Auditors' perceptions of alternative performance measures – Alternative truths and professional skepticism

Abstract

Alternative performance measures (APMs) and alternative ways of presenting financial information pose a threat to the comparability of financial statement information and the assessment of alternative information may rouse increased professional skepticism (PS). The alternative performance measures or "alternative truths" presented in financial statements range from excluding few non-recurrent items to stating full "non-IFRS", "non-GAAP" or "pro forma" results. In a case where the presentation selected leads either to profit or loss, two differing figures may increase uncertainty in audit work and affect the perceived risks in the case. In this paper, we study how Finnish public auditors perceive audit work and professional skepticism related to APMs, with a survey (N=220) with statements focusing on the *professional skepticism* (PS) both generally (as a personal trait, *trait skepticism*) and as case-specific *state skepticism*. We develop a measurement instrument for state skepticism. We find that state skepticism related to APMs is a largely separate component of professional (trait) skepticism. State skepticism seems to be helpful, together with considerations of the practical usefulness of those measures, in assessing APMs. Further, we find that auditors hold various views on APMs, and that search for knowledge seems a key feature in coping with APMs.

Keywords: Professional skepticism, state skepticism, alternative performance measurement, audit.

1. Introduction

The increasing use of alternative performance measures (APMs) and other non-GAAP earnings reporting styles may pose challenges for analysts and auditors, for example bias the decision-making, and thus professional skepticism (PS) is recommended in the assessment of non-GAAP earnings (Cieselski and Henry, 2017; also Chang and Luo, 2021). However, there can be several components in professional skepticism: so-called trait skepticism (involving sub-dimensions like search for knowledge) and state skepticism (Hurtt, 2010; Nelson, 2009; Robinson et al., 2018). Yet, state skepticism is less studied (Robinson et al., 2018); and further, the auditors' views on PS related to alternative performance measures (APMs) or other non-IFRS presentations of financial statements in European context have not received research attention with survey studies to the best of our knowledge. This survey-based research therefore aims to clarify the auditors' views on APMs and analyze how trait skepticism and state skepticism relate to such "alternative truths" in accounting presentation. We utilize the Hurtt (2010) professional (trait) skepticism measurement instrument and develop a new survey instrument (a case situation in the survey) to analyze state skepticism in APM context.

The Conceptual Framework for Financial Reporting (IASB 2018, 1.6) states that investors and lenders also need other information than the financial statements to make economic decisions. Such information may include considerations of economic conditions and company outlooks. Over time, the generally accepted accounting principles (GAAP) and market conditions change, and businesses

face unprecedented events, such as mergers and the recent covid-19 suggesting that some adjustments might be helpful for comparisons and for analyzing trends. The disclosure of Alternative Performance Measures, APMs, is an example of responding to these developments. Companies have been using APMs in their communication with investors for two decades but there is variety in the alternative reporting practices, such as "non-IFRS" or "non-GAAP" profit and loss statements as well as pro forma performance measures and financial ratios calculated in some alternative way. Alternative presentations may however also increase the uncertainty of what is the true and fair view of the company performance, and thereby make also auditing more demanding.

European Securities Markets Authority (ESMA) defines APM as "a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework" (ESMA, 2015). ESMA (2015, 2021) offer guidelines concerning the presentation of APMs and also IOSCO (2016) has published guidelines for non-GAAP measures. ESMA enhances investor protection and orderly financial markets and emphasizes (ESMA 2021) that its guidelines should be taken seriously for enforcement purposes, suggesting that alternative or adjusted presentations may be vulnerable to manipulative practices. Further, FRC (2021) examined the quality of APM reporting in the UK and noted that high levels of APM usage may obscure relevant GAAP information. Further, in their sample, 19 out of 20 companies reported more favorable adjusted results than GAAP results (FRC, 2021).

According to IASB (2018), IFRS financial statements should deliver relevant, comparable, verifiable, timely and understandable information, and so the presentation of "non-IFRS" or APMs in general might be in contradiction with these aims. In current times of alternative truths, however, it may be difficult to know what information is relevant, what true and fair view is or how the APMs are personally perceived by auditing professionals. Generally, in auditing field (Deloitte, 2016) it has been seen that reporting APMs may be an effective way to give more information about a company to markets, but the information can also be misleading. This is because alternative ways of representing financial information and performance indicators may include subjectivity and pose a threat to true and fair view being conveyed by the financial statements. Potentially worrying issues include if APMs influence too much the market actors (see Andersson & Hellman, 2007), if investors rely too much on pro forma information (Allee et al., 2007), or if auditing becomes more complicated because of these alternative truths presented.

Auditors, together with other controls, ensure that the financial information provided by companies is of good quality (Healy & Palepu, 2001), and thus auditors conclude in their reports, whether financial statements give "a true and fair view" of the company. The financial statements of listed companies in Finland follow IFRS but also often include APMs. In Finland, the APMs are not audited, because they are usually presented as additional information to the official financial statements in management reports, although the place for APMs varies between Finnish companies. Also globally, the situation related to APMs and auditing is not straightforward: there can be varying national accounting standards and sometimes APMs are audited and sometimes not. In the US, APMs are not usually audited, because they are traditionally reported outside financial statements, but auditors are responsible for APMs anyway, because audited statements should be in line with other financial information that is disclosed (Black & Christensen, 2018). In Germany, on the other hand, management report is audited and APMs are usually presented in them (Jana & McMeeking, 2021).

There is only little research evidence on auditors' reactions to APMs, and these do not focus on professional skepticism. Chen, Krishnan & Pevzner (2012) find that optimistic pro forma measures, compared with GAAP reporting, increase audit fees and the probability of resignation. APMs suggest therefore additional work or risks from the perspective of auditor. APMs may hinder the investors,

perhaps even the auditor, from seeing what the actual risks of organizational performance are. In this paper, we study perceptions of these "alternative truths" of financial information through the views of professional Finnish auditors, focusing on professional skepticism (PS) both generally (as a general trait) and in a certain situation (case, state skepticism, see Cohen et al., 2017; Hurtt, 2010; Robinson et al., 2018). So far, there have been relatively few studies analyzing both trait skepticism and state skepticism or their implications on auditor behavior (Skeptical behavior), perceptions on APMs, or career items, such as work satisfaction and intention to stay in the field for a long time. Therefore, we both test and amend the Hurtt (2010) model by empirically analyzing both the trait skepticism and state skepticism. Further we consider the implications of skepticism regarding auditor work, careers as well as the trust in the perceived true and fair view of the information conveyed with APMs. Our research questions are:

How do Finnish auditors perceive the presentation of APMs in financial statements?

How do trait and state skepticism explain skeptical behavior and trust related to APMs?

We study these questions with a survey sent to Finnish certified public auditors. We analyze the survey results (N=220) using e.g., factor analysis and structural equation modelling in order to contribute to our understanding of the implications of alternative ways of representing financial information both generally and related to a special situation, case, where a company makes loss according to IFRS and profit according to alternative ways of reporting. The special case (profit with alternative measures but loss according to IFRS) related claims also form an instrument for measuring state skepticism so that state skepticism can be measured. Further, we find that state skepticism develops over time, so that auditors in time learn to see through alternative presentations. Theoretically we contribute to earlier auditing literature (Cohen et al., 2017; Hurtt, 2010; Robinson et al., 2018) by showing that state skepticism as a separate component of professional skepticism required in the current audit work.

2. Background

Some companies refer to "non-IFRS reporting" or "adjusted reporting" but these ways of reporting may include subjective and asymmetrical information elements, potentially jeopardizing the classic accounting considerations of conservatism in reporting (e.g., Basu, 1997) and fair presentation or the true and fair view (Evans, 2003; Hamilton & OHogortaigh, 2009; Walton, 1993). Yet, offering both an official and an alternative view may be seen as providing additional information so it is not to be seen as manipulation, but the perception that a reader of the financial statement might get may still be partially distorted. We study this presentation of alternative truths which we see some potential for "manipulation without manipulation", i.e., manipulation of the view by the management and accountants without the manipulation of the official figures as such. However, for a skeptical mind, blurring the true and fair view, can thus resemble manipulative practices and suggest problems in corporate governance or internal control, and this might make the work of auditors more difficult – and risky (see e.g., Bedard and Johnstone, 2004).

Auditors often show skepticism in their work, i.e., a "questioning mindset", critical judgment, and search for knowledge (Cohen et al., 2017, p. 4), or an "attitude preceding skeptical behaviour", related to personal, task and situational factors (Robinson et al., 2018, p. 215). However, there can be skepticism related to the traits of the auditor (trait skepticism) and skepticism related to the situation (or state of affairs) in the company and in the external environment referred to as state skepticism (Cohen et al., 2017; Hurtt, 2010; Robinson et al., 2018). Also the attitudes or feelings of auditors have been considered as potential components of skepticism (Nolder and Kadous, 2018) but, besides trust

in APMs, we see this discussion of personal feelings or emotions going beyond the scope of this research. To the best of our knowledge the state component of professional skepticism has not been studied and we see difficulties in separating mindsets and attitudes in a survey-based research. Therefore, we focus on the classic model by Hurtt (2010) for analyzing skeptical behavior, which is seen as the predominant method for measuring and operationalizing professional trait skepticism (Khan and Oczkowski, 2021). The Hurtt (2010) figure includes an idea of trait skepticism leading to state skepticism and on to skeptical behavior. There is less information about state skepticism (Khan and Oczkowski, 2021), and for example Hurtt (2010) does not define the state skepticism or the skeptical mind very clearly. Therefore we develop an instrument for measuring state skepticism, and trust on APMs on the other hand, in the case or state of analyzing to APMs (see Figure 2), as APM presentation is seen as requiring professional skepticism (see Cieselski and Henry, 2017).

The presentation of APMs may accentuate both the risks of auditing and the forms of skepticism, at least in a situation, state or case, where official figures show decline in performance and managers can be tempted to remove some items and highlight the APMs. Further, the skepticism and risk perceptions may also affect auditor job outcomes and job turnover (Cohen et al., 2017). In Texas, auditors that assumed (presumptive doubt) some managerial dishonesty, were less likely to remain within the auditing profession (Cohen et al., 2017). Yet in a European context or in different situations, skepticism may accentuate in different ways.

Considering the various forms of alternative or optional reporting practices, pro forma statements present historical information adjusted as if the transactions had occurred at a different time or under a different organizational structure, for example in case of mergers and acquisitions changing the comparability of the organizational form (e.g., called for by SEC 2020). Bhattacharya et al. (2004) consider reporting earnings figures on pro forma basis a controversial practice. Further, they (2004, 285) note that “pro forma earnings exclude normal income statement items that managers deem to be nonrecurring or nonrepresentative of ongoing operations”. Further, “pro forma announcers tend to be relatively “young” firms that are concentrated primarily in the tech sector and business services industries, and that they are significantly less profitable, more liquid, and have higher debt levels, P-E ratios, and book-to-market ratios than other firms in their own industries.”

Bhattacharya et al. (2004, 285) note that “while firms commonly exclude multiple expenses in arriving at their pro forma earnings figure, they usually do not exclude the same items in subsequent pro forma announcements. These results support the criticism that pro forma announcements are often motivated by managers' desires to meet or beat analysts' expectations or to avoid earnings decreases”. Such alternative ways of reporting, such as the full “Non-IFRS” profit and loss statement presentation, may affect comparability and investor perceptions. Here non-IFRS is not just pro forma reporting or alternative indicator reporting only but presenting for example the whole profit and loss statement according to company’s own accounting views of excluding extraordinary items and costs from organizational restructuration.

Additional presentation, e.g., about subtotals of the profit and loss statement, may give better information about the company’s performance to investors, especially considering that the IFRS board too has planned alternative ways of presentation (IFRS ED 2019). These alternative statements are not clearly regulated or audited, however, and may pose a threat of conveying a true and fair view to investors in the possible case where the views provided by Non-IFRS reporting and IFRS reporting are not aligned. This practice suggests the possibility of incoherent presentations, non-comparability and use of different languages, and may raise questions about management’s motivation or governance (Cieselski and Henry, 2017). This suggests that in case alternative performance information views of

the company performance are presented, professional skepticism is needed to see beyond the numbers and analyze the information properly (ibid.).

3. Hypothesis development

The auditor is an important part of the control of a company and corporate governance with a role of ensuring accounting quality and protecting shareholders and investors (Cohen, Krishnamoorthy & Wright 2002)[1]. Yet, accountants, managers and even auditors may need to balance the different views of stakeholders and, as there are several possibly applicable financial reporting frameworks (national, IFRS, US GAAP etc.) and presentation styles with visualizations and segment reports for global companies, and so it is not always clear what a true or fair view actually is, allowing room for both managerial discretion or biases in auditor decision-making (Chang and Luo, 2021). There is earlier evidence that auditors are critical towards issues where managerial bias, or earnings management, related to financial information is possible (Becker et al., 1998). Further, there has been some research on the forms of skepticism (Cohen et al., 2017; Robinson et al., 2018).

Professional skepticism is an element of audit quality and influences the audit process (Hurtt, Brown-Liburd, Earley & Krishnamoorthy, 2013). International Standard of Auditing 200 (ISA 200, 2009) defines the use for professional skepticism as follows: "The auditor shall plan and perform an audit with professional skepticism recognizing that circumstances may exist that cause the financial statements to be materially misstated" (ISA 200.15). FRC (2019) points out that professional skepticism has to be involved during the high-risk audits, especially when there is a question of management judgements and estimates, suggesting a state skepticism, i.e., skepticism related to certain conditions or case situation (Cohen et al., 2017; Hurtt, 2010; Robinson et al., 2018). There is however evidence on the trait skepticism: for example, Rose (2007) found in an experimental test with 125 auditors that auditors who rely less on other people pay more attention to the evidence of aggressive financial reporting. These auditors also suspect more often that the misstatement has been intentional. In addition, auditors who have experience about frauds, tend to think more often that misstatements are intentional. Yet, the relation of skepticism and how auditors assess risks and perform the audit work have not been widely studied in European context. Therefore, we hypothesize that auditor professional skepticism (PS) predicts how auditors perceive the presentation of alternative performance measures (APMs) yet focusing on the possible differences of trait and state skepticism and allowing for a possibility for mediation. The hypotheses are as follows:

H1: State skepticism explains auditors' trust towards APMs.

H2: State skepticism explains auditors' skeptical behavior in audit work.

We study these hypotheses with a survey conducted in Finland and control for the possible influences of background and other typical control variables, such as gender and age, regarding the auditors' attitudes towards APMs and audit work. In addition, we developed a survey instrument related to case-specific auditor skepticism, that is, state skepticism (basically also whether making profit with alternative measures but loss with IFRS measures is a red flag and rises skepticism).

[1] According to Jensen (1993), four control forces affect corporations: the capital markets, the legal/ political/ regulatory system, the product and factor markets, and the internal control system headed by the board of directors. However, there are risks and problems in control systems, such as asymmetry of information (ibid.). Auditing obviously relates to capital markets and to the regulatory systems but the control forces, like stakeholder views, are not necessarily very coherent, but can include alternative viewpoints.

4. Data and Methods

4.1 Data and the survey instrument

A survey of Finnish certified auditors was conducted in September 2021. The list of auditors was obtained from the Finnish Patent and Registration Office and it represents a list of all certified public auditors in Finland. In Finland, there are two main types of certified auditors, called KHT and HT[2]. KHT is the highest level of auditor certification, whereas the lower-tier HT certification usually precedes KHT. Both KHT and HT auditors were included in our survey. We sent an e-mail message to 1271 recipients containing a link to an online survey, with a reminder message sent after one week. We received 220 answers, which corresponds to a response rate of 17.3%.

The survey instrument consisted of statements measured on the five-point Likert scale (1 = disagree,…, 5 = agree). In addition, we followed Cohen et al. (2017) in questions relating to the auditor's background, such as auditing experience and position in the firm (for details on the survey instrument, see Appendix 1). The survey instrument contained several statements that probed the respondent's views on alternative performance measures. Our aim was to analyze state skepticism relating to APMs. Therefore, as a new instrument for measuring state skepticism, we included three novel statements about audit risk, financial statement manipulation and skepticism, involving the case situation: "*If a company reports losses according to IFRS but profit according to alternative performance measures…*". We also surveyed the auditors' perceptions of the usefulness of APMs. Furthermore, our instrument included statements which measured skeptical and trusting attitudes towards management behavior in financial reporting, including alternative performance metrics.

As a measure of professional (trait) skepticism, we use a nine-item version of the professional skepticism scale (Blix et al., 2021), drawn from the 30-item multidimensional professional skepticism survey instrument originally developed by Hurtt (2010). The construct attempts to capture neutral trait skepticism (Hurtt, 2010). The abbreviated scale consists of four subscales: questioning mind, self-determining, search for knowledge, and suspension of judgement. The omitted dimensions are interpersonal understanding (with e.g., statement of interest in other people's behavior) and self-confidence (with statements such as I have confidence in myself, see Hurtt, 2010), which we see relatively personal and less related to the assessment of differing IFRS/APM information presented in our case.

4.2 Methods and the empirical model

We analyzed the data using Stata 15 software. We analyzed the survey statements with exploratory factor analysis (EFA). After this, we used the constructs derived from EFA as dependent variables in a structural equation model (SEM). Control variables in the model were the background variables (age, auditing experience, gender, Big4, KHT certification, domain-specific experience from auditing listed companies, senior position, office size and a goal of staying in the business in the long-term. These variables were consistent with the antecedents of professional skepticism, such as knowledge,

[2] Additionally, there is a specialization degree, JHT (previously called JHTT), in Finland for public sector auditors but this survey did not focus on the auditing of public sector or non-profit organizations.

auditing experience and incentives (Nelson, 2009; Hurtt, 2010; Hurtt et al., 2013). Variable operationalizations are described in Table 3.

Our empirical model is based on Hurtt (2010), proposing that PS, or here professional trait skepticism, may lead to state skepticism and skeptical mindset, which manifests itself in skeptical behavior. In a similar manner, we explore these relationships in our conceptual model (Figure 1), in which the four sub-dimensions (or subscales) of professional trait skepticism on the left, lead to state skepticism or to a perception of practical usefulness of APM. We consider that trait skepticism and state skepticism are not necessarily similar and that the auditor may appreciate practical aspects of APMs as opposed to the state skepticism relating to APMs because Hurtt's PS is a construct of neutral trait skepticism as opposed to presumptive doubt, which assumes suspicion by default (Nelson, 2009). State skepticism and "a practical view", in turn, may manifest themselves as skeptical (in a special case or state) or as trusting thinking and behavior in relation to APMs (generally).

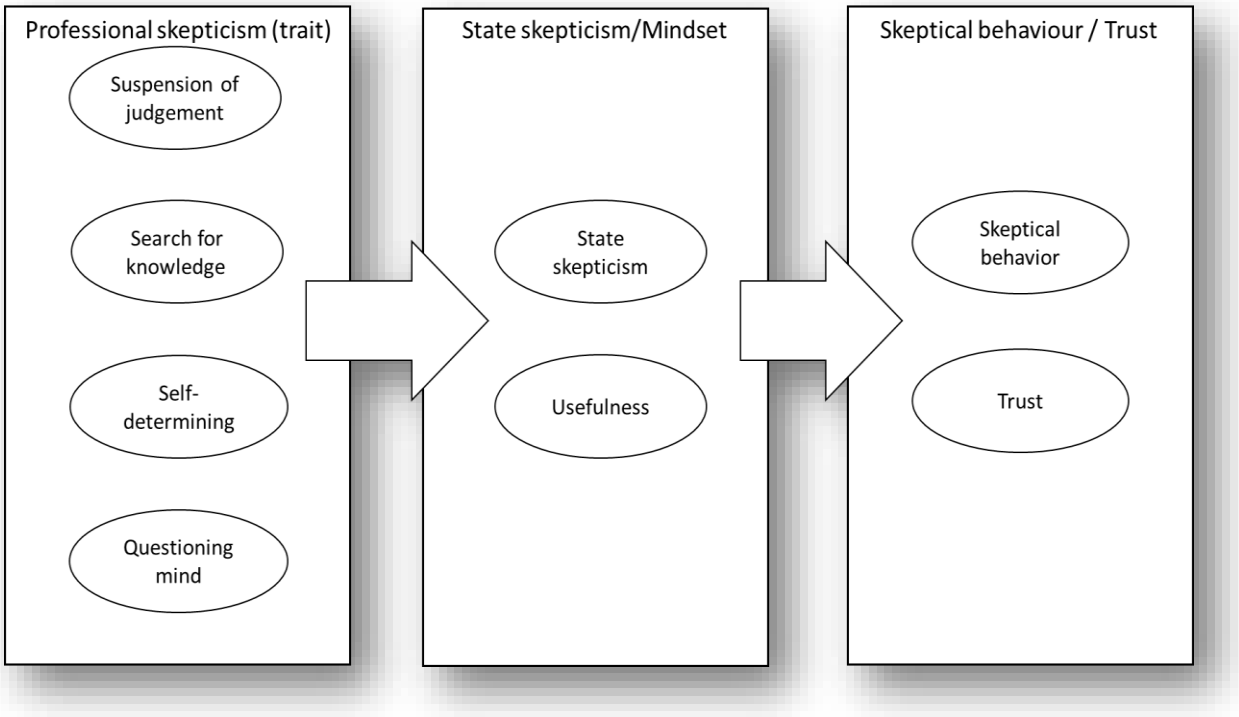

Figure 1. The conceptual model.

Next, we look at the results and eventually outline the final model through our structural equation modelling and other appropriate and related analyses including checks for correlation, consistency and model fit, and with a bootstrapping analysis for considering the mediation effects of structural models (see Hair et al., 2009; Zhao et al., 2010, and the Tables, Figures and notes presented below).

5. Results

First, the descriptive statistics for the professional skepticism scale are reported in Table 1. All items exhibit statistically significant t-values, which suggests that the respondents had opinions either for or against the statements. Consistent with the Hurtt's (2010) original version of the survey instrument,

the factor solution yields four distinct dimensions for professional skepticism (PS), what we consider as trait skepticism. The Cronbach's Alphas for the dimensions range from 0.62 (Questioning mind) to 0.89 (Suspension of judgement), which suggests that they can be used as measures of the dimensions of PS. These are consistent with the ones reported by Hurtt (2010) whose alpha values range from 0.67 (Questioning mind) to 0.89 (Search for knowledge) for the same four dimensions. It should be noted that Blix et al. (2021) did not use or assess the validity of the abbreviated scale as a multidimensional construct. Thus, the abbreviated scale appears to capture reasonably well the multidimensional characteristics of PS.

Table 1. Descriptive statistics and factor loadings for the professional (trait) skepticism construct.

Variable	Mean	SD	Min	Max	t-statistic ($\neq 3$)	Loading
Search for knowledge (Lambda = 2.33, Alpha = 0.83)						
I think that learning is exciting.	4.44	0.77	1	5	27.71***	0.94
I relish learning.	4.37	0.74	1	5	27.57***	0.94
Suspension of judgement (Lambda = 1.86, Alpha = 0.89)						
I take my time when making decisions.	2.53	0.98	1	5	-7.08***	0.72
I don't like to decide until I've looked at all of the readily available information.	3.60	0.98	1	5	9.11***	0.67
I dislike having to make decisions quickly.	2.81	1.11	1	5	-2.54**	0.86
Questioning mind (Lambda = 1.72, Alpha = 0.62)						
My friends tell me that I often question things that I see or hear.	3.20	0.94	1	5	3.14***	0.91
I frequently question things that I see or hear.	3.60	0.80	1	5	11.10***	0.86
Self-determining (Lambda = 1.68, Alpha = 0.78)						
I tend to immediately accept what other people tell me.	1.98	0.73	1	4	-20.58***	0.86
I usually accept things I see, read, or hear at face value.	1.97	0.82	1	5	-18.67***	0.80
I often accept other people's explanations without further thought.	1.80	0.72	1	5	-24.51***	0.87

Notes: Obs. = 220. Factoring method: Principal component analysis. Kaiser-Meyer-Olkin test of sampling adequacy: KMO = 0.62. Bartlett's test of sphericity: Chi2(45) = (p-value < 0.001). Statistical significance: *** = p-value < 0.01; ** = p-value < 0.05.

Second, Table 2 reports the descriptive statistics and the loadings of exploratory factor analysis for the survey instrument that probed the Finnish public auditors' perceptions of APMs. The t-test statistics indicate that in most statements, the respondents, on average, agreed or disagreed with the statements. Our exploratory factor analysis yielded four distinct factors, with two items were dropped from the solution. It is noteworthy that APMs in general were not perceived as related to potential financial statement manipulation risk, even if in our case or state situation this risk was recognized (see Table 2). We labelled the factors as *Usefulness, Trust, Skeptical behavior and State skepticism* (see also the right-hand side of Figure 1). The Usefulness factor ("Useful" for short) reflects a positive perception of the practical usefulness of APMs. The Trust factor relates to a trusting attitude towards companies compliance with the guidance concerning APMs. The Skeptical behavior and thinking factor ("Skeptical" for short) captures auditors' critical views on how management uses APMs. The State skepticism factor ("State" for short) is a novel construct of state skepticism with respect to APMs when compared to a differing view portrayed by the IFRS. Useful and State exhibit a very good internal consistency, as indicated by the high Cronbach's Alpha values of their constructs. Instead, Trust and

State exhibit a lower degree of internal consistency, with alphas slightly above 0.60. However, these values are acceptable in exploratory work (Hair et al., 2009).

Table 2. Descriptive statistics and factor loadings for the APM survey instrument.

Variable	Mean	SD.	t-statistic ($\neq 3$)	Loading
Useful (Lambda = 5.44, Alpha = 0.89)				
It is good to eliminate one-off events from the financial statement figures and present alternative performance measures.	3.70	1.06	9.90***	0.86
Alternative performance measures provide useful information to investors about the company financial results.	3.79	0.88	13.30***	0.80
Using alternative performance measures provides useful information for auditing.	3.24	1.13	3.16***	0.85
Alternative performance measures are misleading to financial statement users.	2.57	0.91	-6.99***	0.55
Reporting alternative performance measures is useful in auditing.	3.04	1.09	0.56	0.78
Presenting alternative performance measures facilitates forming a true and fair view on the financial statements.	3.42	0.94	6.67***	0.84
Alternative performance measures give useful information about the formation of the company results.	3.71	0.81	13.00***	0.70
Trust (Lambda =2.39, Alpha = 0.64)				
I trust the information provided by the alternative performance measures.	3.28	0.78	5.33***	0.48
Finnish companies know how to comply with the guidance related to alternative performance measures, issued by the European Securities and Market Authority, ESMA.	3.00	0.68	0.10	0.93
Companies know how to operate correctly when reporting alternative performance measures.	3.09	0.75	1.79*	0.67
Skeptical behavior (Lambda =1.25, Alpha = 0.62)				
I am usually skeptical regarding what the management tells me.	2.71	0.93	-4.45***	0.53
When presenting alternative performance measures companies typically embellish the image of the company.	3.18	1.00	2.69***	0.80
Companies attempt to maximize their stock value by presenting alternative performance measures.	3.27	0.94	4.21***	0.84
State skepticism (Lambda = 1.22, Alpha = 0.80)				
If a company reports losses according to IFRS but profit according to alternative performance measures, it is a signal of increased audit risk.	3.25	0.99	3.80***	0.88
If a company reports losses according to IFRS but profit according to alternative performance measures, it is a signal of increased risk for financial statement manipulation.	3.02	0.93	0.36	0.90
If a company reports losses according to IFRS but profit according to alternative performance measures, I am more skeptical in my audit.	3.68	0.81	12.38***	0.71
Dropped items				
Presenting alternative performance measures means increased auditing risks.	3.00	1.05	-0.06	
Presenting alternative performance measures increases the risk of financial statement manipulation.	3.11	1.05	1.54	
Notes: Obs. = 220. Factoring method: Principal component analysis. Kaiser-Meyer-Olkin measure of sampling adequacy: KMO = 0.82. Bartlett's test of sphericity: $Chi^2(120) = 1588.02$ (p-value < 0.001). Statistical significance: *** p-value < 0.01; * p-value < 0.1. Min. value in all items 1, max. value in all items 5.				

Table 3 reports the descriptive statistics for the sample. The measures for the dimensions of trait skepticism, proposed mediators and dependent variables are standardized with the zero at mean and a standard deviation of one. Regarding control variables, the average auditor was a 51-year-old male (a quarter of the sample were female), with over twenty years of auditing experience. 54% of the respondents held the higher-tier (KHT) public auditor certification. 69% of the sample reported holding a senior position. Approximately a quarter of the respondents worked with Big 4 companies. 46% of the respondents had audited listed companies. Most respondents planned to stay in the industry with a long-term commitment.

Table 3. Descriptive statistics.

Variable	Description	Mean	SD	Median	Min	Max
State	Bartlett score of the *State* construct.	0.00	1.01	-0.08	-2.71	2.29
Useful	Bartlett score of the *Useful* construct.	0.00	1.00	0.22	-3.25	2.02
Skeptical	Bartlett score of the *Skeptical* construct.	0.00	1.02	-0.14	-2.42	2.47
Trust	Bartlett score of the *Trust* construct.	0.00	1.01	-0.05	-3.66	2.97
Search for knowledge	Bartlett score of the *Search for knowledge* construct.	0.00	1.00	0.14	-4.46	1.26
Suspension of judgement	Bartlett score of the *Suspension of judgement* construct.	0.00	1.02	-0.02	-2.64	2.48
Self-determining	Bartlett score of the *Self-determining* construct.	0.00	1.00	0.07	-1.91	3.13
Questioning mind	Bartlett score of the *Questioning mind* construct.	0.00	1.00	0.13	-3.38	2.16
Listed	Dummy variable that equals one if the responded has experience in auditing listed companies.	0.46	0.50	0.00	0.00	1.00
Experience	Auditing experience in years.	20.44	12.33	20.00	2.00	52.00
Long-term	Score from the statement "I intend to stay in my profession for a long time.", measured on a 5-point Likert scale.	3.30	1.31	4.00	1.00	5.00
KHT	Dummy variable that equals one if the responded holds the KHT certification.	0.54	0.50	1.00	0.00	1.00
Age	The respondent's age in year.	51.22	14.57	51.50	26.00	82.00
Big4	Dummy variable that equals one if the responded works for a Big4 auditing firm.	0.26	0.44	0.00	0.00	1.00
Gender	Dummy variable that equals one if the responded is female.	0.25	0.43	0.00	0.00	1.00
Senior	Dummy variable that equals one if the responded is in a senior position.	0.69	0.46	1.00	0.00	1.00

Notes: Obs. = 220.

Additionally, the Appendix 2 shows the correlations matrix for the variables used in the empirical model. Most variables exhibit moderate correlations with each other, which suggests that multicollinearity may not pose a serious problem. Further, the high correlations are rather obvious: Age correlates with experience and the KHT certification; Big 4 firms tend to hire KHT auditors and carry out listed company audits; the respondent's age is negatively linked with how long he or she plans to stay in business. Appendix 2 shows that Suspension of judgement factor (with variables like "I take my time when making decisions") is highlighted among female auditors and seems to positively correlate with longer careers in auditing. Appendix 2 also shows that that Skeptical behavior and Trust do not correlate; instead, the State skepticism and Trust factors are negatively correlated.

Next, Table 4 and Figure 2 report the results of our structural equation model. Table 4 shows only the estimated coefficients for paths involving the dimensions of PS and dependent variables. Coefficient estimates for control variables are reported in Appendix 3. From Appendix 3 we can see that intention to stay in auditing long-term is negatively related to state skepticism, but otherwise State skepticism does not clearly relate to other general auditor features, such as gender, age or senior position.

In Table 4, the model's fit statistics are indicative of a good fit, with the overall coefficient of determination (R-squared) over 30%. The results show that *Search for knowledge* predicts *State* and *Useful*. This could be regarded as consistent with trait skepticism exhibiting a neutral version of PS. That is, the auditor who scores high on the dimension holds a neutral stance towards APMs and collects evidence before forming an opinion.

Table 4. Structural equation model.

Path	Coef.	S.E.	p-value
Independent variable → Mediator			
Self-determining → State	-0.057	0.065	0.380
Suspension of Judgement → State	0.083	0.062	0.182
Search for Knowledge → State	0.132	0.067	0.047
Questioning Mind → State	0.059	0.064	0.360
Self-determining → Useful	0.008	0.068	0.903
Suspension of Judgement → Useful	-0.028	0.065	0.669
Search for Knowledge → Useful	0.196	0.069	0.005
Questioning Mind → Useful	0.061	0.066	0.361
Mediator → Dependent variable			
State → Skeptical	0.180	0.066	0.006
Useful → Skeptical	-0.343	0.064	0.000
State → Trust	-0.076	0.064	0.239
Useful → Trust	0.370	0.062	0.000
Independent variable → Dependent variable			
Self-determining → Skeptical	0.014	0.064	0.826
Suspension of Judgement → Skeptical	0.036	0.061	0.554
Search for Knowledge → Skeptical	0.045	0.067	0.507
Questioning Mind → Skeptical	0.123	0.063	0.050
Self-determining → Trust	-0.159	0.062	0.010
Suspension of Judgement → Trust	0.010	0.059	0.870
Search for Knowledge → Trust	0.123	0.065	0.059
Questioning Mind → Trust	0.132	0.061	0.031
Model fit statistics			
$\chi 2$	3.49		0.322
RMSEA	0.027		
CFI	0.996		
TLI	0.929		
Coefficient of determination	0.36		

In the second part of the mediation model (see Figure 2), State skepticism is a positive predictor of skeptical behavior and thinking, whereas Useful is a negative predictor. However, only Useful predicts Trust. These results suggest that state skepticism is correlated with skeptical behavior, whereas Useful is linked with Trust. An examination of direct paths shows that Questioning mind is positively correlated with both skeptical behavior and trust. Search for knowledge is also a direct predictor of Trust. However, Self-determining is negatively associated with Trust. Search for knowledge however precedes and plausibly helps forming any opinion.

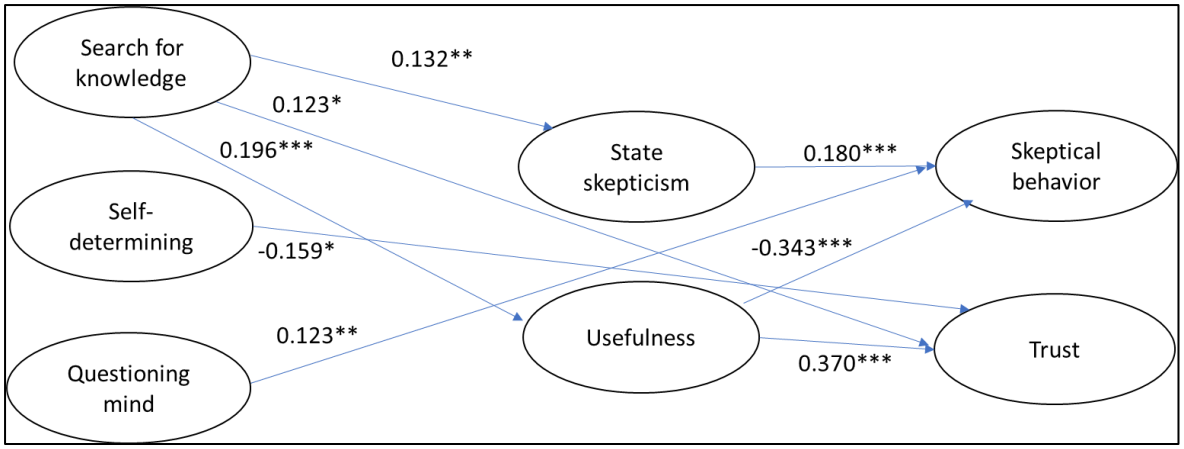

Figure 2. Structural equation model.

A number of studies (e.g., Zhao et al., 2010) suggest that the existence of 'mediation effects' should be assessed by bootstrapped bias-corrected percentile confidence intervals. Only two such effects can be established, as indicated by non-zero bias corrected 95% confidence intervals in Table 5. The Useful factor mediates the path between Search for Knowledge and Skeptical behavior and Trust with a negative and positive coefficient with a comparable magnitude for the former and latter, respectively.

Table 5. Significant mediation effects.

Mediated Path	Coef.	95% Bias Corrected Confidence Interval
Search for Knowledge → Useful → Skeptical	-0.067	-0.134, -0.019
Search for Knowledge → Useful → Trust	0.073	0.019, 0.144

Notes: Bootstrapping was carried out with 2,000 replications.

All in all, we find that State skepticism is a largely separate component of professional skepticism and that Search for knowledge is a key aspect for considering trust and for skeptical behavior in auditing.

6. Discussion and conclusions

Auditors' views on skepticism related to alternative performance measures (APMs) or other non-IFRS presentations of financial statements in European context have not received research attention to the best of our knowledge. Therefore, we studied both state and trait skepticism and built a measurement instrument for analyzing state skepticism with relation to APMs. We found that state skepticism is largely separate from trait skepticism. This contributes to earlier literature by amending the model by Hurtt (2010), in understanding state skepticism as a separate element of professional skepticism in audit work. Further, we see our state skepticism measurement instrument as contributing to auditing survey studies regarding the analysis of trait and state skepticism (elaborating Robinson et al., 2018). Besides understanding potential biases in auditor decision-making generally (Chang and Luo, 2021), it is important to understand the situation of the case company in audit work, the state of affairs.

Generally, the Finnish auditors were positive about APMs, and we found (e.g. through a bootstrapping analysis of mediating effects in Table 4) that trust in APMs is related to Search for knowledge, suggesting that after a careful analysis the auditor can assess the alternative forms of reporting, i.e., can see beyond the "alternative truths" presented.

The state skepticism correlates positively with skeptical behavior and develops especially for those auditors with experience of listed companies (Appendix 2). Further, the Suspension of judgement was a trait prominent among female auditors and such curiosity also indicated a long career in auditing (see Appendix 2). Yet, for ordinary investors or other users of financial statements the APMs may still obscure the views so there is room for further studies regarding APMs.

Considering our first hypotheses (*H1: State skepticism explains auditors' trust towards APMs),* we can conclude that *state skepticism* did not affect trust so much, so that in Appendix 2, there is a significant negative correlation (high state skepticism indicates less trust in APMs) but in Figure 2 there is no direct link with state skepticism and trust. Further, there are mediating aspects such as perceived usefulness (see Figure 2 and Table 4). Therefore, this hypothesis is largely rejected with our data but we note that further research might be beneficial to understand trait and state skepticism. Yet, as professional *trait skepticism* consists of several sub-dimensions, we found that the Self-determining component of PS in Figure 2 indicates less trust, which is in our view also a contribution to earlier literature on trait skepticism (e.g. Hurtt, 2010).

Regarding our second hypothesis *(H2: State skepticism explains auditors' skeptical behavior in audit work),* we corroborate this hypothesis. In Figure 2 we see that state skepticism affects behavior in audit work. We consider this result to contribute to earlier findings on professional skepticism (Cohen et al., 2017; Hurtt, 2010; Robinson et al., 2018) because we show that there are aspects of both trait and state skepticism related to APMs, and as can be seen from Figure 2, that professional skepticism or its effects are not straightforward, and that Search for knowledge is an important element in audit work and related to both trust and skeptical behavior. Thus, as a practical and managerial implication, interest in searching knowledge and being able to notice special case situations seem important practical skills for current and future auditors and may be emphasized in university education and auditor training. Finally, in addition to APMs, we call for further research regarding professional skepticism in various contexts and cases as well as about auditors' possibilities to detect other possibly manipulative states of affairs under current turbulent times.

References

Allee, K.D., Bhattacharya, N., Black, E.L. & Christensen, T.E. (2007). Pro forma disclosure and investor sophistication: External validation of experimental evidence using archival data. *Accounting, Organizations and Society*, 32, 201-222.

Andersson, P. & Hellman, N. (2007). Does Pro Forma Reporting Bias Analyst Forecasts? *European Accounting Review*, 16:2, 277-298.

Basu, S. (1997). The conservatism principle and the asymmetric timeliness of earnings1. *Journal of Accounting and Economics*, 24(1), 3-37.

Becker, O.L., Defond, M.L., Jiambalvo, J. & Subramanyam, K.R. (1998). The Effect of Audit Quality on Earnings Management. *Contemporary Accounting Research*, 15 (1, Spring 1998), pp. 1-24.

Bedard, J. C., & Johnstone, K. M. (2004). Earnings manipulation risk, corporate governance risk, and auditors' planning and pricing decisions. *The Accounting Review*, 79(2), 277-304.

Bhattacharya, N., Black, E. L., Christensen, T. E., & Larson, C. R. (2003). Assessing the relative informativeness and permanence of pro forma earnings and GAAP operating earnings. *Journal of Accounting and Economics*, 36(1-3), 285-319.

Black, D.E. & Christensen, T.E. (2018). Policy implications of research on non-GAAP reporting. *Research in Accounting Regulation*, 30:1, 1-7.

Blix, L. H., Chui, L. C., Pike, B. J., & Robinson, S. N. (2021). Improving auditor performance evaluations: The impact on self-esteem, professional skepticism, and audit quality. *Journal of Corporate Accounting & Finance*, 32(4), 84-98.

Chang, C. J., & Luo, Y. (2021). Data visualization and cognitive biases in audits. *Managerial Auditing Journal*, 36(1), 1-16.

Chen, L. Krishnan, G. & Pevznera, M. (2012). Pro forma disclosures, audit fees, and auditor resignations. *Journal of Accounting and Public Policy*, 31:3, 237-257.

Ciesielski, J. T., & Henry, E. (2017). Accounting's tower of Babel: Key considerations in assessing non-GAAP earnings. *Financial Analysts Journal*, 73(2), 34-50.

Cohen, J. R., Dalton, D. W., & Harp, N. L. (2017). Neutral and presumptive doubt perspectives of professional skepticism and auditor job outcomes. *Accounting, Organizations and Society*, 62, 1-20.

Cohen, J. Krishnamoorthy, G. & Wright, A.M. (2002). Corporate Governance and the Audit Process. *Contemporary Accounting Research*. Vol. 19 No. 4 pp. 573–94.

Deloitte (2016). Alternative performance measures. IFRS in Focus – A practical guide, July 2016, https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/audit/IFRS_news/july-27-2016.pdf

Esma (2015). ESMA Guidelines on Alternative Performance Measures. 05/10/2015| ESMA/2015/1415en

ESMA (2021). ESMA PROPOSES IMPROVEMENTS TO TRANSPARENCY DIRECTIVE AFTER WIRECARD CASE. https://www.esma.europa.eu/sites/default/files/library/esma32-51-818_letter_to_the_ec_on_next_steps_following_wirecard.pdf

Evans, L. (2003). The true and fair view and the 'fair presentation'override of IAS 1. *Accounting and Business Research*, 33(4), 311-325.

FRC (2019). Achieving high quality audits consistently. Financial Reporting Council. A Letter by David Rule, FRC Executive director of supervision, to audit firms. 8 November 2019. https://www.frc.org.uk/getattachment/a40f77f6-9542-47be-b1c5-e15ece70415a/Achieving-high-quality-audits-letter-(sent-to-firms-08-11-19).pdf

FRC (2021). Thematic Review: Alternative Performance Measures. Financial Reporting Council, Oct. 2021. https://www.frc.org.uk/getattachment/74ed739d-2237-4d3e-a543-af8ada9b0e42/FRC-Thematic-Review-on-APMs-October-2021.pdf

Hair, J.F., Black, B., Babin, B.J., and Anderson, R.E. (2009). *Multivariate Data Analysis* (7th Edition). Pearson.

Hamilton, G. & OHogortaigh, C. (2009). The Third Policeman: 'The true and fair view', language and the habitus of accounting. *Critical Perspectives on Accounting*, 20(8), 910-920.

Healy, P.M. & Palepu, K.G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31:1-3, 405-440.

Hurtt, R. K. (2010). Development of a scale to measure professional skepticism. *Auditing: A Journal of Practice & Theory*, 29(1), 149-171.

Hurtt, R. K., Brown-Liburd, H., Earley, C. E., & Krishnamoorthy, G. (2013). Research on auditor professional skepticism: Literature synthesis and opportunities for future research. *Auditing: A Journal of Practice & Theory*, 32(Supplement 1), 45-97.

IASB Conceptual framework (2018). IASB, IFRS Foundation.

IFRS ED (2019). IFRS Exposure Draft, ED/2019/7. General Presentation and Disclosures. December 2019. Published for comments only by the International Accounting Standards Board.

IOSCO (2016). Statement on NON-GAAP Financial Measures, Final Report. https://www.iosco.org/library/pubdocs/pdf/IOSCOPD532.pdf

ISA 200 (2009). International Standard on Auditing 200. Overall Objectives of the independent auditor and the conduct of an audit in accordance with international standards on auditing. Dec. 15, 2009.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, 48(3), 831-880.

Khan, M. J., & Oczkowski, E. (2021). The link between trait and state professional skepticism: A review of the literature and a meta-regression analysis. *International Journal of Auditing*, 25, 558-581.

Nelson, M. W. (2009). A model and literature review of professional skepticism in auditing. *Auditing: A Journal of Practice and Theory*, 28(2), 1-34.

Nolder, C. J., & Kadous, K. (2018). Grounding the professional skepticism construct in mindset and attitude theory: A way forward. *Accounting, Organizations and Society*, 67, 1-14.

Public Company Accounting Oversight Board (PCAOB) 2017. The Auditor's Report on an Audit of Financial Statements when the Auditor Expresses an Unqualified Opinion and Related Amendments to PCAOB Standards. PCAOB Release No. 2017-001.

Robinson, S. N., Curtis, M. B., & Robertson, J. C. (2018). Disentangling the trait and state components of professional skepticism: Specifying a process for state scale development. *Auditing: A Journal of Practice & Theory*, 37(1), 215-235.

Rose, J.M. (2007). Attention to Evidence of Aggressive Financial Reporting and Intentional Misstatement Judgments: Effects of Experience and Trust. *Behavioral Research in Accounting*, 19, 215-229.

SEC (2020). US Securities and Exchange Commission, SEC. Release 33-10786, Amendments to Financial Disclosures about Acquired and Disposed Businesses. Final Rule, effective on Jan 1, 2021. File No. S7-05-19.

Walton, P. (1993). Introduction: the true and fair view in British accounting. *European Accounting Review*, 2(1), 49-58.

Zhao, X., Lynch, J.G. Jr., and Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research*, 37, 197-206.

Appendix 1. The survey instrument.

Note: items 16, 17 and 18 represent *our state skepticism instrument* for surveys related to APMs and auditing.

General items/background selections:

Sex; Age; How many years have you worked as an auditor?
Are you working as an auditor at the moment?
Do you have experience on auditing stock exchange listed companies?
Do you work at a Big-4 company (Deloitte, EY, KPMG, PwC)?
Do you have a senior/leading position?
What is the size of your workplace?
Do you have a KHT (Finnish higher auditing) degree?

1) I trust the information provided by the alternative performance measures.
2) It is good to eliminate one-off events from the financial statement figures and present alternative performance measures.
3) Alternative performance measures provide useful information to investors about the company financial results.
4) Using alternative performance measures provides useful information for auditing
5) Alternative performance measures are misleading to financial statement users.
6) Presenting alternative performance measures means increased auditing risks.
7) Reporting alternative performance measures is useful in auditing.
8) Finnish companies know how to follow the alternative performance measures related guidance from the European Securities and Market Authority, ESMA.
9) Presenting alternative performance measures increases the risk of financial statement manipulation.
10) Presenting alternative performance measures facilitates forming a true and fair view on the financial statements.
11) I am usually skeptical regarding what the management tells me.
12) When presenting alternative performance measures companies typically embellish the image of the company.
13) Companies tend to maximize their stock value by presenting alternative performance measures.
14) Alternative performance measures give useful information about the formation of the company results.
15) Companies know how to operate correctly when reporting alternative performance measures
16) If a company reports losses according to IFRS but profit according to alternative performance measures, it is a signal of increased audit risk.
17) If a company reports losses according to IFRS but profit according to alternative performance measures, it is a signal of increased risk for financial statement manipulation.
18) If a company reports losses according to IFRS but profit according to alternative performance measures, I am more skeptical in my audit.
19) I am satisfied with my work.
20) I intend to stay in my profession for a long time.
21) I think that learning is exciting.
22) I take my time when making decisions.
23) I relish learning.
24) I dislike having to make decisions quickly.
25) I don't like to decide until I've looked at all the readily available information.
26) My friends tell me that I often question things that I see or hear.
27) I frequently question things that I see or hear.
28) I tend to immediately accept what other people tell me.
29) I often accept other people's explanations without further thought.
30) I usually accept things I see, read or hear at face value.

Appendix 2. Correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
State (1)	1.00														
Useful (2)	-0.23*	1.00													
Skeptical (3)	0.19*	-0.11	1.00												
Trust (4)	-0.35*	0.39*	-0.05	1.00											
Search for knowledge (5)	-0.01	-0.14*	-0.12	-0.01	1.00										
Susp. of judgement (6)	0.03	0.18*	0.04	0.16*	0.00	1.00									
Self-determining (7)	0.06	-0.01	0.11	-0.02	-0.01	0.01	1.00								
Questioning mind (8)	0.13	0.16*	0.02	0.03	0.01	0.00	-0.01	1.00							
Listed (9)	0.14*	0.10	-0.23*	-0.12	-0.03	0.13	-0.07	0.18*	1.00						
Experience (10)	-0.05	-0.08	0.19*	0.05	-0.22*	-0.10	-0.05	-0.06	-0.23*	1.00					
Long-term (11)	0.00	0.10	-0.21*	-0.01	0.10	0.29*	-0.02	0.08	0.23*	-0.39*	1.00				
KHT (12)	0.07	0.01	-0.16*	-0.13	0.02	0.16*	-0.10	0.03	0.46*	-0.06	0.19*	1.00			
Age (13)	-0.02	-0.14*	0.28*	0.05	-0.17*	-0.12	0.02	-0.08	-0.46*	0.87*	-0.40*	-0.26*	1.00		
Big4 (14)	0.02	0.02	-0.26*	-0.14*	0.14*	0.06	-0.04	0.05	0.48*	-0.24*	0.11	0.41*	-0.43*	1.00	
Gender (15)	0.07	-0.04	-0.10	0.00	0.09	0.19*	-0.03	-0.10	0.03	-0.07	0.14*	0.06	-0.06	0.28*	1.00
Senior (16)	0.04	-0.03	0.08	-0.04	-0.16*	0.03	-0.08	0.03	0.02	0.14*	0.15*	0.13*	0.06	-0.09	0.02

Statistical significance: * p-value < 0.05.

Appendix 3. Structural equation model estimates.

Path	Coef.	S.E.	p-value
Dependent variable*: State*			
Self-determining → State	-0.057	0.065	0.380
Suspension of Judgement → State	0.083	0.062	0.182
Search for Knowledge → State	0.132	0.067	0.047
Questioning Mind → State	0.059	0.064	0.360
Listed → State	-0.132	0.170	0.439
Log(Experience) → State	-0.218	0.189	0.247
Longterm# → State	-0.183	0.074	0.013
KHT → State	-0.026	0.152	0.864
Log(AGE) → State	0.919	0.544	0.091
Big4 → State	-0.248	0.188	0.185
Gender → State	-0.117	0.158	0.461
Senior→ State	0.218	0.144	0.130
Constant	-2.957	1.744	0.090
Dependent variable*: Useful*			
Self-determining → Useful	0.008	0.068	0.903
Suspension of Judgement → Useful	-0.028	0.065	0.669
Search for Knowledge → Useful	0.196	0.069	0.005
Questioning Mind → Useful	0.061	0.066	0.361
Listed → Useful	-0.243	0.176	0.168
Log(Experience) → Useful	0.354	0.196	0.071
Longterm# → Useful	-0.023	0.077	0.763
KHT → Useful	-0.220	0.157	0.162
Log(AGE) → Useful	-1.019	0.564	0.071
Big4 → Useful	-0.279	0.195	0.152
Gender → Useful	0.039	0.164	0.812
Senior→ Useful	-0.114	0.149	0.444
Listed → Useful	3.362	1.810	0.063
Constant	-0.243	0.176	0.168
Dependent variable*: Skeptical*			
State → Skeptical	0.180	0.066	0.006
Useful → Skeptical	-0.343	0.064	0.000
Self-determining → Skeptical	0.014	0.064	0.826
Suspension of Judgement → Skeptical	0.036	0.061	0.554
Search for Knowledge → Skeptical	0.045	0.067	0.507
Questioning Mind → Skeptical	0.123	0.063	0.050
Listed → Skeptical	0.399	0.167	0.017
Log(Experience) → Skeptical	-0.242	0.183	0.186
Longterm# → Skeptical	-0.061	0.072	0.399
KHT → Skeptical	0.074	0.148	0.618
Log(AGE) → Skeptical	0.558	0.535	0.297
Big4 → Skeptical	-0.236	0.184	0.200
Gender → Skeptical	0.274	0.155	0.076
Constant	-1.728	1.711	0.312
Dependent variable*: Trust*			
State → Trust	-0.076	0.064	0.239
Useful → Trust	0.370	0.062	0.000
Self-determining → Trust	-0.159	0.062	0.010
Suspension of Judgement → Trust	0.010	0.059	0.870
Search for Knowledge → Trust	0.123	0.065	0.059
Questioning Mind → Trust	0.132	0.061	0.031
Listed → Trust	0.038	0.163	0.815
Log(Experience) → Trust	0.092	0.178	0.608
Longterm# → Trust	0.021	0.070	0.759
KHT → Trust	-0.075	0.144	0.604
Log(AGE) → Trust	-0.629	0.520	0.227
Big4 → Trust	0.049	0.179	0.785
Gender → Trust	-0.150	0.150	0.318
Constant	2.243	1.663	0.178
Model fit statistics			
$\chi 2$	3.49		0.322
RMSEA	0.027		
CFI	0.996		
TLI	0.929		
Coefficient of determination	0.36		

Notes: #Standardized variable (Mean = 0, SD = 1).