less compliant and less truthful about their extra income. Given the significant interaction effects in which these variables were also involved, significant first-order effects of the self-interest and justice variables may be understood as "average effects" across levels of inclusive identification (Aiken & West, 1991). Specifically, Deterrence had a significant negative inhibitory effect on noncompliance (β = –.07; p = .014). Likewise, Outcome Favorability was negatively related to underreporting of extra income (β = –.09; p = .004). These two effects were in line with H2a. Procedural Justice had a significant positive effect (β = .12; p < .001), contrary to prediction H3a that perceptions of procedural justice would decrease noncompliance. Inclusive Identification also had a significant overall effect (β = –.12; p < .001); in accordance with H1, respondents who identified more rather than less strongly with Australians reported being more compliant.

However, all these effects would need to be considered in the light of relevant interaction effects. First, the effect of Deterrence was significantly moderated by level of Inclusive Identification (β = .09; p = .004), as predicted in H2b. A simple slope analysis (see Aiken & West, 1991) showed that Deterrence decreased noncompliance for respondents who identified less with the inclusive category (β = –.16), but not for those highly identified (β = .02).[3] Paralleling this finding, there was a significant positive interaction effect of Outcome Favorability and Inclusive Identification (β = .08; p = .004). In line with H2b, respondents who identified less with Australians were more compliant when decisions of the tax authority were favorable to them, but not so the highly identified respondents (simple slopes: –.18 vs. –.01).

There was further an interaction effect of perceived Procedural Justice and Inclusive Identification (β = –.09; p = .006), in line with H3b. More precisely, however, for highly identified respondents this effect only buffered the unexpected positive "average" effect of Procedural Justice on noncompliance, while the positive effect remained for less identified respondents (simple slopes: .03 vs. .12). So, while the direction of the interaction effect is in line with the hypothesis, Procedural Justice had overall no positive effect for the highly identified. Moreover, the squared measure of perceived Distributive Injustice was related to greater noncompliance for those strongly identified as Australians, but not so for those less identified with Australians (interaction effect: β = .03; p = .047; simple slopes: .05 vs. –.01); this finding supported prediction H4b.

Deductions. For noncompliance in Deduction claims, all three steps of the regression analysis explained significant portions of variance, so that we focus on step 3 again (see Table 6). Out of the four background variables, Age had a significant effect (β = –.11; p < .001), indicating that, as for Income, younger respondents reported being less compliant and less

truthful in their deduction claims. Sex had a close to significant effect (β = –.05; p = .054), with male respondents again reporting less compliance than females.

Inclusive Identification had a negative "average effect" (β = –.07; p = .034), in line with H1. Respondents strongly inclusively identified reported being more compliant. Note, however, that this effect was not significant at step 2 and therefore unreliable. Deterrence again had a significant negative effect (β = –.15; p < .001); this effect was not further moderated by the interaction with Inclusive Identification and constituted evidence for H2a rather than H2b. However, the findings for the other self-interest variable supported the more specific prediction H2b. As for Extra Income, the interaction effect involving Outcome Favorability was significant and positive (β = .06; p < .043). Respondents who identified less rather than more strongly with Australians were more outcome-oriented, because they were more compliant when tax decisions were in their favor (simple slopes: –.15 vs. –.04).

Moreover, perceived Procedural Justice was related to greater tax compliance only for respondents who identified strongly with Australians, whereas it was rather positively related to noncompliance for the less identified (interaction effect: β = –.11; p < .001; simple slopes: –.08 vs. .03); this result supported prediction H3b. Similarly, the close to significant interaction effect involving the squared Distributive Injustice measure (β = .03; p = .054) reflects the finding that perceived distributive justice was related to greater compliance for those strongly identified as Australians, but not so for less identified respondents (simple slopes: .04 vs. –.02). This result paralleled the finding for Extra Income and supported prediction H4b. There was no significant effect involving perceptions of Macro-Injustice.

Tax minimization. For measures of Tax Minimization, steps 1 and 2 of the regression analysis accounted for a significant portion of the variance explained, while the interaction terms introduced in step 3 did not (see Table 7). We therefore focus on step 2. The positive impact of Age (β = .11; p = .001) indicates that, in contrast to compliance in deduction claims

and income reporting, older respondents reported they were less compliant and more likely to minimize their tax. Personal Income as well as Family Income were both positively related to tax minimization ($\beta = .13$; $p < .001$, and $\beta = .17$, $p < .001$, respectively). In contrast to the findings for Income and Extra Income, respondents with higher Personal Income, or higher Family Income, reported using tax minimization strategies to a greater extent than lower-income respondents. The only other significant predictor was Outcome Favorability; its negative effect ($\beta = -.11$; $p < .001$) supported H2a. When respondents perceived tax decisions to be in their favor, they were less likely to use tax minimization strategies.

Discussion

The present study used a survey methodology to study the impact of self-interest and justice perceptions on self-reported tax compliance, with a particular focus on the moderating role of inclusive identification. The study tested predictions derived from the group value approach to procedural justice (Tyler et al., 1997) and the categorization approach to distributive justice (Wenzel, 2000a) concerning the impact of social identity on people's justice motivation versus outcome orientation. The findings of the study speak to three issues, namely (1) the phenomenon of tax compliance, (2) theories of justice motivation, and (3) theory and practice of compliance enforcement and regulation.

The Phenomenon of Tax Compliance

The present study yielded evidence to support the necessity of differentiating forms of tax compliance (Kidder & McEwen, 1989). Both the factor analysis and the differential regression findings show that tax compliance is not a homogeneous set of behaviors. The factor analysis differentiated between tax compliance in the reporting of remuneration income (cash and non-cash), the reporting of extra (non-remuneration) income, claims for deduction, and tax minimization strategies. The regression analyses showed that some predictors had different effects depending on the form of compliance investigated. The findings support the

view that forms of tax compliance need to be distinguished conceptually if we want to better understand and predict this phenomenon (see Kidder & McEwen, 1989).

Background variables. Regarding the demographic variables considered in this research, sex of respondents contributed significantly to the prediction of tax compliance in income reporting and deduction claims, but not the other two forms of tax compliance. The results are consistent with previous findings that men tend to be less compliant than women (e.g., Kinsey & Grasmick, 1993; Mason & Calvin, 1978; Porcano, 1988; Vogel, 1974). Further, the present study revealed negative relationships between respondent age and noncompliance in income-reporting and deduction claims. In line with most earlier findings, older respondents tended to be more compliant (e.g., Kinsey & Grasmick, 1993; Mason & Calvin, 1978; Tittle, 1980; Vogel, 1974). However, other studies found either no relationship between age and tax compliance (Porcano, 1988), the reverse relationship (Wallschutzky, 1984), or even a curvilinear relationship (Song & Yarbrough, 1978). Likewise, the present study yielded also a positive relationship between age and noncompliance in terms of tax minimization. These findings suggest that the impact of age depends on the specific form of taxpaying behavior, which may also account for earlier empirical inconsistencies. For instance, age may be correlated with different opportunities to avoid tax. Older people may have acquired more assets that allow for strategies of tax minimization, whereas younger people are more likely to be in the work force and thus have access mainly to strategies of underreporting of income and exaggeration of deductions.

The effects for personal income and family income can also be explained in terms of differential opportunities, although income level is confounded with many other variables (most notably, the tax rate). Income level was related to greater compliance in terms of reporting of income and extra income, in line with some previous research (e.g., Clotfelter, 1983). However, respondents with higher personal income, or higher family income, reported

a greater use of tax minimization strategies than lower-income respondents did. This findings supports the intuition that high-status taxpayers have greater access to such effective but relatively low-risk strategies (Roth et al., 1989). In contrast, respondents with lower income have to confine themselves to options of underreporting income and extra-income; importantly, they are also more likely to be recipients of cash payments and government allowances and thus underreporting constitutes an available opportunity.

Self-interest, justice, and identity. Regarding the effects of self-interest, justice and identity variables, the regression results yielded, broadly speaking, two different patterns for the four forms of tax compliance. Noncompliance with regard to income-reporting and tax minimization were exclusively predicted by self-interest variables, whereas noncompliance in reporting of extra income as well as deductions claims were additionally influenced by identification and, interacting with identification, perceptions of justice. This pattern seems to suggest two kinds of tax noncompliance, namely noncompliance for instrumental reasons and noncompliance out of protest (similar to what Kidder & McEwen, 1989, called asocial and brokered noncompliance versus symbolic noncompliance). Income-underreporting and tax minimization seem to follow exclusively instrumental considerations. Indeed, both seem to share the characteristic of not being considered illegitimate at all. Tax minimization strategies are usually conceived as legal ways of reducing one's tax, even though not conducive to the integrity of the tax system. Income-underreporting (in particular, cash income) is widely considered a trivial offence, as "everybody does it" to some extent and as it is widely accepted in at least certain occupations (Sigala, Burgoyne, & Webley, 1999). Of course, underreporting is nonetheless illegal, which could be the reason why it was influenced by perceived deterrence, while tax minimization was not. However, it seems plausible that, because tax minimization and income-underreporting are considered acceptable and system-inherent behaviors, they are determined by opportunity and cost-benefit calculations, and less

so by considerations of social responsibility and justice. If they are not considered illegitimate and system-opposing, they can hardly be acts of protest against the system and its injustices.

In contrast, underreporting of extra income and incorrect deduction claims were additionally determined by social factors; that is, level of inclusive identification and perceptions of justice. Because extra income (e.g., pensions) is usually more easily traceable than cash income (as an instance of remuneration income), namely due to the paper trail and the cooperation between tax office and other government agencies or banks, noncompliance in extra income would seem a more explicit disagreement with the system and to require justification to oneself. Also, compared to tax on remuneration income, taxation of extra income (e.g., interest or government allowances) might be regarded as more unfair, because savings have already been taxed as income and tax on allowances, it could be argued, undermines their purpose of alleviating neediness. Hence, fairness motivations may be more relevant for noncompliance in extra income. Likewise, false deduction claims are not simply an omission of a required behavior (as it is the case for underreporting), but rather explicit "lies" and attempts to mislead the tax office. Again, such acts would require a justification or motivation that could be based on the perceived unfairness of the tax system. Thus, it makes sense that noncompliance regarding extra income and deductions are determined more by social factors and system-related discontent.

Specifically, for these two forms of noncompliance, the analysis yielded an effect of inclusive identification; however, for deduction claims, it was only significant at step 3 and therefore unreliable. The findings provide some, but not conclusive, support for the prediction that inclusive identification promotes cooperation, trust in authorities, and feelings of responsibility for the fate of fellow citizens (Brewer & Schneider, 1990; Kramer, Brewer, & Hanna, 1996). However, identification clearly moderated the effects of justice and self-interest variables. Concern about individual outcomes impacted on tax compliance only for

respondents who did not identify with their collective; highly identified respondents seemed to have transcended their concern for personal profits. This is consistent with the argument that group identification renders people's sense of self more inclusive (Turner, Oakes, Haslam, & McGarty, 1994) and transforms their self-interests so as to include the interests and welfare of other members (Brewer, 1991; Morrison, 1997). The interaction effects between outcome favorability and identification constitute evidence for these more specific predictions.

For underreporting extra income, a similar interaction effect between deterrence and identification emerged, further supporting the theoretical argument. Moreover, this result is interesting in that it suggests that the effectiveness of deterrence is conditional, although it is probably the most advocated and certainly the most practiced enforcement strategy toward tax compliance. In fact, the regression results showed for low inclusive identification a simple regression slope of –.16 for deterrence, reflecting a substantial deterrence effect. However, for high inclusive identification the simple slope for deterrence was +.02; deterrence appears ineffective for those highly identified with the inclusive category. This finding may contribute to a better understanding of the inconsistent results for deterrence effects (see the discussion earlier). It certainly supports the notion that regulation needs to be more responsive to the conditions, attitudes, and motivations of those to be regulated (Braithwaite & Braithwaite, 2000). We will return to this issue further below.

Likewise, the present research yielded evidence that perceptions of justice can affect tax compliance. More importantly, the findings again might help resolve inconsistencies of previous research on this issue (see the discussion earlier). In this study, justice concerns were only relevant to two out of four forms of tax compliance. As argued before, it might be the case that only these two forms of tax noncompliance are considered deviant behavior; and as instances of deviance, they require extra motivation (e.g., legitimate resentment due to felt

injustice) or, conversely, are inhibited by considerations of justice or fairness. Further, even in these two cases, the impact of justice perceptions on tax compliance depended on respondents' degree of identification with their nation, being the relevant inclusive category in this context. This leads us to a more general discussion of the nature of justice motivation.

The Basis of Justice Motivations

The finding that perceptions of justice were positively related to tax compliance only for those respondents who identified strongly with the inclusive category was predicted on the basis of the group value model of procedural justice (Tyler et al., 1997) and the categorization approach to distributive justice (Wenzel, 2000a, in press), respectively. Both theories refer to social identity theory (Tajfel & Turner, 1986) and self-categorization theory (Turner et al., 1987) as their theoretical background. Both argue that concerns for justice are not simply based on one's motivation to maximize outcomes, through procedures that allow for some control or through distributions that are in one's favor, respectively; rather justice is based on identity processes.

The group value approach argues that people are concerned about procedural justice, specifically about respectful, unbiased, and trustworthy treatment by authorities, because it is indicative of their inclusion and standing in their social group. It has implications for their social identity in terms of the category they share with the authorities and within which the procedures are applied, but only if they regard this category as relevant to their self-definition (see Tyler & Smith, 1999). Huo et al. (1996) and Smith and Tyler (1996) demonstrated that procedural justice was related to favorable evaluations of authorities and their decisions as well as the obligation to obey them, when respondents identified with the inclusive category.

The present research corroborates these findings and extends them to the area of tax compliance. Taxpayers were more compliant with tax laws when they identified with Australians and thought they were treated fairly and respectfully by the tax authorities.

Following the group value approach, we can conclude that taxpayers want to have their rights as citizens respected and their voice considered (as much as others' voices are considered), when they identify as citizens of Australia. If their status as Australian citizens is important to them, they want it to be respected and acknowledged. When authorities convey such respect and acknowledgement, taxpayers are more compliant irrespective of whether or not decision outcomes are favorable to them. While the present data supported this interactive effect of procedural justice and identification, it must be acknowledged however that procedural justice had an unexpected positive "average effect" (across levels of identification) on underreporting of extra income (for a similar finding, see Porcano, 1988). It is not clear why this effect occurred. Perhaps procedural fairness induced perceptions of benevolence of the tax office that let taxpayers anticipate little punishment for their tax evasion. But then it remains unclear why this should have been the case for one but not the other forms of tax compliance.

The categorization approach (Wenzel, 2000a, 2001a) argues that identity concerns are likewise the basis of the distributive justice motive. When people identify with the inclusive category that defines the boundaries of the allocation problem and includes all potential recipients, they may respond in two ways. They either want to be treated equally to others, as this acknowledges the inclusion and identity they share with other members; or, they want the inclusive category to be differentiated, and members to be differentially treated, along dimensions which they consider important value dimensions of that category and defining attributes of their identity. So, irrespective of the specific content of the distributive justice notions, inclusive identification drives the motivation to see these justice notions realized. Because entitlements are derived from the inclusive category membership, violation of entitlements may lead to social protest due to injustice felt, if there is sufficient identification with the inclusive category (Wenzel, 2000a).

Previous empirical findings, however, were not always consistent with this view. For instance, Tyler (1994) and Smith and Tyler (1996) argue and provide evidence that distributive justice was more strongly based on instrumental concerns and self-interest, while procedural justice was mainly based on relational and identity concerns (as just discussed). In contrast, Wenzel (2000a) reports evidence for the categorization approach in a study following the reunification of Germany. East Germans who identified more rather than less strongly as Germans felt entitled to a better economic situation (i.e., more equal to the West German one); and, those East Germans who felt that their entitlements were violated and who identified strongly as Germans showed more signs of social protest. However, there was no evidence for the equivalent interaction effect involving procedural justice, as the group value approach would have predicted. This could have been due to the specific political context of the study (Wenzel, 2000a). The present research now yielded evidence for both the group value model and the categorization approach to distributive justice.

While Smith and Tyler (1996) collapsed measures of distributive justice and instrumental evaluations on the one hand, and measures of procedural justice and relational evaluations on the other hand, the present study went to great lengths to separate aspects of outcome favorability and distributive justice. It used separate predictors of outcome favorability to partial out their effects and tested for curvilinear effects of the bipolar distributive justice measure while controlling for linear effects (of favorability). Perhaps as a consequence of this careful procedure, the present study yielded evidence for the categorization approach. When taxpayers considered their tax burden to be unfair and they identified with the inclusive category, they reported less compliant taxpaying behavior (in terms of extra income underreporting and deduction claims).

However, predictions were not confirmed for the macro-aspect of distributive justice. Indeed, there were no statistically significant effects for perceived macrojustice at all. We

might conclude that the respondents in our study were less concerned about macrojustice issues. However, it might also be the case that the operationalization of macrojustice in the present study was suboptimal, had a considerable overlap with self-interest, and was not as precise as the measure of microjustice. First, the questions on government spending did not explicitly ask about justice, but rather one's satisfaction with or preferences for government spending. Taxpayers might base their spending preferences on the extent to which they personally profit from various budget items (Sears & Citrin, 1982). Satisfaction is not the same as feelings of justice and may rather involve aspects of outcome favorability; the same problem applies to a number of earlier studies (e.g., Alm et al., 1993; Alm, McClelland, & Schulze, 1992). Unlike the case of distributive microjustice, there were no specific controls for the impact of self-interest. Second, the measure of vertical injustice (i.e., the standard deviation of justice judgments for tax burdens of different societal groups) might have been too subtle or not transparent enough for respondents to consciously express an opinion. Further research is required to clarify the role of macrojustice for tax compliance and the psychological basis of macrojustice concerns.

Compliance Enforcement and Regulation

Concerning practices of enforcement and theories of regulation in general, the present findings clearly suggest that there are alternatives to deterrence and material incentives (Grasmick & Bursik, 1990; Scholz, 1998; Smith & Stalans, 1991). In fact, the results show that, for certain forms of compliance, deterrence may only be effective for taxpayers who do not identify with the inclusive category. Likewise, outcome favorability could be considered a proxy to material incentives, because taxpayers for whom tax decisions were favorable had an incentive to comply with and support the tax system. Again, with even more convincing evidence than for deterrence, outcome favorability (i.e., material profitability) worked in certain cases only for those taxpayers who did not identify with their country. Importantly, the

segment of less identified taxpayers was clearly a minority. Thus, conventional enforcement strategies of deterrence and material incentives seem to work only for a minority of taxpayers. It appears that deterrence and incentives are only effective for taxpayers who do not identify with the system and its authorities, perceive a social rift between regulators and themselves, and "disengage" with the authorities (Braithwaite, 1995; Braithwaite & Braithwaite, 2000). In contrast, the majority of taxpayers who feel some kind of shared identity with the authorities seem to be more concerned about justice of the tax system and fairness of their treatment, irrespective of material consequences.

In order to advance more cooperative regulatory strategies built on a system of consensual justice notions, we can derive the following suggestions from the present findings. First, perceptions of justice and fairness played a role only for two of the four forms of tax compliance, namely those two forms that were more clearly illegal, illegitimate, and unacceptable. Hence, regulators must clearly define certain taxpaying behaviors as illegal; and they must boost social norms and informal beliefs that these behaviors are illegitimate, unacceptable, and irresponsible. Or, given that norms become effective through how they are perceived (rather than as they "truly" are), regulators might have to correct for misperceptions of relevant social norms (Wenzel, 2001b, 2001c).

Second, perceptions of justice and fairness affected taxpaying behavior positively only when there was sufficient identification with the inclusive category (and its representatives). Hence, the regulators must build a cooperative relationship with the regulatees; they must gain sympathy, respect, and trustworthiness, and build on a consensual understanding of shared goals and values. Clearly, such a relationship is difficult to shape, in particular for a governmental enforcement agency like the tax office that is often seen almost through a party-political lens. However, there is scope for managing a better relationship. In this context, it must be stressed that the theoretical analysis presented in this paper focussed on only one

causal direction out of a possibly more complex and cyclical web of causal relations. Justice motivations may not only follow from inclusive identification; rather, the satisfaction of these motivations may increase inclusive identification. For instance, the group value approach (Tyler et al, 1997; Tyler & Lind, 1990) assumes that procedurally fair treatment increases feelings of inclusion and identification with the inclusive category and its authorities. Similarly, the categorization approach (Wenzel, in press) assumes that, while entitlements are deduced from the inclusive category, treatment in accordance with entitlements induces self-categorization in terms of the category from which the entitlements are derived. These propositions need to be tested in future research, preferably with longitudinal designs.

Third, regulators must nurture the regulatees' feelings of justice and fairness. They must treat regulatees with dignity and respect, consult widely and equally for their opinions, and demonstrate that regulatory actions ultimately aim at the integrity and fairness of the tax system and are thus to the benefit of the collective. More specifically, tax officers could be trained in the implementation of justice principles in their interactions with clients (see Skarlicki & Latham, 1996). While it seems easier to accomplish procedural fairness in the tax arena, views about the substantial distributive justice of the tax system will always differ between groups of taxpayers. This fact, however, cannot be taken as an excuse for not pursuing the ideal of a consensually just tax system; it rather demands a constant discourse about the fairness of the tax system.

Limitations

The present research has limitations, in particular due to its survey methodology; these problems need not be repeated here (e.g., Hessing, Elffers, & Weigel, 1988). It needs to be emphasized though that the correlational data do not permit causal interpretations. Wherever in the present paper findings were put in terms of causal directionality, such interpretations stem from the surplus of the underlying theory but cannot be inferred from the data.

A further problem of the study appears to be the general weakness of effects and the modest amount of variance explained. Part of the problem is certainly the small variation in the dependent variables, as the large majority of respondents stated that they were compliant and cooperative taxpayers. Part of the problem may also be the fact that self-report measures are burdened with social desirability tendencies. In the present case, there might have even been an actual fear of being identified and targeted by the tax office as a consequence of one's answers, detracting from the validity of the measures. However, even if the effects were truly small in terms of explained variance, they could yet have immense practical importance. Even if interventions or policy changes informed by the present findings increased tax compliance only by 1%, this could translate into millions of dollars of revenue gain.

Finally, possible interaction effects between procedural and distributive justice were omitted (e.g., Cropanzano & Folger, 1989; Gilliland, 1994; Greenberg, 1990). The theoretical focus of the study, however, was on the moderation of justice and outcome concerns by social identity and, to maintain clarity and economy of the analyses, other possible interactions had to be neglected.

In this respect, the study yielded some significant and instructive findings. Our confidence in the reliability and validity of the results is furthermore reinforced by the fact that the findings replicated earlier preliminary analyses based on the first half of the sample (Wenzel, 2000b). Overall, the present study encourages a strongly theory-driven analysis of compliance and regulation processes that acknowledges, beyond our widely shared materialism, human concerns for fairness, justice, and identity.

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Appendix

Below, a complete list is given of the measures used for the various sub-concepts of tax compliance and justice. It details also the original scale formats and the recoding of the data if applicable.

Tax Compliance

Income. "As far as you know, did you report all the money you earned in your 1998-99 income tax return?" (1 = yes, 2 = no)

"Have you worked for cash-in-hand payments in the last 12 months? By cash-in-hand we mean cash money that tax is not paid on." (1 = yes, 2 = no; reverse-coded)

"People earn income from many different sources, […] Think about each of the sources of income listed below, and select the response that best describes your 1998-99 income tax return." (1 = received none, 2 = did not declare it, 3 = declared some, 4 = declared most, 5 = declared all; recoded into 1, 2, 2, 2, and 1, respectively): (1) Salary, wages; (2) Honorariums, allowances, tips, bonuses, director's fees.

Extra income. The previous question was continued for: (3) Eligible termination payments; (4) Australian government allowances like Youth Allowance, Austudy, Newstart; (5) Australian government pension, superannuation pensions, and other pensions and annuities; (6) Interest; (7) Dividends.

Deductions. "As far as you know, did you exaggerate the amount of deductions or rebates in your 1998-99 income tax return?" (1 = a lot, 2 = quite a bit, 3 = somewhat, 4 = a little, 5 = not at all; reverse-coded)

"Think of the deductions and rebates you claimed in your 1998-99 income tax return. Would you say you were …" (1 = …absolutely confident that they were all legitimate, 2 = a bit unsure about some of them, 3 = pretty unsure about quite a lot, 4 = haven't a clue, someone else did it; recoded into 1, 2, 2, and 2, respectively)

Tax minimization. "Some people put in a lot of effort to plan their financial affairs in order to legally pay as little tax as possible. How much effort did you or your family devote to this objective in preparing for your 1998-99 income tax return?" (1 = a lot, 2= quite a bit, 3= some, 4 = a little, 5 = none; reverse-coded)

"In preparing for your 1998-99 income tax return, did you look at several different ways of arranging your finances to minimize your tax?" (1 = yes, 2 = no; reverse-coded)

"Below is a list of investment strategies that may provide for tax minimization. In preparing for your 1998-99 income tax return, were you able to minimize your tax through … (1) Negative gearing (property/shares), (2) Employee share arrangements, (3) Salary packaging, (4) Superannuation planning, (5) Warrants or leveraged investments, (6) Schemes to convert income into capital gains, (7) Tax shelters, e.g. film schemes, agricultural schemes, (8) Off-shore tax havens or other international tax planning" (each with the response options yes, no, don't know what that is; coded as 1, 0, and 0, respectively, and averaged over all minimization strategies).

Deterrence

Underreporting of cash. "Imagine yourself in this situation. You have been paid A$5000 in cash for work that you have done outside your regular job. You don't declare it on your income tax return." (A) "What do you think the chances are that you will get caught?" (1 = about zero [0%], 2 = about 25%, 3 = about 50%, 4 = about 75%, 5 = almost certain [100%]). (B) "If you did get caught, what are the chances that you would have to face the following legal consequences? (a) Taken to court + pay a substantial fine + pay the tax you owe with interest; (b) taken to court + pay the tax you owe with interest; (c) pay a substantial fine + pay the tax you owe with interest; (d) pay the tax you owe with interest" (with the same percentage scale for each item). (C) "Look at these legal consequences again. How much of a

problem would they be for you? (a)… (b)… (c)… (d)…" (1 = no, 2 = small, 3 = medium, 4 = large). The deterrence score is defined as A*(Ba*Ca+Bb*Cb+Bc*Cc+Bd*Cd)/4.

Exaggerations of deductions. "Imagine yourself in this situation. You have claimed A$5000 as work deductions when the expenses have nothing to do with work." – The questions that followed were the same as for cash income and the measure was constructed equivalently.

Outcome Favorability

"How often do you agree with the decisions made by the Tax Office?"; "How often are the decisions of the Tax Office favorable to you?" (1 = almost never, 5 = almost always).

Procedural Justice

Respect. "The Tax Office respects the individual's rights as a citizen"; "The Tax Office is concerned about protecting the average citizen's rights".

Trustworthiness. "The Tax Office considers the concerns of average citizens when making decisions"; "The Tax Office cares about the position of taxpayers"; "The Tax Office tries to be fair when making their decisions".

Neutrality. "The Tax Office gives equal consideration to the views of all Australians"; "The Tax Office gets the kind of information it needs to make informed decisions"; "The Tax Office is generally honest in the way it deals with people"; "The Tax Office consults widely about how they might change things to make it easier for taxpayers to meet their obligations"; "The Tax Office goes to great lengths to consult with the community over changes to their system" (1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree, 5 = strongly agree, for all the procedural justice items).

Distributive Justice

Distributive (micro)injustice. "Think about the people who are in the same boat as you when it comes to paying tax. In your opinion, do they pay …?" (1 = …much more than their

fair share, 2 = a bit more, 3 = about their fair share, 4 = a bit less, 5 = much more than their fair share). "In your opinion, do the following people/groups pay their fair share of tax?" (same response format): (1) You, yourself; (2) Your industry/occupation group.

Macro-injustice. The previous question also referred to: (3) Workers whose primary income is wage and salaries; (4) People who make a lot of money from investments; (5) Families earning less than A$20,000 a year; (6) Families earning less than A$100,000 a year; (7) Owner-managers of large companies; (8) Senior judges and barristers; (9) Unskilled factory workers; (10) Trades people; (11) Farm laborers; (12) Farm owners; (13) Doctors in general practice (GPs); (14) Chief executives of large national corporations; (15) Small business owners; (16) Tax agents and advisors; (17) Waitresses; (18) Surgeons. The "vertical" justice measure was defined as the respondent's standard deviation across these items.

"The government spends taxpayers' money in many different areas. Below are just a few of these areas. For each area, do you think the government should be spending less money, keeping things as they are, or spending more money?" (1 = much less, 2 = less, 3 = same, 4 = more, 5 = much more; recoded into 3, 2, 1, 2, and 3, respectively): (1) Education; (2) Defence; (3) Health care; (4) Law courts and legal aid; (5) Policing; (6) Preventing illegal immigration; (7) Welfare; (8) Employment; (9) Scientific research; (10) The arts (film, music, dance); (11) Industry development. "Overall, how dissatisfied or satisfied are you with the way the government spends taxpayers' money?" (1 = dissatisfied, 5 = satisfied; reverse-coded).

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Footnotes

[1] Dichotomization of variables is often criticized for loss of information. The reason for using the procedure in the present context may be conceived of as focussing on the relevant information, given the empirical peculiarities of the variable. It is less relevant whether respondents indicated scale points 6 or 7 for their degree of identification (this might rather reflect some personal preference for extreme or less extreme responses); more meaningful and important is whether respondents tended towards the one or the other end of the identification scale. However, variance in this respect would be diluted by the variance of a large number of cases at the upper end of the scale, if the original scale would be used.

[2] A score for Income noncompliance based only on the two unambiguous items yielded basically the same results in the regression analyses as the four-measure construct.

[3] All simple slopes reported in the present paper were calculated for levels of –1 versus +1 standard deviation of Inclusive Identification.

Table 1

Factor Analysis of Measures of Tax Compliance

Item	Factor 1	2	3	4
Income	.81			
Cash income	.74			
Salary, wages	.59	(.45)		
Honorariums, allowances, tips, bonuses, director's fees	.42	(.52)		
Eligible termination payments		.73		
Australian government allowances e.g., Youth Allowance, Austudy, Newstart		.76		
Australian government pensions, superannuation pensions, and other pensions and annuities		.74		
Interest		.57		
Dividends		.73		
Exaggeration of deductions			.76	
Illegitimacy of deduction			.79	
Effort on tax minimization				.78
Looked at ways to minimize tax				.82
Various strategies on tax minimization				.65
Eigenvalues (before rotation)	1.67	3.69	1.09	1.48
Explained variance after rotation (%)	13	22	10	13

Note. Principal components analysis, varimax rotation. Only factor loadings greater than or equal to .40 are displayed; cross-loadings are given in parentheses.

Table 2

Factor Analysis of Measures of Self-interest and Justice

	Factor				
	1	2	3	4	5
Item					
Deterrence-Cash	.92				
Deterrence-Deductions	.92				
Agreement with decisions		.83			
Favorability of decisions		.82			
Tax Office (TO) respects individual's rights			.65		
TO is concerned about protecting rights			.77		
TO considers average citizens' concerns			.80		
TO cares about position of taxpayers			.74		
TO tries to be fair when making decisions			.72		
TO gives equal consideration to views			.66		
TO gets information necessary for decisions			.57		
TO is generally honest with taxpayers			.63		
TO consults widely about changes			.69		
TO goes to great length to consult			.67		
Fairness of one's own tax burden				.82	
Fairness of tax burden of industry group				.85	
Fairness of tax burden of people in the same boat				.70	
Standard deviation of fairness ratings across groups					
.63					
Government spending for various selected areas					.83
Global satisfaction with government spending					.58
Eigenvalues (before rotation)	1.26	1.63	6.51	2.00	1.15

Explained variance after rotation (%)	9	9	26	10	8

Note. Principal Component Analysis, Varimax rotation; only factor loadings ≥ .40 are displayed.

Table 3

Intercorrelations and Summary Statistics

Variable	M	SD	N	1	2	3	4	5	6	7	8	9	10
1. Income [1; 2]	1.05	.14	1621	—									
2. Extra Income [1; 2]	1.03	.12	1567	.39***	—								
3. Deductions	n/a	n/a	1612	.29***	.34***	—							
4. Tax Minimization	n/a	n/a	1650	.07**	.08**	.13***	—						
5. Incl. Identification [1; 2]	1.87	.33	1968	-.05*	-.11***	-.07**	-.01	—					
6. Deterrence [1; 100]	47.28	26.27	1897	-.14***	-.09***	-.16***	-.10***	.15***	—				
7. Outcome Fav. [1; 5]	3.67	1.02	1923	-.11***	-.05*	-.10***	-.09***	.10***	.06**	—			
8. Procedural Justice [1; 5]	3.11	.66	1998	-.02	.06*	-.01	-.04	.12***	.10***	.48***	—		
9. Distrib. Injustice [1; 5]	2.64	.66	1976	.03	.04	.07**	.02	-.04	-.04	.18***	.28***	—	
10.Distrib. Inj. Squared	n/a	n/a	1976	.02	-.00	.02	.04†	-.02	-.01	-.20***	-.21***	-.32***	—
11.Macro-Injustice	n/a	n/a	2035	-.00	-.04	.01	-.01	-.01	.07**	-.21***	-.39***	-.27***	.27***

Note. Means for compound measures based on standardized indicators (originally with different scales) are not meaningful and not reported. Possible scale ranges, again only where applicable, are given in square brackets. Higher scores indicate greater noncompliance, identification, deterrence, outcome favorability, procedural justice, and distributive injustice (for Distrib. Inj. Squared and Macro-Injustice), respectively.

†$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$.

Table 4

Hierarchical Regression Analyses for Tax Noncompliance in Reporting of Income

	Step 1	Step 2	Step 3
Predictor	β	β	β
Age	-.15***	-.12***	-.12***
Sex	-.11***	-.09**	-.09**
Personal Income	-.14***	-.15***	-.15***
Family Income	.00	-.01	-.01
Identification		-.02	-.02
Deterrence		-.14***	-.14***
Outcome Fav.		-.12***	-.12***
Procedural J.		.04	.04
Distributive. Inj.		.06*	.07*
Distrib. Inj. Squared		.01	.02
Macro-Injustice		.05	.05†
Id.5Deterrence			.04
Id.5Outcome Fav.			.03
Id.5Proc. J.			-.02
Id.5Distr. Inj.			.01
Id.5D. Inj. Squared			.02
Id.5Macro-Injustice			.03
(Constant)	-.02	-.02	-.03
R^2	.036	.071	.076
R^2change	.036	.035	.005
Fchange	12.49***	7.07***	1.12
df	4, 1323	7, 1316	6, 1310

Note. †p < .10, *p < .05, **p < .01, ***p < .001.

Table 5

Hierarchical Regression Analyses for Tax Noncompliance in Reporting of Extra Income

	Step 1	Step 2	Step 3
Predictor	β	β	β
Age	-.04	-.03	-.02
Sex	-.04	-.04	.03
Personal Income	-.09*	-.09*	-.08*
Family Income	.01	.02	.02
Identification		-.11***	-.12***
Deterrence		-.07*	-.07*
Outcome Fav.		-.10**	-.09**
Procedural J.		.14***	.12***
Distributive. Inj.		.02	.03
Distrib. Inj. Squared		.01	.02
Macro-Injustice		.03	.04
Id.5Deterrence			.09**
Id.5Outcome Fav.			.08**
Id.5Proc. J.			-.09**
Id.5Distr. Inj.			.04
Id.5D. Inj. Squared			.03*
Id.5Macro-Injustice			-.00
(Constant)	-.02	-.01	-.03
R^2	.008	.038	.059
R^2change	.008	.031	.021
Fchange	2.44*	5.84***	4.70***
df	4, 1287	7, 1280	6, 1274

Note. †p < .10, *p < .05, **p < .01, ***p < .001.

Table 6

Hierarchical Regression Analyses for Tax Noncompliance in Deduction Claims

	Step 1	Step 2	Step 3
Predictor	β	β	β
Age	-.14***	-.11***	-.11***
Sex	-.07*	-.05†	-.05†
Personal Income	-.05	-.06	-.05
Family Income	.00	-.02	-.01
Identification		-.02	-.07*
Deterrence		-.16***	-.15***
Outcome Fav.		-.11***	-.09**
Procedural J.		.04	.03
Distributive. Inj.		.04	.06*
Distrib. Inj. Squared		-.00	.01
Macro-Injustice		.04	.04
Id.5Deterrence			.00
Id.5Outcome Fav.			.06*
Id.5Proc. J.			-.11***
Id.5Distr. Inj.			.03
Id.5D. Inj. Squared			.03†
Id.5Macro-Injustice			.01
(Constant)	-.03	-.03	-.03
R^2	.020	.055	.071
R^2change	.020	.036	.016
Fchange	6.57***	7.09***	3.76**
df	4, 1316	7, 1309	6, 1303

Note. †p < .10, *p < .05, **p < .01, ***p < .001.

Table 7

Hierarchical Regression Analyses for Tax Minimization

	Step 1	Step 2	Step 3
Predictor	β	β	β
Age	.09**	.11***	.11***
Sex	-.04	-.03	-.03
Personal Income	.13***	.12***	.13***
Family Income	.17***	.16***	.16***
Identification		.02	.03
Deterrence		-.04	-.04
Outcome Fav.		-.11***	-.11***
Procedural J.		.02	.02
Distributive. Inj.		.05	.05
Distrib. Inj. Squared		.02	.02
Macro-Injustice		-.04	-.04
Id.5Deterrence			.04
Id.5Outcome Fav.			.03
Id.5Proc. J.			-.01
Id.5Distr. Inj.			-.02
Id.5D. Inj. Squared			.00
Id.5Macro-Injustice			-.00
(Constant)	-.02	-.04	-.05
R^2	.075	.089	.091
R^2change	.075	.014	.002
Fchange	27.20***	2.94**	.53
df	4, 1340	7, 1333	6, 1327

Note. $^{\dagger}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.