FACTORS THAT INFLUENCE TAX EVASION PERCEPTIONS IN AUSTRALIA AND TURKEY: A STRUCTURAL EQUATION MODEL STUDY

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ABSTRACT

The tax literature indicates that many factors impact upon and influence tax evasion and non-compliant behaviour. This study makes a contribution to the literature by investigating specific economic and tax variables that influence tax evasion perceptions. By employing a structural equation model using self-reported taxpayer data from both Australia and Turkey, the study examines the structural relationships between national well-being, life satisfaction, tax involvement and tax evasion. The findings reveal that significant positive and negative relationships exist between the selected variables. The results will be of interest to the Australian and Turkish governments, and have implications for tax policy development in both countries.

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I Introduction

The tax literature indicates that many factors impact upon and influence tax evasion and non-compliant behaviour. In particular, it is well documented in the tax literature that fairness of the tax system,[1] compliance and enforcement,[2] and taxpayer morals and ethics,[3] all play key roles in determining levels of tax evasion. In the economic literature, there has been evidence of other factors that have impacted upon economic growth and the well-being of a country's citizens. These include the issues of rivalry amongst individuals regarding income levels, overestimation of the benefits of increased consumption, and generally a level of inequality in society.[4] These later economic factors have also influenced tax evasion behaviour.

However, it is evident that, while tax and economic studies have investigated these factors independently, there are few that have combined the factors into a truly interdisciplinary study. This paper proposes to overcome this research gap, and makes a contribution to the existing literature by investigating three specific economic and tax factors that impact upon tax evasion perceptions. The study uniquely employs a structural equation model ('SEM'), and in particular explores the relationships between national well-being and life satisfaction, tax involvement and life satisfaction, as well as life satisfaction and tax evasion. Following a recent study investigating tax evasion attitudes in Australia and Turkey,[5] this study builds on that prior research by examining three distinct relationships in an SEM, employing self-reported taxpayer data from both Australia and Turkey.

The rationale for comparing Australia and Turkey was the diverse, economic, religious and cultural differences that exist between the two countries, and how those differences may potentially impact upon the results. The Australian legal system is based on common law, while Turkey is a civil law jurisdiction. Australian society is of predominately Christian belief, while Turkey is predominately of Muslim belief. Australian culture is largely a mix of Anglo-Saxon and Aboriginal, although arguments could be mounted for a more multicultural society nowadays, while Turkey has strong European and Middle Eastern ties.[6] Collaboration between Australian and Turkish universities was established to conduct the research, which reports on the opinions of both Turkish and Australian taxpayers with regards to tax evasion.

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[1] Frank Cowell, 'Tax Evasion and Inequity' (December 1992) 13(4) *Journal of Economic Psychology* 521.

[2] Joel Slemrod, *Why People Pay Taxes: Tax Compliance and Enforcement* (University of Michigan Press, 1992).

[3] Michael Wenzel, 'The Social Side of Sanctions: Personal and Social Norms as Moderators of Deterrence' (Conference Paper, Centre for Tax System Integrity Canberra Conference, Australian National University, 2003); Kristina Murphy, 'The Role of Trust in Nurturing Compliance: A Study of Accused Tax Avoiders' (2004) 28 *Law and Human Behaviour* 187.

[4] Thomas Griffith, 'Progressive Taxation and Happiness' (2004) 45 *Boston College Law Review* 1363.

[5] Robert McGee, Ken Devos and Serkan Benk, 'Attitudes toward Tax Evasion in Turkey and Australia: A Comparative Study' (2016) 5(10) *Social Sciences* 1. This study employed student data as opposed to real taxpayers.

[6] Ibid 11.

This paper is structured as follows. After the introduction, a brief background of both the Australian and Turkish tax systems is provided in Section II. This is followed by a review of the relevant literature and the development of the hypotheses to be tested in this study in Section III. Section IV proceeds to describe the research method, including the various measures and sampling employed. Section V provides a discussion and analysis of the research results, including participant demographics, statistical analysis of the variables employed and the SEM. Finally, Section VI concludes by summarising the main findings and tax policy implications, and notes the study's qualifications and possible avenues for future research.

II BRIEF OVERVIEW OF THE AUSTRALIAN AND TURKISH TAX SYSTEMS

A *The Australian tax system*

Australia operates under a self-assessment tax system, whereby citizens lodge their tax return (either tax agent-assisted or not) based on an honest disclosure. The tax return information is taken as correct and will only be verified upon an audit, whereby any discrepancies may be subject to penalty. The Australian Taxation Office ('ATO') has enormous capacity to deal with the administration of some 15 million tax returns, along with the educational and enforcement activities it conducts. The Australian government's power to impose taxes comes from the Australian Constitution. Section 51(ii) of the Constitution grants the government power to impose laws with regards to the collection and administration of taxes.[7]

Compliance levels are relatively high despite having one of the more complex tax systems in the world, based on a number of legislative acts. However, as a result of the complex nature of the tax law and relatively high tax rates (income tax is payable at progressive rates, and the goods and services tax ('GST') rate is 10 per cent), there has been evidence of tax evasion and avoidance, which the government has placed greater emphasis on targeting in recent years.[8] In particular, the ATO has identified evidence of tax evasion activity — for example, through certain labour hire arrangements that use discretionary trusts to split income, diversion of personal services income to self-managed super funds, and other arrangements that exploit mismatches between trust and taxable income.[9]

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[7] Kerrie Sadiq et al, *Principles of Taxation Law 2019* (Thomson Reuters, 12th ed, 2019).

[8] The government introduced multinational anti-avoidance legislation in 2016, and a diverted profits tax of 40 per cent in 2017, to assist in curbing tax avoidance by multinational corporations. Additional resources in the 2019 Federal Budget have also been allocated to assist in this regard, signalling the government's intension to reduce avoidance.

[9] 'Schemes We Have Identified', *Australian Taxation Office, Australian Government* (Web Page, 19 June 2018) <https://www.ato.gov.au/general/tax-planning/tax-avoidance-schemes/schemes-we-have-identified/cited>.

B *The Turkish tax system*

The power to tax in Turkey is found in the Foundation Decree, where the duties of the Department of Taxpayer Services are also outlined.[10] There are three main types of taxes in Turkey, which are derived from various sources. These include income tax, expenditure and wealth taxes. Income tax is imposed upon both individuals and corporations, with progressive tax rates applying to various income brackets for individuals. Withholding tax on wages varies with income level, while the corporate tax rate was fixed at 22 per cent in the 2018 tax year. Taxes on expenditures include value added tax at a standard rate of 18 per cent, with a reduced rate of 8 per cent for applicable basic foodstuffs, for example. Taxes on wealth mainly cover real estate and motor vehicles.

There has been evidence of tax evasion and avoidance in Turkey, which has taken the form of 'undocumented commercial transactions', while the results of auditing activities revealed that there was some TL38,715,354,158 discrepancy in assessments for the year ended 2005.[11] Despite government efforts to target this tax discrepancy in recent years, arguably tax evasion is already widespread due to the large presence of the informal economy.

III LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The following section reviews the literature on the key variables employed in this study, namely tax involvement, national well-being, life satisfaction and tax evasion. The relevant research hypotheses to be tested in this study include:

> *H1: The level of a person's tax involvement has a positive effect on their level of life satisfaction.*

> *H2: The level of a person's national and subject well-being has a positive effect on their level of life satisfaction.*

> *H3: The level of a person's life satisfaction has a negative effect on their level of tax evasion.*

A *Tax involvement*

There appears to be no specific definition of 'tax involvement' outlined in the literature, but it has previously been described as consisting of three factors. First, what role or ideal does tax play in a person's life, and how central is it to the person's functionality. Second, how does a person think about tax, and are they conscious of what role tax plays in society. Third, does taxation have any particular purpose or meaning in a person's life.[12]

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[10] Presidency of Revenue Administration, Department of Taxpayer Services, Turkish Government, *Taxation in Turkey* (Publication No 21, September 2006) 33 <https://www.gib.gov.tr/sites/default/files/fileadmin/user_upload/yayinlar/Taxation.pdf>.
[11] Ibid 41.
[12] Takanori Sumino, 'Level or Concentration? A Cross-National Analysis of Public Attitudes towards Taxation Policies' (2016) *Social Indicators Research* 129, 1115–34; Valerie Braithwaite, 'How Do Australians Think about Tax' (Seminar Paper, 'Public Perceptions: Making the Connection between Tax Investment and Return', Per Capita Working Seminar, :7 July 2009).

Other studies have also developed and defined the concept of tax involvement from the perspective of self-interest, for example, focusing on how Australians think about tax, and discovering that tax outcomes and processes need to be respectful of people's self-interest.[13] This, in particular, pertains to the democratic collective self that expects government to deliver in exchange for taxpayer cooperation, and expects to be respected as a citizen. This would include a taxpayer's trust in the tax authority.[14]

Tax involvement may also encompass a person's competitive self that aspires to wealth, power and status in some cases, and to job, family and home in others. In particular, a taxpayer's opportunity for investment and prosperity are considered along with their opportunity for tax minimisation and avoidance.[15] For example, if a person wants to be a good person, and seen as honest and law abiding, their tax involvement will be acceptable to the tax authority.[16] This would also encompass a taxpayer's attitude towards tax evasion and the employment of ethical tax advisers to ensure a plausible outcome is achieved. Clearly all these elements are critical in determining how connected and involved a person is with taxation.

A self-interest approach is equally applicable to an analysis of an individual's preferences and involvement in taxation, as was discovered by Sumino.[17] The findings of Sumino's study strongly support an institutionalist understanding of tax behaviour. In particular the results reveal that attitudinal differences among different income groups become more salient in higher-taxed societies.[18] Based on these results, Sumino concluded that 'tax targeting' does not have an interactional effect on the income–attitude linkage. Rather, relative to tax level, concentrated taxation might be invisible or hidden to ordinary citizens.[19] Consequently, if taxpayers do not notice the degree of tax concentration in their country then it is not surprising that they fail to react to tax policies, or that the burden of tax policies are high in comparison to the expected benefits.[20] As such, taxpayers have little tax involvement, understanding or interest.

Evidence of how different people think about tax and the role it plays in society was uncovered in a study by Lim, Slemrod and Wilking.[21] Their study aimed to investigate the views of both tax experts and the general public regarding various tax policy issues. Not surprisingly, given the different level of tax involvement and tax knowledge of the two samples, strikingly different views were discovered. In particular, the tax experts were largely in favour of the government's role in the redistribution of tax revenues, while the general public were not. This could be attributed to experts being trained to think of policy changes in a balanced-budget framework, whereas the general public are not.[22] It is also acknowledged that differences in demographics, values and views about the

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[13] Braithwaite (n 12).
[14] Ibid.
[15] Ibid.
[16] Ibid.
[17] Sumino (n 12).
[18] Ibid 1131.
[19] Ibid.
[20] Ibid 1131–2.
[21] Diane Lim, Joel Slemrod and Eleanor Wilking, 'Expert and Public Attitudes towards Tax Policy' (2013) 66(4) *National Tax Journal* 775.
[22] Ibid 803.

economic consequences of tax policy alternatives may have also contributed to the differentiated results.[23]

The self-interest argument explaining levels of tax involvement was also uncovered by Braithwaite.[24] Braithwaite employed an SEM to gauge taxpayer attitudes to tax policy, and in particular GST. Self-interest was a significant factor in shaping attitudes, with those feeling the tax burden expressing support for the goal of taxation efficiency.[25] Self-interest was found to be relevant and had a role to play in policy evaluation and tax involvement. Self-interest can also be gauged by how much a taxpayer thinks about taxation implications for themselves. For example, Prabhakar found that principles are important in shaping public attitudes to taxation, and that, in particular, people think about both the benefits and costs of taxation.[26] Although Prabhakar's findings revealed that the public makes systematic mistakes about taxation and that tax knowledge is lacking, they suggested that while the majority of taxpayers may not be directly involved in the tax system there is evidence of thought and consideration towards tax.[27]

For the purposes of this study, the following definition of tax involvement is adopted: the role or ideal tax plays in a person's life; how central it is to the person's functionality; how a person thinks about tax; the role tax plays in society; and whether taxation has any particular purpose or meaning in a person's life.

B *Life satisfaction*

Life satisfaction refers to a cognitive judgemental process, and has been defined as 'a global assessment of a person's quality of life according to his/her chosen criteria'.[28] It is important to note that the key factor here is having personal criteria and values in which to gauge overall life satisfaction. It is not imposed externally, and different components of life will matter more or less for different individuals. Besides the affective emotional aspects of the life satisfaction construct, the cognitive-judgemental aspects are critical, and hence accurate measurement requires a multi-item scale, according to work carried out by Diener et al,[29] which is employed in this study.

It is also evident that life satisfaction may vary greatly depending on an individual's circumstances, and may or may not necessarily be related to happiness. For example, an important aspect of happiness and life satisfaction is the inclination to have more money. However, do individuals overestimate and misjudge the value of money? Additional happiness does not necessarily come with additional consumption.[30] Most people think that a 25 per cent increase in their pay would greatly increase their satisfaction with their

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[23] Ibid 798.

[24] Braithwaite (n 12).

[25] Ibid.

[26] Rajiv Prabhakar, 'What Do the Public Think of Taxation? Evidence from a Focus Group Study in England' (2012) 22(1) *Journal of European Social Policy* 77.

[27] Ibid 81.

[28] Doh Shin and Dan Johnson, 'A Vowed Happiness as an Overall Assessment of the Quality of Life' (1978) 5 *Social Indicators Research* 474.

[29] Ed Diener et al, 'The Satisfaction with Life Scale' (1985) 49 *Journal of Personality Assessment* 71; see also Ken Devos, 'The Impact of Life Satisfaction on Tax Evasion Perceptions in Australia' (2017) 8(3) *International Journal of Advanced Biotechnology and Research* 197.

[30] Griffith (n 4); Devos (n 29).

lives, but individuals who are currently at that level do not report greater life satisfaction.[31] Aspiration theory holds that an individual's aspirational level rises as income rises, and this aspirational level is somewhat higher than their current income.[32] The actual increase in welfare is less than what actually occurs and, as such, the income increase can be disappointing.[33]

In addition to studies on income and welfare, data on life satisfaction and happiness has also been taken to be a direct proxy for utility. Frijters, Johnston and Shields employed life satisfaction data to examine the issue of optimal taxation.[34] Employing Australian data, the study found that under an optimal scheme those with the lowest marginal satisfaction with income would be taxed more heavily in favour of those with the higher marginal satisfaction with income.[35] The results would be indicative of whether or not current transfer policies manage to tax those with little marginal satisfaction with income compared to those with higher marginal satisfaction with income.[36] The exception was younger, single Australians who are taxed far more heavily than their high marginal satisfaction with income would predict.[37] These findings may have implications for tax evasion motivations, in that those who believe they are unfairly overtaxed may potentially evade tax.[38]

In examining life satisfaction levels, changes in aspirational levels may diminish the gains from additional consumption.[39] Consequently, if increased working hours results in additional taxes and less leisure time, it is possible this will be a disincentive for people to work harder/longer. In this case, the opposite effect of decreased working hours resulting in less money may encourage tax evasion, as people look for other ways to fill the income void. People may look for the additional income/benefits via tax evasion rather than earning it by conducting extra work.[40] This study adopts the above definition of life satisfaction as 'a global assessment of a person's quality of life according to his/her chosen criteria'.[41]

As indicated by Braithwaite, self-interest is a major factor or reason why people get involved with taxation.[42] That is, there is a natural desire to become more prosperous or wealthy by understanding and appreciating the intricacies of taxation. Further, both Griffith and Lane found that having greater wealth and utility contributes to higher life satisfaction.[43] Consequently, this study examines the relationship between these two

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[31] Robert Lane, *The Loss of Happiness in Market Democracies* (Yale University Press, 2000); Devos (n 29).
[32] Lane (n 31).
[33] Ed Diener and Eunkook Mark Suh, 'National Differences in Subject Well Being' in Daniel Kahneman, Ed Diener and Norbert Schwarz (eds), *Well-being: The Foundations of Hedonic Psychology* (Russell Sage Foundation, 1999) ch 22, 434, 435; Devos (n 29).
[34] Paul Frijters, David Johnston and Michael Shields, 'The Optimality of Tax Transfers: What Does Life Satisfaction Data Tell Us?' (2012) 13 *Journal of Happiness Studies* 821; see also Devos (n 29).
[35] Frijters, Johnston and Shields (n 34).
[36] Ibid; see also Devos (n 29).
[37] Frijters, Johnston and Shields (n 34); Devos (n 29).
[38] See also Devos (n 29).
[39] Griffith (n 4).
[40] Ibid.
[41] Shin and Johnson (n 28).
[42] Braithwaite (n 12).
[43] Griffith (n 4); Lane (n 31).

variables and hypothesises that the level of a person's tax involvement has a positive effect on their level of life satisfaction.

C *National and subject well-being*

The concept of national well-being is interpreted very widely and is often aligned with the concept of subject well-being in the literature. A common feature in the subject well-being literature is the assumption that the net resources of a person matter, whether they are aware of it or not, and that individuals with a higher living standard generally experience higher subject well-being levels.[44]

Subject well-being as a subset of national well-being can also be considered in a cultural context. Davey and Rato found that subject well-being was normative in samples with varied socio-economic variables.[45] They examined China's personal well-being scores for citizens in Hong Kong, Macau and Zhuhai, and found that they were similar despite different cultural, societal and wealth issues.[46] The study indicated that improved living standards for China's growing middle class has had minimal influence on subject well-being.[47] So where the economic situation has improved in absolute terms, the taxpayers' relative income position has deteriorated due to rising income inequality.[48]

There are similar findings in Western nations, where there is a gap between incomes and material aspirations and where money and materialism bring costs as well as benefits.[49] In this regard, the comparison of national well-being in both Australia and Turkey in the present study should also provide further insights as to whether differences in the culture, religion and legal systems of each country have implications for tax evasion.

Likewise, Oishi et al suggest that indicators of citizen's cognitive judgements of their society are also important, and include trust in national institutions, tolerance, social cohesion, social trust and fear of crime.[50] The general class of subjective indicators include measures of people's attitudes and values, evaluations, and perceptions as derived from their own experiences.[51] Hence, the presence of money and financial gain alone as an indicator of national well-being becomes questionable, as is the case with life satisfaction.

Consequently, the literature appears to be mixed with regards to what constitutes both subject and national well-being. Griffith indicates that people tend to overestimate the benefits of additional consumption and wealth, and that this does not necessarily lead to

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[44] Alpaslan Akay et al, 'Happy Taxpayers? Income Taxation and Well-Being' (Discussion Paper No 6999, Institute of Labor Economics, 2012).

[45] Gareth Davey and Ricardo Rato, 'Subjective Wellbeing in China: A Review' (2012) 13 *Journal of Happiness Studies* 333.

[46] Ibid 344.

[47] Ibid.

[48] Hilke Brockmann et al, 'The China Puzzle: Falling Happiness in a Rising Economy' (2009) 10(4) *Journal of Happiness Studies* 387.

[49] Davey and Rato (n 45).

[50] Shigehiro Oishi, Ulrich Schimmack and Ed Diener, 'Progressive Taxation and the Subjective Well-Being of Nations' (2012) 23(1) *Psychological Science* 86.

[51] Ibid 90.

greater life satisfaction.[52] Rather, Oishi et al indicate that it is people's values, attitudes and perceptions towards life that are critical in assessing national well-being.[53] However, if greater wealth and utility contribute to a higher standard of living it is possible that both subject and national well-being have also been enhanced.

This study adopts the above definition of subject and national well-being, which is aligned to people's values, attitudes and perceptions towards life. Therefore, the study proceeds to examine the relationship between these two variables, and hypothesises that the level of a taxpayer's national and subject well-being has a positive effect on the level of a taxpayer's life satisfaction.

D *Tax evasion*

Tax evasion can be described as the illegal non-payment of tax properly owing under the law. It is distinguished from tax avoidance, which is legal but against the spirit of the law, and tax planning, which can also be described as tax minimisation, which is within both the spirit and legal confines of the law. However, a blurring between tax avoidance and tax evasion has come about through an increase in aggressive tax planning. As taxpayers rigorously try to plan to pay less tax, they run the risk of going too far, and their actions can consequently result in tax evasion. Tax evasion has also been defined as intentional non-compliance, and this definition has been adopted in this paper. A review of the literature indicates that there are numerous factors that have influenced and impacted upon tax evasion over the years, but it is unclear whether life satisfaction per se has had an impact upon tax evasion perceptions.[54]

Ajzen and Fishbein found that taxpayers' behaviour is directly determined by their intentions, which are a function of their attitude towards behaviour and perception of social norms.[55] This infers that tax evasion motivations could arise as a result of people's peers and community standards. Other researchers have concluded that tax evasion could also be influenced by educating taxpayers of their social responsibility to pay.[56]

Other social and psychology studies have found that the fairness and equity of a tax system also impacts upon compliance and evasion.[57] In particular, the notion of 'exchange equity' (where taxpayers believe they are not receiving the benefits from the government in exchange for taxes paid) affects compliance. Wallschutzky found that the exchange relationship was the most important hypothesis explaining why taxpayers who evaded

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[52] Griffith (n 4).

[53] Oishi, Schimmack and Diener (n 50).

[54] Marianne Richardson and Adrian Sawyer, 'A Taxonomy of the Tax Compliance Literature: Further Findings, Problems and Prospects' (2001) 16 *Australian Tax Forum* 137; Betty Jackson and Valerie Milliron, 'Tax Compliance Research: Findings, Problems and Prospects' (1986) 5 *Journal of Accounting Literature* 125.

[55] Icek Ajzen and Martin Fishbein, *Understanding Attitudes and Predicting Social Behavior* (Prentice Hall, 1980).

[56] Robert Cialdini, 'Social Motivations to Comply: Norms, Values and Principles' in Jeffrey A Roth and John T Scholz (eds), *Taxpayer Compliance: Social Science Perspectives* (University of Pennsylvania Press, 1989) vol 2, 200.

[57] Ian Wallschutzky, 'Possible Causes of Tax Evasion' (1984) 5(4) *Journal of Economic Psychology* 371.

tax felt justified in doing so.[58] Wallschutzky also found that the burden of taxes was the main justification for increased levels of tax evasion and that tax advisers were perceived to have a significant impact upon taxpayers avoiding tax.[59]

Social psychology studies have also examined the impact of ethics and moral values upon tax evasion. Indeed, much of the empirical work that has been carried out by social researchers in this area tends to refute the economic model of compliance (that is, that taxpayers are utility maximising creatures who only weigh up the expected costs of non-compliance against the potential gains) in its basic form.[60] For example, it has been demonstrated, by means of laboratory experiments,[61] that even where the deterrence factor is so low that evasion makes obvious economic sense, some individuals nevertheless comply due to their high tax morals and values.[62]

Historically, there have been three main views regarding the morality of tax evasion.[63] At one extreme is the first main view, that evading taxes is immoral and that one has an absolute duty to pay whatever taxes the government demands. Several justifications have been given for this position, based on religious and authoritarian grounds.[64] At the other extreme is the second main view, that evading taxes is never immoral. Those who espouse this view often believe that all governments are illegitimate and need not be obeyed or supported financially.[65] The third main view is that tax evasion may be justified on moral grounds sometimes. This view is the prevalent view in the theological, philosophical and empirical literature.[66]

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[58] Ian Wallschutzky, 'Taxpayer Attitudes to Tax Avoidance and Evasion' (Research Study No 1, Australian Tax Research Foundation, 1985), as cited in Ken Devos, 'An Investigation into Australian Personal "Tax Evaders" — Their Attitudes towards Compliance and the Penalties for Non-Compliance' (December 2009) 19 *Revenue Law Journal* 1; see also Devos (n 29).

[59] Wallschutzky, 'Taxpayer Attitudes' (n 58).

[60] Devos, 'An Investigation into Australian Personal "Tax Evaders"' (n 58).

[61] James Alm, Isabel Sanchez and Ana De Juan, 'Economic and Noneconomic Factors in Tax Compliance' (1995) 48(1) *Kyklos* 3.

[62] Devos, 'An Investigation into Australian Personal "Tax Evaders"' (n 58).

[63] Robert McGee, 'The Ethics of Tax Evasion: A Survey of Romanian Business Students and Faculty' (Working Paper Series, Andreas School of Business, September 2005), reprinted in RW McGee and GG Preobragenskaya, *Accounting and Financial System Reform in Eastern Europe and Asia* (Springer, 2006) 299; RW McGee, M Basic and M Tyler, 'The Ethics of Tax Evasion: A Survey of Bosnian Opinion' (2009) 11(2) *Journal of Balkan and Near Eastern Studies* 197; Martin Crowe, *The Moral Obligation of Paying Just Taxes* (Catholic University of America Press, 1944).

[64] McGee, Basic and Tyler (n 63); Devos, 'The Impact of Life Satisfaction' (n 29).

[65] Martin Crowe, Andrew Ross and Robert McGee, 'Education Level and Ethical Attitude toward Tax Evasion: A Six-Country Study' (2012) 15(2) *Journal of Legal, Ethical and Regulatory Issues* 93; Lysander Spooner, *No Treason: The Constitution of No Authority* (1870); Devos, 'The Impact of Life Satisfaction' (n 29).

[66] For theological literature, see Crowe, Ross and McGee (n 65). For philosophical literature, see Robert McGee, 'Is Tax Evasion Unethical?' (1994) 42 *University of Kansas Law Review* 411. For empirical literature, see James Alm and Benno Torgler, 'Cultural Differences and Tax Moral in the United States and in Europe' (2006) 27 *Journal of Economic Psychology* 224; Robert McGee and Guo Zhiwen, 'A Survey of Law Business and Philosophy Students in China on the Ethics of Tax Evasion' (2007) 2 *Society and Business Review* 299; Benno Torgler, *Tax Compliance and Tax Morale: A Theoretical and Empirical Analysis* (Edward Elgar, 2007); Benno Torgler et al, 'Causes and Consequences of Tax Morale: An Empirical Investigation' (2008) 38 *Economic Analysis and Policy* 313. See also Devos, 'The Impact of Life Satisfaction' (n 29).

The literature suggests that people's life satisfaction is arguably preoccupied with the accumulation of wealth and increased consumption. However, as indicated by Griffith, the opportunity cost of earning additional income is the loss of leisure time and the disincentive to work longer hours.[67] This situation has implications for the increased motivation for tax evasion and avoidance. As indicated in the literature above, there are myriad factors that contribute to tax evasion, including fairness,[68] exchange equity,[69] people's ethics/morals,[70] and perceptions and social norms.[71] However, it is argued that where taxpayers are at ease with all these factors they are more likely to be satisfied with life, and less inclined to be involved in tax evasion. Consequently, this study proceeds to examine the relationship between these two variables and hypothesises that the level of a taxpayer's life satisfaction has a negative effect on the level of tax evasion. The research model described in Figure 1 shows the relationships among the variables.

Figure 1: Conceptual model
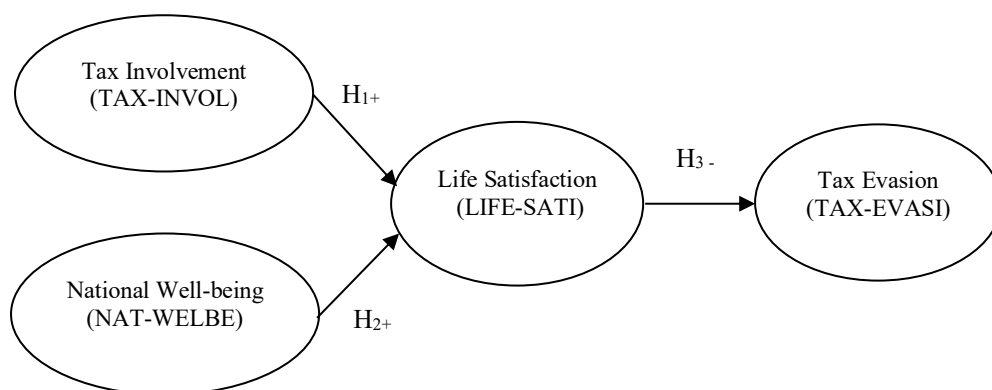
IV METHODOLOGY

A *Measures*

A questionnaire instrument for the empirical study of the relationships among tax involvement, national well-being, life satisfaction and tax evasion was developed on the basis of previous research and scale-developing procedures. The scale of tax involvement was developed by the authors according to the scale-development procedure recommended by Churchill.[72] To develop initial items in Turkey, a combination of data

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[67] Griffith (n 4).

[68] James Vogel, 'Taxation and Public Opinion in Sweden: An Interpretation of Recent Survey Data' (1974) 27 *National Tax Journal* 499; Thomas Porcano, 'Correlates of Tax Evasion' (1988) 9 *Journal of Economic Psychology* 47; Gerrit Antonides and Henry Robben, 'True Positives and False Alarms in the Detection of Tax Evasion' (1995) 17 *Journal of Economic Psychology* 617.

[69] Wallschutzky, 'Taxpayer Attitudes' (n 58).

[70] Crowe, Ross and McGee (n 65).

[71] Devos, 'The Impact of Life Satisfaction' (n 29).

[72] Gilbert Churchill Jr, 'A Paradigm for Developing Better Measures of Marketing Constructs' (February 1979) 16 *Journal of Marketing Research* 64.

derived from in-depth interviews (23 taxpayers), in addition to a review of the tax involvement literature, was applied. Subsequently, a set of items designed to measure each tax involvement dimension was developed. The items were purified based on a pilot study (52 taxpayers) and expert opinion, as suggested by Churchill.[73] All the items of the tax involvement scale are measured by a seven-point Likert scale, ranging from 'strongly disagree' (1) to 'strongly agree' (7). Cronbach's α was 0.79 for the entire scale and 0.73, 0.75 and 0.79 for its subscales, respectively (see Table 2).

The scale of national well-being consisted of six items retrieved from a study by Davey and Rato.[74] The six items pertaining to national well-being were answered on a five-point end-defined Likert scale, anchored from 'very bad' (1) to 'very good' (5), with higher scores indicating a strong tendency for satisfaction. The six items measuring national well-being had a very satisfactory value of 0.93 for Cronbach's α (see Table 4). A satisfaction with life scale was adopted to assess a taxpayer's degree of satisfaction in life.[75] The three items measuring life satisfaction had a Cronbach's α of 0.87, which indicates acceptable internal consistency (see Table 4).[76] Finally, this study employed a tax evasion scale, which included 18 statements regarding the reasons given to justify tax evasion, developed by Crowe, Ross and McGee.[77] All the items of the scales for life satisfaction and tax evasion were measured by a seven-point Likert scale, ranging from 'strongly disagree' (1) to 'strongly agree' (7). Cronbach's α was 0.92 for the entire scale, and 0.93, 0.92 and 0.86 for its subscales, respectively (see Table 6), indicating satisfactory value.[78]

B *Sampling*

Sampling in this study comprised taxpayers who resided in two countries, Australia and Turkey. These two countries display marked economic, social and cultural diversity, thereby providing a good basis for exploring and comparing their perceptions on tax involvement, national well-being, life satisfaction and tax evasion. The taxpayers selected were generally self-preparers, and the majority (99 per cent in Australia and 92.5 per cent in Turkey) were employed (see Table 1), meaning that they were actively concerned with tax issues. A convenience sampling method was used to apply the questionnaire. In Turkey, data was collected via questionnaires that specifically targeted citizens who pay tax. Out of 650 questionnaires distributed at popular places in Eskişehir, 480 questionnaires were returned, resulting in an overall response rate of 73 per cent. In Australia, an online questionnaire was conducted via a website for 45 days to collect sample data.[79] On average, the questionnaire took 15 minutes to complete. A total of 64 surveys (28 in Turkey, 36 in Australia) were deemed unusable due to invalid responses (for example, blank, double answers, etc) and were therefore eliminated from the sample. The total number of usable respondents was 733 (480 in Turkey, 253 in Australia).

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[73] Ibid.

[74] Davey and Rato (n 45).

[75] Diener et al (n 29).

[76] Jane Nunnally and Ian Bernstein, *Psychometric Theory* (McGraw Hill, 3rd ed, 1994).

[77] Crowe, Ross and McGee (n 65).

[78] Devos, 'The Impact of Life Satisfaction' (n 29).

[79] 'Home', *Qualtrics* (Web Page, 2019) <http://www.qualtrics.com>.

V Discussion and Analysis of Research Results

A *Demographic characteristics of participants*

Table 1 displays the demographic characteristics of the respondents who are from Turkey and Australia. The largest group of respondents in Turkey (63.1 per cent) were male, however, the gender ratio was approximately equal in Australia. In terms of marital status, 26.7 per cent of the Australian respondents were married, and 61.1 per cent of Turkish respondents. When average monthly income was examined, the largest group of Turkish respondents (42.7 per cent) had a monthly income of AUD930 or less. However, 23.7 per cent of Australian respondents (the largest group) had a monthly income of AUD3,001–6,000. In both countries, the proportion of respondents with an undergraduate educational level or equivalent was high — 49 per cent for Turkey, and 44.6 per cent for Australia. As shown in Table 1, there was a wide range of occupation groups, however, the ratio of office workers in Australia (30.8 per cent) was much higher than any other occupational group examined.

Table 1: Demographic characteristics of respondents

Turkey (N=480)			Australia (N=253)		
	f	*%*		*f*	*%*
Gender			*Gender*		
Male	303	63.1	Male	127	50.2
Female	177	36.9	Female	126	49.8
Marital status			*Marital status*		
Married	293	61.1	Married	67	26.7
Single	171	36.6	Single	150	59.8
Other	16	3.3	Other	34	13.5
Education level			*Education level*		
Primary or secondary	50	10.4	Primary or secondary	25	10.0
High school or equivalent	157	32.7	High school or equivalent	58	23.1
Undergraduate or equivalent	235	49.0	Undergraduate or equivalent	112	44.6
Postgraduate or qualification	38	7.9	Postgraduate or qualification	56	22.3
Monthly income			*Monthly income*		
AUD930 and <	205	42.7	Undeclared	52	20.6
AUD931–1,860	152	31.7	AUD3,000 and <	41	16.2
AUD1,861–2,790	54	11.3	AUD3,001–6,000	60	23.7
AUD2,791–3,720	29	6.0	AUD6,001–9,000	33	13.0
AUD3,721 and >	40	8.3	AUD9,001–12,000	29	11.5
			AUD12,001 and >	38	15.0
Occupation			*Occupation*		
Office worker	81	16.9	Office worker	78	30.8
Retail or shop worker	83	17.3	Retail or shop worker	22	8.7
Retired	36	7.5	Retired	1	0.4
Home duties	17	3.5	Home duties	3	1.2
Manager	38	7.9	Manager	59	23.3
Tradesperson	85	17.8	Tradesperson	21	8.3
Student	39	8.1	Student	5	2.0
Other	63	13.1	Other	64	25.3
Self-employed	38	7.9			

B *Measures*

1 *Tax involvement*

The tax involvement scale was first subjected to exploratory factor analysis ('EFA') to delineate the underlying factors. EFA with Varimax rotation, particularly useful for checking the unique (explained) and error (unexplained) variance of a specific variable,[80] was employed on the tax involvement data. The Kaiser–Meyer–Olkin ('KMO') amounted to 0.727, which indicated that the sample was adequate for factor analysis. Bartlett's Test of Sphericity was 1,336.123 (p < 0.01), indicating that the hypothesis variance and covariance matrix of variables as an identity matrix was rejected; therefore the factor analysis was appropriate. Table 2 indicates that all the factor loadings had satisfactory values greater than the cut-off value of 0.40.[81]

The results of the EFA reveal three valid factors entitled 'role and centrality', 'consciousness', and 'meaning in life'. These three factors regarding tax involvement explained 66.83 per cent of the total variance, which is a satisfactory level of variance explanation according to Hair et al,[82] while the eigenvalues ranged from 1.97 to 3.02. All three factors comprised two statements, each concerning the direct or indirect attributes of tax involvement. The first factor of 'role and centrality' included two items with regards to tax's role in life. The 'consciousness' factor comprised two items regarding the subject's conscious citizenship. Similarly, two items in relation to 'meaning in life' made up the third factor.

Table 2: Factors and items related to the tax involvement scale

Factors	Std load	TUR		AUS		t
		Mean	SD	Mean	SD	
Role and centrality		5.03	1.50	4.13	1.27	8.07*
Tax has a central role in my life	0.76	4.83	1.78	3.98	1.43	
I know the tax rate because it encompasses many areas of our lives	0.81	5.22	1.64	4.29	1.40	
Consciousness		5.81	1.31	5.33	1.11	4.98*
I really like being a conscious citizen	0.78	5.57	1.57	5.12	1.30	
People need to be informed citizens	0.84	6.08	1.38	5.55	1.10	
Meaning in life		5.58	1.56	4.87	1.44	6.08*
Tax means nothing to me‡	0.94	5.58	1.73	4.76	1.61	
Tax does not matter to me‡	0.78	5.59	1.74	4.96	1.42	
CR = 0.76, 0.79, 0.85, respectively, according to factors. AVE = 0.62, 0.66, 0.75, respectively, according to factors. Reliability (Cronbach's α) = 0.73, 0.75, 0.79, respectively, according to factors. ‡ Reverse statement; entire scale (six items) reliability = 0.79 * p < 0.01						

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[80] Joseph Hair et al, *Multivariate Data Analysis* (Prentice Hall, 6th ed, 2006).
[81] Nunnally and Bernstein (n 76).
[82] Hair et al (n 80).

Significant differences appeared between the two countries in relation to all three factors (t = 8.07, t = 4.98, t = 6.08, respectively) with regards to tax involvement (see the last column in Table 2). The results indicated that the sampled Turks tended to have a slightly stronger tax conscience (m = 5.81) than the Australians (m = 5.33). Likewise, tax played a more central role in the lives of Turks (m = 5.03) compared to Australians (m = 4.13), and, overall, tax meant more to Turks (m = 5.58) than to Australians (m = 4.87). One explanation for the difference in tax involvement generally could be due to attitudinal differences between the different income groups of the Turks and the Australians in this sample, as found by Sumino.[83]

As the EFA indices showed a satisfactory level, the confirmatory factor analysis ('CFA') was then employed to test the fit of the measurement model for tax involvement. As the $\chi 2$ value is sensitive in a large sample, the researchers mostly referred to additional fit indices. For this reason, the goodness-of-fit of the model was assessed with the normed fit index ('NFI'), the non-normed fit index ('NNFI'), the comparative fit index ('CFI'), the root mean square error of approximation ('RMSEA'), the goodness-of-fit index ('GFI'), the adjusted goodness-of-fit index ('AGFI'), and the standardised root mean square residual ('SRMR'). Hu and Bentler suggested a 0.95 cut-off point for CFI and 0.09 for SRMR.[84] According to Chiu and Wang, AGFI and NNFI should exceed 0.8 and 0.9, respectively.[85] Additionally, according to Browne and Cudeck, RMSEA values higher than 0.10 indicate a poor fit, while values of 0.08 or less represent enough fit, and values of less than 0.06 indicate a good fit.[86]

Table 3: CFA results on tax involvement

Fit indices	Whole sample (N=733) (TUR+AUS)	Turkey sample (N=480) (TUR)	Australia sample (N=253) (AUS)	Acceptable level
χ2/df	2.33	2.21	1.12	< 5
RMSEA	0.043	0.050	0.022	< 0.08
SRMR	0.016	0.021	0.016	< 0.08
IFI	1.00	0.99	1.00	> 0.90
NFI	0.99	0.99	0.99	> 0.90
NNFI	0.99	0.98	1.00	> 0.90
CFI	1.00	0.99	1.00	> 0.90
GFI	0.99	0.99	0.99	> 0.90
AGFI	0.98	0.97	0.97	> 0.90

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[83] Sumino (n 12).

[84] Lin Hu and Peter Bentler, 'Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives' (1999) 6(1) *Structural Equation Modeling* 1.

[85] CM Chiu and Ed Wang, 'Understanding Web-Based Learning Continuance Intention: The Role of Subjective Task Value' (2008) 45 *Information & Management* 194.

[86] Michael Browne and Rob Cudeck, 'Alternative Ways of Assessing Model Fit' in Kenneth A Bollen and John Scott Long (eds), *Testing Structural Equation Models* (Sage, 1993) 445.

As seen in Table 3, the ratios of the χ2 value to degrees of freedom (χ2/df = 2.33, 2.21, 1.12, respectively) were less than the cut-off point of 3, as suggested by Bagozzi and Yi.[87] The fit indices of tax involvement in the whole sample (RMSEA = 0.043, CFI = 1.00, NFI = 0.99, IFI = 1.00) revealed an acceptable model fit. Furthermore, GFI (0.99) and AGFI (0.98) were greater than the recommended value of 0.9. RMSEA was 0.043, which is less than 0.08.[88] Therefore, the overall fit of the full structural model was satisfactory.

2   *National well-being and life satisfaction*

CFA was used to assess the scales relating to national well-being and life satisfaction. The results illustrate reliability coefficients and descriptive statistics (mean and standard deviation) about the factors and items. Both national well-being and life satisfaction represent a unidimensional construct (see Table 4).[89]

No statistically significant difference was discovered between the Australian (m = 2.56) and Turkish (m = 2.65) samples with regards to national well-being. Consistent results appeared with respect to national security, economic, environmental and social conditions. The results also found no connection between income inequality and well-being perceptions, which is consistent with the findings of Diener and Oishi.[90] The findings are also consistent with Davey and Rato's study, which found that there was no difference in well-being perceptions for people of different cultural, societal and wealth backgrounds.[91]

It is noted that self-reports on subject well-being can be of a low quality and vulnerable to external disturbance and arbitrary measures. However, it is acknowledged that a combined happiness method, developed by Ng, may overcome these problems and improve the evaluation of overall national well-being.[92] It is arguable whether an increase in an individual's subject well-being can be equated with 'a particular kind of sensation' — happiness, according to Kelman.[93] Consequently, other approaches to measuring subject well-being should be considered, and have been adopted in this study when considering the broader concept of national well-being.[94]

There was evidence of a significant differentiation (t = -4.57, p > 0.01) with regards to the life satisfaction scores between the two countries. The Australian citizens' life satisfaction (m = 4.80) was higher than that of Turkish citizens (m = 4.29). While Australians were happier with their life conditions and prospects than Turks, it is important to note that

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[87] Richard Bagozzi and Youjae Yi, 'On Evaluation of Structural Equation Models' (1988) 16 *Journal of the Academy of Marketing Science* 74.

[88] Hair et al (n 80) 7.

[89] Devos, 'The Impact of Life Satisfaction' (n 29).

[90] Ed Diener and Shigehiro Oishi, 'Money and Happiness: Income and Subject Well-Being across Nations' in Ed Diener and Eunkook M Suh (eds), *Culture and Subjective Well-Being* (MIT Press, 2000) ch 8, 198; see also Devos, 'The Impact of Life Satisfaction' (n 29).

[91] Davey and Rato (n 45); see also Devos, 'The Impact of Life Satisfaction' (n 29).

[92] Yew-Kwang Ng, 'Happiness Surveys: Some Comparability Issues and an Exploratory Survey Based on Just Perceivable Increments' (1996) 38 *Social Indicators Research* 1.

[93] Mark Kelman, 'Hedonic Psychology and the Ambiguities of "Welfare"' (2005) 33 *Philosophy & Public Affairs* 391.

[94] Haiou Zhou, 'A New Framework of Happiness Survey and Evaluation of National Wellbeing' (2012) 108 *Social Indicators Research* 491.

measurement is difficult and that both internal and external factors could play a vital role in influencing this level.[95] Australia offers, potentially, a more stable political and social system than Turkey, and this may have also contributed to the result. The difference between those with little marginal income satisfaction compared to others with higher income satisfaction may have also been another reason for the difference in the life satisfaction scores.[96]

Table 4: Factors and items related to scales of national well-being and life satisfaction[97]

Factors	Std load	TUR		AUS		t
		Mean	SD	Mean	SD	
National well-being		2.65	1.08	2.56	0.51	1.24
Economic situation in my country	0.87	2.71	1.19	2.50	0.60	
The state of the natural environment in my country	0.77	2.82	1.17	2.55	0.65	
Social condition in my country	0.89	2.65	1.16	2.62	0.70	
Government in my country	0.87	2.63	1.36	2.44	0.71	
Business in my country	0.83	2.41	1.18	2.60	0.59	
National security in my country	0.81	2.66	1.31	2.66	0.66	
Life satisfaction		4.29	1.53	4.80	1.22	-4.57*
In most ways my life is close to my ideal	0.84	4.43	1.70	4.59	1.29	
The conditions of my life are excellent	0.86	3.82	1.70	4.77	1.34	
I am satisfied with my life	0.81	4.61	1.78	5.04	1.35	
CR = 0.94, 0.88, respectively, according to factors. AVE = 0.72, 0.70, respectively, according to factors. Reliability (Cronbach's α) = 0.93, 0.87, respectively, according to factors. Entire scale (nine items) reliability = 0.90 * p < 0.01						

The results of the CFA suggest that the fit measurement of the model was acceptable. In the whole sample, the values of the other fit indices were also found to be acceptable: CFI = 0.99; IFI = 0.99; RMSEA = 0.061; NFI = 0.99; NNFI = 0.99; and SRMR = 0.019. The fit indices of national well-being and life satisfaction for the Turkey sample ($\chi 2/df$ = 2.74, RMSEA = 0.061, CFI = 0.99, NFI = 0.99, IFI = 0.97) also revealed an acceptable model fit. However, the Australian sample represented poor values in terms of RMSEA (0.095) and AGFI (0.89). All the other Australian statistics were within the acceptance ranges, indicating a good fit to the data overall (see Table 5).

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[95] Shin and Johnson (n 28).
[96] Frijters, Johnston and Shields (n 34).
[97] Devos, 'The Impact of Life Satisfaction' (n 29).

Table 5: CFA results on life satisfaction and national well-being

Fit indices	Whole sample (N=733) (TUR+AUS)	Turkey sample (N=480) (TUR)	Australia sample (N=253) (AUS)	Acceptable level
χ^2/df	3.73	2.74	3.26	< 5
RMSEA	0.061	0.061	0.095	< 0.08
SRMR	0.019	0.023	0.044	< 0.08
IFI	0.99	0.97	0.97	> 0.90
NFI	0.99	0.99	0.96	> 0.90
NNFI	0.99	0.99	0.96	> 0.90
CFI	0.99	0.99	0.97	> 0.90
GFI	0.97	0.97	0.93	> 0.90
AGFI	0.95	0.94	0.89	> 0.90

3   *Tax evasion*

CFA was conducted to assess 18 items in the tax evasion scale. Seven items of the tax evasion scale were removed due to low factor loadings or multi-factorial loading. Table 6 displays factor loadings, reliability coefficients, and AVE values regarding tax evasion. In line with the literature, the factors fell under the general headings of 'fairness', 'tax system' and 'discrimination'. 'Fairness' included five items, which incorporated fairness perceptions. The 'tax system' factor comprised three items, which incorporated perceptions concerning tax rates and usage. Three items in relation to 'discrimination' issues made up the third factor. In addition, significant differences regarding tax evasion between the two countries were discovered in relation to the 'tax system' factor ($t = 4.07$, $p > 0.01$) and the 'discrimination' factor ($t = 3.91$, $p > 0.01$) (see Table 6).[98]

The results indicate that Australians were more sensitive to the ethical issues surrounding the tax system ($m = 2.60$) than Turks ($m = 3.20$). Likewise, Australians were more sensitive to ethical issues around tax discrimination ($m = 2.88$) compared to Turks ($m = 3.46$). However, both the Turks and Australians had similar perceptions with regards to tax fairness issues (Turks = 2.08 and Australians = 2.18). The latter result is consistent with previous findings on the impact of tax fairness perceptions upon tax evasion,[99] and indicates that, regardless of culture, tax fairness is universal. One explanation for the difference in relation to the tax system could be that, as the Australian tax system is quite complex and tax rates are high relative to Turkey, there is the potential for greater avoidance/evasion. It also appears that tax evasion perceptions were not justified on discrimination grounds, but rather there was evidence of a duty to pay tax. This finding is also consistent with previous studies by McGee and Crowe.[100]

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[98] Devos, 'The Impact of Life Satisfaction' (n 29).

[99] Mark Spicer, 'A Behavioural Model of Income Tax Evasion' (PhD Thesis, Ohio State University, 1974); LM Tan, 'Taxpayers' Perceptions of the Fairness of the Tax System — A Preliminary Study' (1998) *New Zealand Journal of Taxation Law and Policy* 59; Young-dahl Song and Tinsley Yarbrough, 'Tax Ethics and Tax Attitudes: A Survey' (1978) 58 *Public Administration Review* 442; Chris Chan, Coleen Troutman and David O'Bryan, 'An Expanded Model of Taxpayer Compliance: Empirical Evidence from the United States and Hong Kong' (2000) 9 *Journal of International Accounting, Auditing and Taxation* 83.

[100] Crowe, Ross and McGee (n 65); see also Devos, 'The Impact of Life Satisfaction' (n 29).

Table 6: Factors and items related to tax evasion scale

Factors	Std load	TUR		AUS		t
		Mean	SD	Mean	SD	
Fairness		2.08	1.34	2.18	1.37	-0.92
Tax evasion is ethical even if most of the money collected is spent wisely	0.85	1.98	1.55	2.13	1.40	
Tax evasion is ethical even if a large portion of the money collected is spent on worthy projects	0.89	1.99	1.53	2.16	1.48	
Tax evasion is ethical if a large portion of the money collected is spent on projects that do not benefit me	0.91	2.25	1.70	2.20	1.39	
Tax evasion is ethical even if a large portion of the money collected is spent on projects that do benefit me	0.90	1.96	1.46	2.15	1.41	
Tax evasion is ethical if the probability of getting caught is low	0.85	2.20	1.72	2.23	1.50	
Tax system		3.20	2.04	2.60	1.58	4.07*
Tax evasion is ethical if tax rates are too high	0.87	3.01	2.20	2.40	1.59	
Tax evasion is ethical if the tax system is unfair	0.91	3.29	2.27	2.69	1.65	
Tax evasion is ethical if a large portion of the money collected is wasted	0.92	3.28	2.22	2.70	1.72	
Discrimination		3.46	1.99	2.88	1.73	3.91*
Tax evasion would be ethical if I were a Jew living in Nazi Germany in 1940	0.71	3.40	2.20	3.10	2.02	
Tax evasion is ethical if the government discriminates against me because of my religion, race or ethnic background	0.92	3.51	2.30	2.76	1.77	
Tax evasion is ethical if the government imprisons people for their political opinions	0.89	3.45	2.35	2.79	1.88	
CR = 0.95, 0.93, 0.88, respectively, according to factors. AVE = 0.78, 0.81, 0.71, respectively, according to factors. Reliability (Cronbach's α) = 0.93, 0.92, 0.86, respectively, according to factors. Total scale (11 items) reliability = 0.92 * p < 0.01						

The overall fit of the model to the data, especially for the Australian sample, was not strong due to the inadequate fit indices of RMSEA (0.14), GFI (0.85) and AGFI (0.75). Hu and Bentler suggested that if GFI and AGFI perform poorly, they are not recommended for evaluating model fit, and rather other better fit indices should be considered.[101] Moreover, Bagozzi and Yi indicated that all the indices that exceed 0.80 should meet the respective minimum criteria and show goodness-of-fit to the data and theoretical model overall.[102] In particular, the CFA results achieved for the whole sample and the Turkey sample were acceptable. Based on these findings, it can be concluded that the model of the tax evasion scale was empirically supported (see Table 7).

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[101] Hu and Bentler (n 84); see also Devos, 'The Impact of Life Satisfaction' (n 29).
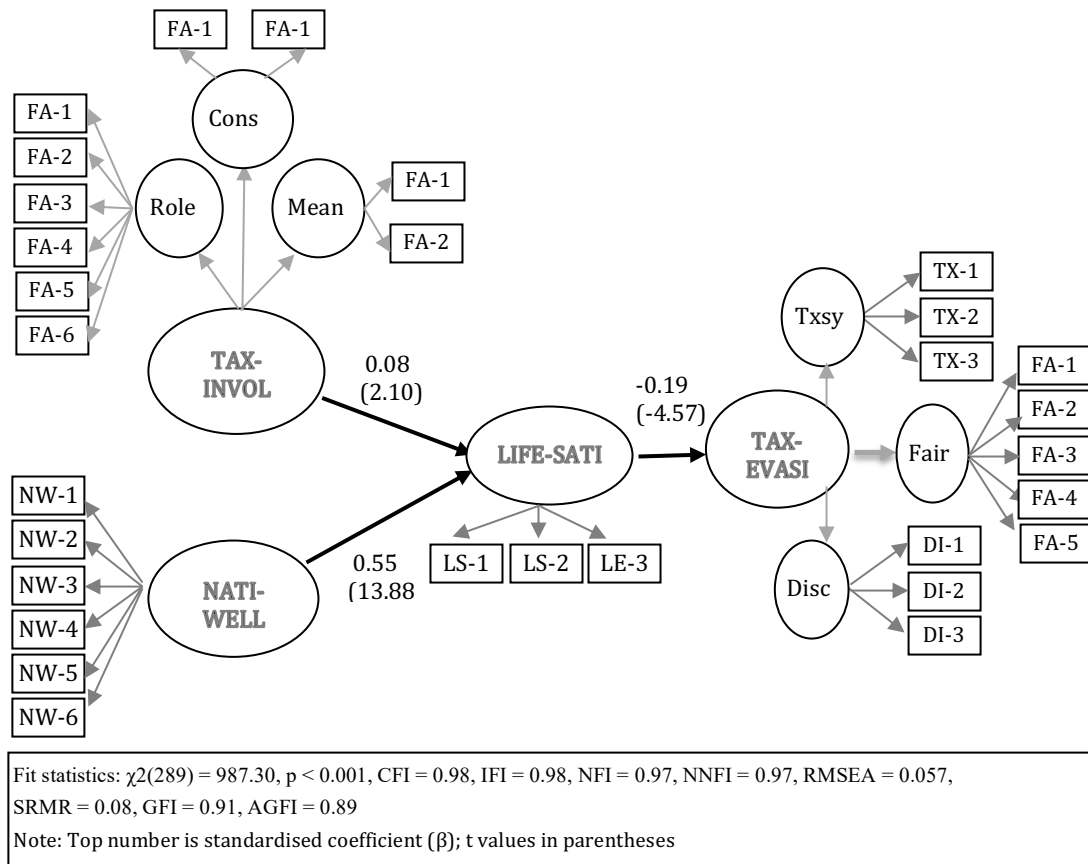[102] Bagozzi and Yi (n 87); see also Devos, 'The Impact of Life Satisfaction' (n 29).

Table 7: CFA results on tax evasion

Fit indices	Whole sample (N=733) (TUR+AUS)	Turkey sample (N=480) (TUR)	Australia sample (N=253) (AUS)	Acceptable level
χ2/df	5.68	3.90	6.08	< 5
RMSEA	0.080	0.078	0.14	< 0.08
SRMR	0.032	0.036	0.038	< 0.08
IFI	0.99	0.98	0.97	> 0.90
NFI	0.98	0.98	0.96	> 0.90
NNFI	0.98	0.98	0.96	> 0.90
CFI	0.99	0.98	0.97	> 0.90
GFI	0.95	0.94	0.85	> 0.90
AGFI	0.91	0.91	0.75	> 0.90

C *Structural equation model*[103]

The hypothesised research model was empirically tested using an SEM, using LISREL 8.80. More precisely, the hypothesised model specifying the structural relationship among tax involvement, national well-being, life satisfaction and tax evasion fits the data well. The χ2 is significant (p < 0.01), which is usually the case for large sample sizes. Except for GFI and AGFI, all the other statistics (χ2 = 987.30, df = 289, χ2/df < 5, CFI = 0.98, IFI = 0.98, NFI = 0.97, NNFI = 0.97, RMSEA = 0.057, SRMR = 0.08) were within the acceptance ranges, indicating a goodness-of-fit to the data.

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[103] Claes Fornell and David Larcker, 'Evaluating Structural Equation Models with Unobservable Variables and Measurement Error' (1981) 28 *Journal of Marketing Research* 39.

Figure 2: Structural equation model among dimensions

Fit statistics: $\chi2(289) = 987.30$, $p < 0.001$, CFI = 0.98, IFI = 0.98, NFI = 0.97, NNFI = 0.97, RMSEA = 0.057, SRMR = 0.08, GFI = 0.91, AGFI = 0.89

Note: Top number is standardised coefficient (β); t values in parentheses

The path coefficient estimates (standardised beta and t values) of the model are summarised concisely in Figure 2. The path analysis supports the finding that all three hypotheses are accepted. In other words, there were positive and significant relationships between the constructs of life satisfaction and national well-being ($\beta = 0.55$, $t = 13.88$, $p < 0.05$), and life satisfaction and tax involvement ($\beta = 0.08$, $t = 2.10$, $p < 0.05$). Rationally, there was also a negative relationship between life satisfaction and tax evasion ($\beta = -0.19$, $t = -4.57$, $p < 0.05$). The strongest relationship displayed was between national well-being and life satisfaction, a result that is strongly supported in the literature.[104]

VI Conclusion

A *Summary and findings*

The primarily purpose of this research was to examine particular tax involvement dimensions that related to samples of both Turkish and Australian taxpayers. Specifically, CFA was applied to verify the relationships between key variables comprising tax involvement, national well-being, life satisfaction and tax evasion. The second aim of this study was to examine the structural relationship, if any, among these key variables.

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[104] Oishi, Schimmack and Diener (n 50); Devos, 'The Impact of Life Satisfaction' (n 29).

The current study developed and validated the Australian and Turkish versions of the tax involvement scale. The scale demonstrated reliability, multidimensionality and validity, as well as consistency across the Turkish and Australian samples. The dimensions of tax involvement included 'role and centrality', 'consciousness' and 'meaning in life'. The findings revealed that there were significant differences between the two countries in relation to all three dimensions regarding tax involvement.

The CFA results in the current study indicate that the dimensions of tax evasion can be conceptualised and measured as a three-dimensional construct comprising 'fairness', 'tax system' and 'discrimination'. As indicated previously, the structural relationships among tax involvement, national well-being, life satisfaction and tax evasion in Turkey and Australia were also examined by employing the appropriate scales. The results revealed that particular relationships did exist between these dimensions. In particular, the overall results showed that life satisfaction plays a central role in the model. The relationship between life satisfaction and tax involvement was statistically significant and is consistent with previous findings.[105] Hence, the level of a person's tax involvement had a positive effect on their level of life satisfaction and H_1 was accepted. Likewise, a statistically significant positive relationship was found between national well-being and life satisfaction. Consequently, as the level of a person's national and subject well-being had a positive effect on their level of life satisfaction overall, H_2 was accepted.

As predicted, a negative relationship was found between life satisfaction and tax evasion, indicating that satisfaction with life may be a mediator between tax evasion, national well-being and tax involvement. The results indicated that tax evasion and tax involvement also relate to national well-being and life satisfaction. Specifically, tax involvement and national well-being correlated positively with life satisfaction, however, satisfaction with life had a significant negative effect on tax evasion perceptions. The results of the analysis were generally expected. That is, if taxpayers had greater tax involvement and were positive about national well-being, they were more likely to have greater life satisfaction (positive relationship). Conversely, taxpayers with greater life satisfaction would be less likely to harbour tax evasion perceptions (negative relationship). Therefore, as the level of a person's life satisfaction had a negative effect on their level of tax evasion, H_3 was also accepted.

Other possible reasons explaining the significant differences between the two countries in terms of national well-being, life satisfaction and all the dimensions of tax involvement could also be due to cultural differences. It was expected that the diversity in legal, social and economic values between Australia and Turkey would have contributed to the variance of the results to some degree.

B *Tax policy implications*

Investigating taxpayer perceptions regarding national well-being, life satisfaction, tax involvement or tax evasion is an important governmental activity of citizen-orientated countries. Where both national well-being and life satisfaction exist amongst a country's citizens it encourages loyalty and prosperity into the future. Consequently, it is vital to build a strong economy, and security systems, which represent key requirements for

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[105] Griffith (n 4); Lane (n 31); Shin and Johnson (n 28).

generating long-term happiness and life satisfaction. In this respect, creation and delivery of humanistic values is an important antecedent of citizen loyalty. The results of this study provide some valuable insights into the relationship between tax systems and citizenship issues. It seems that the combination of national well-being and life satisfaction provided by governments not only relates to social issues, but also taxpayer perceptions.

It is acknowledged that Australia currently has extensive compliance programmes in place for its citizens. The ATO, for example, has become a world leader in tax administration and provides a sophisticated website and educational services for its taxpayers. However, this study revealed that more could be done to improve the tax fairness perceptions of Australian taxpayers,[106] by promoting and advertising the services taxpayers receive from the ATO. The government and social conditions in Australia were shown to have implications for both national well-being and life satisfaction measures in the SEM, which in turn influence tax evasion perceptions.

In Turkey, where the tax administration system is not as sophisticated as Australia's,[107] issues of tax fairness and discrimination are present, as revealed through this study.[108] In this regard, issues of exchange equity, and improvements in deterrents and enforcement by the revenue authority, were shown to have implications for both national well-being and life satisfaction measures in the SEM, which in turn influence tax evasion perceptions.

Consequently, it is important that both governments give due attention to issues of tax fairness, and tax education and enforcement in the case of Turkey, in order to build up the knowledge and understanding of its citizens. In particular, this may also involve addressing the issues of tax complexity, expenditures and transparency. This study's findings indicate that many issues, both social and psychological, may effectively shape perceptions in the tax context.

C *Limitations and future studies*

Although this study makes a valuable contribution in the area of tax evasion perceptions, some limitations are noted. First, the scope of this study was limited to only two countries (Australia and Turkey), which limits the generalisability of the findings beyond these countries. In addition, as convenient sampling was adopted in both Australia and Turkey, the samples are not representative of their populations and are not normally distributed but somewhat skewed.[109] This limitation was initially recognised and accepted in order for the study to be carried out.

Second, as the tax systems in the two countries are quite different from each other, it was highly likely that the perceptions of particular tax issues would vary. Therefore, future research could examine comparative countries with similar tax systems and cultures (for example, collectivist, individualist), which would enhance the researchers' ability to

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[106] PA Hite and ML Roberts, 'An Analysis of Tax Reforms Based on Taxpayers' Perceptions of Fairness and Self-Interest' (1992) 4 *Advances in Taxation* 115; Chan, Troutman and O'Bryan (n 99); Tan (n 99) 60.
[107] Presidency of Revenue Administration (n 10) 34–5.
[108] See the Turkish statistical results regarding tax evasion in Tables 6 and 7 of this paper.
[109] A Q-Q plot was not provided in the analysis to determine normality.

generalise the findings beyond just two countries.[110] Third, while this study investigated only four variables, in practice, taxpayers are potentially exposed to multiple variables that may provide more effective tax dimensions. Future research could therefore consider the impact of additional variables and their effects, in order to provide a more comprehensive understanding.

Finally, while the study employed a quantitative methodology, perhaps taking up a qualitative approach by way of semi-structured interviews of taxpayers could enhance and enrich the findings and cross-validate previous results. Traditionally, many countries have preferred to assist citizens with their tax obligations rather than just introduce new and more severe sanctions. Some commentators argue that the former course of action is the best way forward for tax administration in these countries.[111] In this regard, this study revealed some of the relationships between key economic and tax variables that should be considered in formulating any tax policy measures.

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[110] Devos, 'The Impact of Life Satisfaction' (n 29).

[111] Simon James and Chris Alley, 'Tax Compliance, Self-Assessment and Tax Administration in New Zealand — Is the Carrot or Stick More Appropriate to Encourage Compliance?' (1999) 5 *New Zealand Journal of Taxation Law and Policy* 3.

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