

Psychological capital intervening effect on individual competency and educator accountants' research performance in Surabaya

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ABSTRACT

This research aimed to discover the effects of knowledge, skill, and attitude on educator accountants' research performance with psychological capital as an intervening variable. The Research object was educator accountants with their full-time status at both public and private higher education in Surabaya. The sample was taken by means of purposive sampling and it gained 167 employees. The data were analyzed using Structural Equation Modeling (SEM). The result shows that: (1) knowledge, skill, and attitude significantly affect educator accountants' performance in Surabaya. (2) Psychological capital within educator accountants also significantly intervenes in the relationship between skill and attitude on educator accountants' performance in Surabaya. However, psychological capital does not intervene relationship between knowledge on educator accountants' performance in Surabaya.

ABSTRAK

Penelitian ini bertujuan untuk menemukan pengaruh pengetahuan, keterampilan, dan sikap pada kinerja penelitian akuntan pendidik dengan modal psikologis sebagai variabel intervening. Objek penelitian adalah akuntan pendidik dengan status penuh waktu di pendidikan tinggi negeri dan swasta di Surabaya. Sampel diambil dengan cara purposive sampling dan diperoleh 167 karyawan. Data dianalisis menggunakan Structural Equation Modeling (SEM). Hasil penelitian menunjukkan bahwa: (1) pengetahuan, keterampilan, dan sikap secara signifikan memengaruhi kinerja akuntan pendidik di Surabaya. (2) Modal psikologis dalam akuntan pendidik juga secara signifikan melakukan intervensi dalam hubungan antara keterampilan dan sikap terhadap kinerja akuntan pendidik di Surabaya. Namun, modal psikologis tidak mengintervensi hubungan antara pengetahuan tentang kinerja akuntan pendidik di Surabaya.

1. INTRODUCTION

Several publications in international journals have provided evidence concerning the effects on academic reputation either at national or at the international level. For example, Scopus indexed journal currently becomes one of the accredited international journal publication references. Nowadays, it has been a topic for discussion in the Indonesian education domain. One of the global higher education ranking appraisals carried out by The QS World University Ranking is based on the number of scientific article publications that

higher education has got in the Scopus indexed journal. It should also be indicated by the number of citations taken from the faculties' research in their higher education. Therefore, more number of publications in Scopus indexed journal is expected. The number of scientific papers cited in order to increase the higher education rank (Amias & Segumpan 2018).

According to the data taken from Scimago Institutions Rankings accessed through www.scimagoir.com, website ranks the universities based on the total number of published

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documents based on the Scopus database. The list of higher education ranking with the most journal publication, for example in Indonesia in 2018 was as follows: (1) University of Diponegoro; (2) University of Indonesia; (3) University of North Sumatera; (4) Bandung Institute of Technology; (5) University of Gajah Mada; (6) University of Sebelas Maret; (7) Bogor Agricultural Institute; (8) Tenth of November Institute; (9) University of Udayana; and (10) University of Telkom.

The total number of publications in Indonesia is still low compared to other universities in the cities outside Surabaya. No university in Surabaya occupies the top 10- publication. For example, University of Airlangga is the best higher education that occupies at the 12th rank. Research in accounting discipline compared to other disciplines in Surabaya is also categorized low. Research on economic science especially in accounting science also remains categorized low.

The data obtained from Ministry of research, Technology, and Higher Education (2018) provided evidence that 5 science disciplines with the most productive research were: (1) Engineering (15.14%); (2) Medicine (10.64%); (3) Computer Science (10.2%); (4) Agricultural and Biological Science (9.57%); (5) Physics and Astronomy (5.39%). Research in accounting discipline did not occupy the top 10-science discipline with the most research in Surabaya. Yet, accounting research only accounted for 2.57% from the total research they conducted.

The Ministry of Research, Technology and Higher Education announced the quality rank and the total publication of public and private universities in Surabaya for 2018 with the following result: Rank 1 is occupied by University of Airlangga with the score of 2.3; Rank 2 is Petra Christian University with the score of 1.7; Rank 3 the State University of Surabaya and Widya Mandala Catholic University with the score of 1.3; Rank 4 University of Surabaya with the score of 1.2; Rank 5 University of Ciputra with the score of 0.9; Rank 5 University of Narotama, University of PGRI Adi Buana and STIE Perbanas Surabaya with the score of 0.8; Rank 7 STIESIA Surabaya, University of 17th August of Surabaya, and Rank 8 University of Bhayangkara with the score of 0.4; Rank 9 UPN (State University) Surabaya, East Java with 0.1 score (www.ristekdikti.go.id).

Act Number 14 Year 2005 requires educator accountants in Indonesia to obtain minimum education of post-graduate (S2), which means every educator accountant has similar educational background. The total research differences between accounting lecturerd in higher education in Surabaya could be explained through individual competition effect explained by Spencer & Spencer (1993).

Individual competency is gained through a combination of knowledge and skill, and attitude that could affect individual work achievement and performance to increase. Knowledge refers to information and learning product possessed by individual utilized to perform task. Skill is individual attitude related to task implementation that could be mastered through learning. It can be improved through training, and attitude is individual behavior realization in implementing task provided according to prevailing regulations (Spencer & Spencer 1993).

The higher individual employee knowledge, skill, and attitude, the higher such employee performance would be. Individual with more knowledge and skill would be even skilled in conducting certain job and this shall increase their performance. This argument is in line with a tsudy done by Amias & Segumpan (2018), Chen (2014), (2016), Hakim (2015), Xu & Ye (2014), Roeleejanto (2015), Zaim et al. (2013), Nisak (2015), Sujana (2012), Setiawati (2009), and Yanuardi (2013). However, a study done by Kolibacova (2014) and Septiyani and Sanny (2013) found that knowledge, skill, and attitude owned by the employees did not affect on their job performance.

The results of a study concerning knowledge, skill, and attitude affect inconsistently the individual performance. It was indicated also by other variables that indirectly affect. One of the variables that can intervene the relationship between individual competency and job performance is psychological capital. This is based on the study done by Luthans (2016), Damayanti (2015), Saithong-in &Ussahawanitchakit (2016), Roopa & Blaskovich (2012), and Klassen&Tze (2014). Yet, a study conducted by Durrahet *at al* (2016) on the employees working at University of Philadelphia indicate suggests that self-efficacy, hope, and resilience provided effect on job performance. Meanwhile, the optimist did not provide effect on job performance. This variable indirectly affects knowledge, skill, and attitude which is psychological capital.

Psychological capital that subsequently referred to as psychap has 4 of the following categories: self-efficacy, optimism, hope, and resiliency. Self-efficacy is the employee's self-confidence sense that they must be able to motivate themselves to succeed in implementing their tasks. The optimism is individual ability to remain persistence in implementing their task. They have, having positive motion concerning current and future hope is individual persistence to focus to attain objective successively, and resiliency is individual ability to adapt in facing difficulties or problems within their job and seek for completing a given task in the middle of the problems (Luthans, 2007).

Educator accountant with high knowledge, skill and attitude supported by positive psychology able to improve motivation in implementing research, emerging research ideas, and should obstacle found within research process then educator accountant shall not hopeless that eventually could improve number of research. Several previous researches indicated that psychological capital could intervene individual performance amongst them Koperski (2017), Gupta (2014), Roopa & Blaskovich (2012), and Gupta & Singh (2014).

2. THEORETICAL FRAMEWORK AND HYPOTHESIS

Individual Competency

Competency is indicated by individual knowledge, skill, and attitude for facing various problems when implementing their task and responsibility. In this case, the individual competency has reciprocal relationship with their performance at work place. Several factors that could affect individual competency are their knowledge, skill, and attitude (Spenser & Spenser 1993).

Knowledge

Spenser & Spenser (1993), Xu & Ye (2013), and Septiani & Sunny (2013) explained that individual knowledge appraisal comprised of three competencies such as analytical thinking (AT), conceptual thinking (CT), technical/professional/managerial expertise (EXP). Therefore, the factors concern the definition of AT, conceptual thinking (CT), technical/professional/managerial expertise (EXP) presented below.

Skill

Skill defined as individual ability to perform

certain job. Skill could be mastered by individual through learning and could be improved through learning process (Spenser, 1993).

Attitude

According to Nur'aeni (2011), Spenser & Spenser (1993), Xu & Ye (2013), Zaimet *al.* (2013), and Roeleejanto (2015), attitude is individual behavior in performing job based on prevailing regulations. Attitude also defined as individual ability to perform task, self-control ability to remain calm under pressure, and also individual ability in conflict management. Attitude appraisal comprised of self-control, self-confident, and flexibility competencies.

Psychological Capital

Psychological capital concept has characteristics that individual should possess specifically the following positive emotion and energy: (1) hope or diligently hoping attitude that certain effort would certainly succeed, (2) self-efficacy or confidence, self-confidence attitude that individual could complete the given task and problems they encounter, (3) resiliency, never give up or steadfast in facing problems that such individual could succeed in solving problems, and (4) optimism, individual attitude with high hope concerning current and future succeed (Luthans, 2005; Luthans *et al.*, 2016; and Gupta & Singh, 2014).

Research Performance

The Regulation issued by the Minister of Administrative and Bureaucratic Reform (*Permen PAN-RB*) Number 17 Year 2013 stated that scientific work publication either on national accredited journal or at accredited international journal is integrated part of three pillars of higher education. Scientific work publication on national and international journal also required as academic position promotion. Several activities appraised as certain lecturer research pillars are as follow: (1) doing research or thought manifested in form of book; (2) Making research published on accredited international journal; (3) doing research published on unaccredited international journal; (4) doing research published on accredited national journal; (5) doing research published on unaccredited national journal; (6) doing research published on international seminar; (7) doing research published on national seminar; (8) doing research published on international seminar in form of poster; (9) doing research published

on national seminar in form of poster; (10) doing research or thought product published in form of newspaper or magazine; (11) doing unpublished research (stored in higher education library).

Hypothesis Formulation

H1: Psychological capital intervene the effect of knowledge on research performance of educator accountant.

H2: Psychological capital intervene the effect of skill on research performance of educator accountant.

H3: Psychological capital intervene the effect of attitude on research performance of educator accountant.

3. RESEARCH METHOD

This research is quantitative using Structural Equation Modeling (SEM) analysis with Partial Least Square (PLS), WARS PLS version 6.0 software.

Variables Identification

This study includes some variables such as the independent variables that are knowledge (PG), skill (KT), and attitude (PR) and the dependent variable is accountant research performance (KPA). Besides that, this study also includes the intervening variables such as psychological capital (PCP) comprised of hope (HR), self-confidence (PD), self-endurance (KD), and optimism (OP). This can be clearly presented on Figure 1 in the appendix concerning the conceptual framework.

Population and Sample

The research population consists of 215 educator accountants working in public and private universities in Surabaya with their full time employment status. However, there were 167 people taken as the research sample. The data were collected by using questionnaire with the questions in 1-4 Likert scale.

Analysis Technique

Outer model evaluation was carried out by testing the validity and reliability as well. Validity testing comprised of convergent validity and discriminant validity testing.

Outer Model Evaluation

Convergent Validity Test

There are two conditions that certain variables deemed valid according to convergent validity. Such conditions are that loading factor value higher than 0.4 and Average Variance Extracted (AVE) value > 0.5 . These two conditions must

be fulfilled. The indicator with loading factor value below the condition must be dropped out from the model and subsequently retested. It is the rule of thumb commonly used to perform initial examination from minimum factor matrices that is 0.40 and if above 0.50 it shall be deemed practically significant.

AVE value must be higher than 0.5, otherwise treatment shall be conducted on that variable by eliminating variable indicators with the lowest loading factor, to be subsequently retested until AVE value higher than 0.5. When certain indicator has AVE value below 0.5 but loading factor value higher than 0.7, then such indicator is invalid according to convergent validity appraisal. In other words, according to convergent validity certain variable must have minimum loading factor higher than 0.4 and AVE value above 0.5 to be deemed valid (Abdilah & Jogiyanto, 2015:96).

Discriminant Validity

According to Ghazali (2006:25), discriminant validity appraisal could be conducted through square root of average variance extracted (AVE square root) value on each construct with correlation between one construct and another within model constructed. Should AVE square root value of each construct higher than correlation value between one construct and another within model, then this model has good discriminant validity value or valid according to discriminant validity.

Reliability Test

When a variable composite reliability value is above 0.80 and AVE value 0.50 then such variable deemed to have good reliability (Ghozali, 2006:151; Ghazali, 2015:90), meanwhile according to Abdillah and Jogiyanto (2015:196) good reliability occur when certain variable have composite reliability value higher than 0.70 (> 0.70), though 0.6 still deemed acceptable.

Judging Structural Model or Inner Model

Structural model judged through p value observation, hypothesis acceptance occur when p value lower than 0.05 ($p \text{ value} < 0.05$), and hypothesis rejection occur when p value higher than 0.05 ($p \text{ value} > 0.05$).

Intervening Testing Stages

According Hair *et al.* (2013) and Preacher & Hayes (2004), Sholihin & Ratmono (2013:81-83) stated that intervening effect testing carried out with the following approach:

First Testing (Direct Effect)

Testing primary effect, independent effect on dependent without intervening variable (X on Y) must be significant, otherwise intervening effect testing could not be carried out. Significance judgment made according to p value, if p value lower than 0.01 (p value < 0.01) then it is significant.

Second Testing (Indirect Effect)

The test of indirect effect is the test which is specifically when intervening variable inserted into model. This test was carried out to discover independent variable effect on intervening variable and intervening variable on dependent must be significant (p value < 0.01). Thus, when this indirect effect testing producing significant result, it indicates that intervening variable could lessen direct effect carried out on first testing. Next is the subsequent step that would be Variance Accounted For (VAF) calculation.

Variance Accounted For (VAF) Calculation

VAF is defined as extent to which intervening variable could eliminate direct effect on first testing. Figure 2 (see Appendix) is the intervening model illustration using VAF method.

Based on Figure 1 (Appendix), the first step is calculating P13 direct effect, second step is calculating indirect effect of $P12 * P23$, and the last step is calculating total effect or addition of direct effect and indirect effect ($P13 + (P12 * P23)$). VAF value originated from indirect effect value divided by total effect ($P12 * P23$) / ($P12 * P23 + P13$). VAF value determination is as follow: (1) VAF above 80% ($VAF > 80\%$) means Y2 as full mediation variable; (2) VAF between 20% - 80% ($VAF > 80\%$) means Y2 as partial mediation variable; and (3) VAF below 20% ($VAF > 20\%$) means Y2 does not mediate (Hair et al., 2013; Sholihin & Ratmono, 2013:82).

4. DATA ANALYSIS AND DISCUSSION

Respondent Demographic Description

As presented on Table 1, (Appendix), it can be indicated that most respondents in this research are female. They are as follows: 92 females (55%) and 75 males (45%). Also from Table 1 (Appendix), most respondents have master degree (S2) educational background with total of 131 people (78%), followed by doctors (S3) with total of 35 people (21%) and 1 people (1%) of bachelor degree. In other words majority of respondents in this research have magister educational background, followed by doctor and bachelor.

Research respondents' academic position majority, on Table 1 (Appendix) is lecturers with total of 72 people (43%), 44 people (26%) with lector position, associate professor (50 people or 30%), and 1 people (1%) with professor position. Still on Table 1, it also indicates that majority of the respondents have been married (151 people or 90%). Only 10% (16 people) are unmarried.

Research Respondent Knowledge General Description

The majority of educator accountants that become the research respondents have knowledge level in high or good category with total of 107 respondents or 64% in percentage. Second rank is occupied by respondent with very high or very good category with total of 51 respondents or 31%. Yet, 9 respondents or 5% have knowledge in low or not good category and it is occupied third rank. Finally, no respondent who is either very low or very not good category in terms of knowledge.

Respondents' Skill General Description

The majority of educator accountants that become research respondents have skill level in high or good category with total of 115 respondents or 69% in percentage. Second rank is occupied by respondent with very high or very good category with total of 34 respondents or 20%. Yet, 13 respondents or 8% have skill in low or not good category and occupied third rank. Respondents with very low or very not good category occupied the last rank with total of 5 people or 3% in percentage.

Respondent Attitude General Description

The majority have attitude level of high or good category with total of 98 respondents or 59% in percentage. Second rank is occupied by respondent with very high or very good category with total of 64 respondents or 38%. Meanwhile 4 respondents or 2% had skill in low or not good category and occupied third rank. Respondent with very low or very not good category occupied the last rank with total of 4 people or 2% in percentage.

Psychological Capital General Description

The majority have psychological capital level of high or good category with total of 141 respondents or 84% in percentage. Second rank of psychological level is occupied by respondent with very high or very good category with total of 22 respondents or 13%. However, 4 respondents or 2% had psychological capital

in low or not good category and occupied third rank. Respondent with very low or very not good category occupied the last rank with total of 4 people or 2% in percentage. Finally, it was found no respondent with either very low or very not good category in terms of psychological capital.

It could be concluded that psychological capital description of educator accountant that became respondent within this research distributed into various category but, most of their psychological capital is of high category.

Performance Level General Description

The majority have performance level of being low or not good category with total of 76 respondents or 46% in percentage. Second rank is occupied by respondent with high or good category with total of 47 respondents or 28%. However, 43 respondents or 26% had research performance level in very low or very not good category and occupied third rank. Respondent with very high or very good category occupied the last rank with total of 1 people or 1% in percentage.

Results of the Data Analysis

Outer Model Evaluation

Knowledge (PG)

Convergent Validity Test

The values of loading factors for knowledge variable (PG) indicators from BAS, KIM, KSM, KIK, KMM, MTP, PTBK and KBJP are 0.420, 0.481, 0.557, 0.308, 0.605, 0.708, 0.676, and 0.677 respectively. AVE variable value is 0.324 or below 0.5 ($0.324 < 0.5$) (refer to Table 2 of Appendix). In order to make knowledge (PG) factor become valid, a treatment was conducted by eliminating variable indicator with loading factor lower than 0.4 specifically by eliminating KIK indicator, for subsequently re-tested to obtain AVE value higher than 0.5

Upon retesting, knowledge variable (PG) indicator loading factors for KIM, KSM, KMM, MTP, PTBK and KBJP are 0.723, 0.789, 0.779, 0.725, 0.763, 0.732 and 0.743 respectively, with AVE variable value of 0.564 (refer to table 3 of appendix). Loading factor (LF) value for knowledge (PG) variables from BAS indicator through KBJP indicator were all higher than 0.4 ($LF > 0.4$) and AVE value higher than 0.5 ($0.564 > 0.5$) therefore it could be said that knowledge variable (PG) was valid according to convergent validity.

Discriminate Validity Test

Discriminate validity judgment was carried out

by comparing each AVE square root, if AVE square root value higher than correlation value between construct, then such variable meet discriminate validity requirement (Ghozali & Latan, 2015:77 and 96; Abdillah & Jogyanto, 2015:195). Knowledge variable discriminate validity output result presented on table 4 (appendix).

Knowledge variable (PG) had AVE square value of 0.676. This variable had the highest value compared to its construct value. AVE square value formed diagonal that could be observed on table 4.8 which each value was the highest amongst its construct, that this variable was valid according to discriminat validity judgment.

Reliability Test

Knowledge variable reliability test was carried out using composite reliability value. Composite reliability value is higher than 0.7 (composite reliability > 0.7) indicating a valid variable. Reliability test result could be seen on table 5 (appendix). According to table 5 knowledge variable had composite reliability of 0.787 ($0.787 > 0.7$). Therefore, knowledge variable (PG) was valid and reliable, and ready to be inner model tested.

Skill (KT)

Convergent Validity Test

Loading factor value of skill variable (KT) indicators of KGSP, PCSJ, IPTPMPL, KIPL, and KKPL were 0.723, 0.789, 0.734, 0.817, 0.763, 0.738 respectively, meanwhile AVE value for this variable was 0.598 that were presented on table 6 (appendix). These variable indicators had entire loading factor (LF) value from KGSP through KKPL higher than 0.4 ($LF > 0.4$) and AVE higher than 0.5 ($0.598 > 0.5$). Therefore, it could be said that skill (KT) variable was valid according to convergent validity.

Discriminate Validity Test

Table 4 (Appendix) indicates that skill variable (KT) had AVE square value of 0.707 which means the highest compared to its construct values ($0.707 > 0.610, 0.545, 0.519, 0.602$). Therefore skill variable (KT) in this research was valid according to discriminate validity judgment.

Reliability Test

Table 5 (appendix) indicates that skill variable (KT) had AVE square value of 0.853. This composite reliability value of skill variable (KT) was higher than 0.7 ($0.853 > 0.7$), indicating

a reliable variable. Therefore, skill variable (KT) was valid and reliable, and ready to be inner model tested.

Attitude (PR)

Convergent Validity Test

Loading factor value of attitude variable (PR) indicators of KME, KBP, BEE, KMP and MKS were 0.742, 0.816, 0.715, 0.861, and 0.738 respectively. Meanwhile, AVE value for this variable was 0.578 that were presented on table 7 (appendix). These variable indicators had entire loading factor (LF) value from KME through KMS higher than 0.4 ($LF > 0.4$) and AVE higher than 0.5 ($0.578 > 0.5$). Therefore, it could be said that attitude variable (PR) was valid according to convergent validity.

Discriminate Validity Test

Table 4 (appendix) indicates that attitude variable (PR) had the highest value compared to its construct values ($0.707 > 0.632, 0.545, 0.472, 0.602$). As attitude variable (PR) had the highest AVE square value amongst its construct, then attitude variable (PR) in this research was valid according to discriminate validity judgment.

Reliability Test

Table 5 (Appendix) indicates that attitude variable (PR) had composite reliability value of 0.871. This composite reliability value of attitude variable (PR) was higher than 0.7 ($0.871 > 0.7$), indicating a reliable variable. Therefore, attitude variable (PR) was valid and reliable, and ready to be inner model tested.

Psychological Capital (PCP)

Convergent Validity Test

Loading factor value of psychological capital variable (PCP) is presented on table 8 (appendix). Hope variable (HR) had variable indicators of PMAS, CPTWS, MSMP, SPKP, SMTP, and MTKP with loading factor value of 0.549, 0.582, 0.625, 0.581, 0.615, and 0.515 respectively. These six loading factor values of hope variable (HR) all have value higher than 0.4 that already has fulfilled one of judgment requirement specifically loading factor value must be at least higher than 0.4 ($lf < 0.4$).

Self-endurance variable (KD) had six question indicators of KMH, CBG, MMS, BMP, MDPG, and KPIM with loading factor value of 0.768, 0.781, 0.715, 0.744, 0.781, and 0.768 respectively. These six loading factor values of self-endurance variable (HR) entirely had value higher than 0.4 that already fulfilled one of judgment requirement specifically loading

factor value must be at least higher than 0.4 ($lf < 0.4$).

Self-confidence variable (PD) had six question indicators of SMJP, MWPG, KIIP, SPST, KSTP, and MTKP with loading factor value of 0.581, 0.553, 0.678, 0.713, 0.658, and 0.678 respectively. These six loading factor values of self-confidence variable (HR) entirely had value higher than 0.4 that already fulfilled one of judgment requirement specifically loading factor value must be at least higher than 0.4 ($lf < 0.4$).

Optimist variable (OP) also had six question indicators of OMBP, OPB, OKAH, BPAS, ODMP, and MPTS with loading factor value of 0.715, 0.760, 0.691, 0.669, 0.555, and 0.058 respectively. These five loading factor values of optimist variable (HR) from OMBP through ODMP had value higher than 0.4 that already fulfilled one of judgment requirement specifically loading factor value must be at least higher than 0.4 ($lf < 0.4$). Meanwhile one of indicator, MPTS had loading factor 0.058 or lower than 0.4 ($0.058 < 0.4$) therefore MPTS value became invalid.

Next step would be observing Average Variances Extracted (AVE) value. Psychological capital variable (PCP) has AVE value of 0.408 or below 0.5 ($0.408 < 0.5$). In order to elevate AVE into above 0.5 treatment carried out by eliminating PCP variable indicator with lowest value. In this case, MPTS from optimist variable (OP) was eliminated to be subsequently re-tested. Loading factor value result of psychological capital's each variable indicator on second testing presented on Table 9 (Appendix).

Table 9 (Appendix) indicates that loading factor value of hope variable (HR) that comprised of KMH, CBG, MMS, BMP, MDPG, and KPIM, had loading factor value of 0.768, 0.781, 0.715, 0.744, 0.781, and 0.768 respectively. These six loading factor values of hope variable (HR) entirely had value higher than 0.4 that already fulfilled one of judgment requirement specifically loading factor value must be at least higher than 0.4 ($lf < 0.4$).

Self-confidence variable (PD) according to table 9 (appendix) that comprised of SMJP, MWPG, KIIP, SPST, and KSTP, had loading factor value of 0.780, 0.753, 0.778, 0.713, 0.759, and 0.778 respectively. These six loading factor values of self-confidence variable (HR) entirely had value higher than 0.4 that already fulfilled one of judgment requirement specifically loading factor value must be at least higher

than 0.4 ($lf < 0.4$).

Optimist variable (OP) according to table 9 (appendix) that comprised of OMBP, OPB, OKAH, BPAS, ODMP, and MPTS, had loading factor value of 0.715, 0.760, 0.791, 0.769, and 0.756 respectively. These five loading factor values of optimist variable (HR) from OMBP through ODMP all have value higher than 0.4 that has already fulfilled one of judgment requirement specifically loading factor value must be at least higher than 0.4 ($lf < 0.4$).

Psychological capital variable (PCP) had AVE value of 0.526 or higher than 0.5 ($0.526 > 0.5$). Entire loading factor values of psychological capital variable (PCP) indicators were higher than 0.4 ($lf > 0.4$) with AVE value higher than 0.5 ($AVE > 0.5$) as well. Therefore, it could be concluded that psychological capital (PCP) judgment had fulfilled requirements to be declared valid according to convergent validity.

Discriminate Validity Test

AVE square value of psychological capital variable (PCP) has the highest value compared to its construct values ($0.820 > 0.639, 0.602, 0.652, 0.590$ (refer to Table 4 of appendix). AVE square value formed diagonal that could be observed on table 4.17 which each value was the highest amongst its construct, that psychological capital variable (PCP) in this research was valid according to discriminate validity judgment.

Reliability Test

Table 5 (Appendix) indicates that psychological capital variable (PCP) has composite reliability value of 0.942. This composite reliability value of psychological capital variable (PCP) was higher than 0.7 ($0.942 > 0.7$), indicating a reliable variable. Therefore, psychological capital variable (PCP) was valid and reliable, and ready to be inner model tested.

Research Performance

Convergent Validity Test

Loading factor values for variable indicators of BK, JIA, JITA, JNA, JNTA, PSSI, PSSN, PTSI, PTSN, PKM, and PTP are 0.767, 0.756, 0.741, 0.744, 0.730, 0.731, 0.780, 0.719, 0.782, 0.725, and 0.754 respectively that could be seen on table 10 (appendix). These loading factor values of Educator accountant research performance variable (KPA) from BK through PTP all have value higher than 0.4 that already fulfilled one of judgment requirement specifically loading factor value must be at least higher than 0.4 (lf

< 0.4).

Their research performance variables of (KPA) has AVE value of 0.544 or higher than 0.5 ($0.544 > 0.5$). The entire loading factor values of educator accountant research performance (KPA) variable indicators were higher than 0.4 ($lf > 0.4$) with AVE value higher than 0.5 ($AVE > 0.5$) as well. Therefore, it could be concluded that educator accountant research performance (KPA) judgment has fulfilled requirements to be declared valid according to convergent validity.

Discriminate Validity Test

AVE square value of educator accountant research performance variable (KPA) has the highest value compared to its construct values ($0.676 > 0.587, 0.519, 0.472, 0.590$). AVE square value formed diagonal that could be observed on table 4.20 which each value was the highest amongst its construct, that educator accountant research performance (KPA) variable in this research was valid according to discriminate validity judgment.

Reliability Test

Table 5 (appendix) indicates that educator accountant research performance variable (KPA) has composite reliability value of 0.851 or higher than 0.7 ($0.851 > 0.7$), indicating a reliable variable. Therefore, it could be concluded that educator accountant research performance (KPA) variable was valid and reliable, and ready to be inner model tested.

Measurement Model (Inner Model) Evaluation Structural model within PLS was evaluated by observing R2 value. R2 used to measure independent variable effect change on dependent variable. This research had R2 value of 0.88, which means independent variable effect size of knowledge (PG), skill (KT), and attitude (PR) and intervening variable of psychological capital (PCP) on dependent variable of educator accountant research performance (KPA) was 88%. Meanwhile the remaining 12% explained by other variable outside model being used in this research.

Independent variable change effect size of knowledge (PG), skill (KT), and attitude (PR) on intervening variable of educator accountant research performance (KPA) was 77%. Meanwhile the remaining 23% explained by other variable outside model being used in this research, that evidenced from R2 value of 0.77.

Hypothesis Test Result

Psychological Capital Intervenes for H1

Hair *et al.* (2013), Preacher and Hayes (2014), and Sholihin and Ratmono (2013) stated that VAF value below 20% ($VAF < 20\%$) indicates no intervening effect, VAF value between 20% through 80% ($20\% \leq VAF \leq 80\%$) indicates partial intervening effect, and full intervene indicated by VAF above 80% ($VAF > 80\%$).

The direct effect that is the effect of knowledge on educator accountant research performance is 0.61 while the indirect effect is 0.0234. The total effect value is 0.6334 and, therefore, VAF is 0.0369. VAF value of 3.69% or below 20% ($3.69\% < 20\%$) is said to indicate that there is no intervening effect. Therefore, hypothesis stating that psychological capital (PCP) intervenes relationship between knowledge (PG) on educator accountant performance (KPA) is rejected.

Psychological Capital (PCP) for H2

The direct effect of skill on educator accountant research performance is 0.16, while the indirect effect of skill, psychological capital effects on educator accountant performance was 0.0416, total effect value is 0.2016. Therefore, VAF value is 0.21. VAF value is 21% or higher 20% ($21\% < 20\%$) indicating partial intervening effect. Therefore, hypothesis stating that psychological capital (PCP) intervenes relationship between skill (KT) on educator accountant performance (KPA) is accepted.

Psychological Capital (PCP) for H3

The direct effect specifically of attitude variable (PR) on educator accountant research performance variable (KPA) is significant (p value < 0.01). The indirect effect of attitude, psychological capital effects on educator accountant performance is 0.1742, with the total effect value of 0.4742. Therefore, VAF value is 0.37 and this VAF value is 37% or higher 20% ($37\% < 20\%$) indicating partial intervening effect. This can provide evidence that hypothesis stating that psychological capital (PCP) intervenes relationship between attitude (PR) on educator accountant performance (KPA) is accepted.

Beta value of knowledge variable (PG) on educator accountant research performance (KPA) is 0.61, skill variable (KT) on educator accountant research performance (KPA) is 0.16, attitude variable (PR) on educator accountant research performance (KPA) is 0.30, and psychological capital (PCP) on educator

accountant research performance (KPA) is 0.26. Beta value of knowledge variable (PG) on educator accountant research performance (KPA) is the highest between skill variable (KT), attitude variable (PR), and psychological capital (PCP) which means that knowledge variable (PG) has the most dominant effect on educator accountant research performance in Surabaya.

Variance Accounted For (VAF) value of knowledge variable (PG) is 0.0369, VAF for skill variable (KT) was 0.21, VAF for attitude variable (PR) is 0.37. Attitude variable (PR) has the highest VAF amongst knowledge variable (PG) and skill variable (KT) indicating that psychological capital provided the highest intervening effect on relationship between attitude on educator accountant performance in Surabaya.

Discussion

Psychological Capital (PCP) towards knowledge (PG) and educator accountant research performance (KPA)

Statistical test result of this research indicates that psychological capital (PCP) indirectly does not intervene relationship between knowledge on educator accountant research performance, evidenced with p value 0.12 ($p > 0.01$).

Educator accountant knowledge variable could directly affect educator accountant research performance. Educator accountant knowledge could be utilized to analyze, identify, and solve problems fast and precisely. Individual with knowledge shall would have creative ideas, and comprehend job-related theories. Knowledgeable educator accountant have high motivation to perform science transfer through research (Spenser and Spenser 1993).

According to Spencer and Spencer (1993), educator accountants with knowledge would be able to think analytically able to detail and outline certain problem into smaller parts to be subsequently connected into unity. Measurable individual analytical thinking assessment is ability to identify problem and ability to solve problems fast and precisely. Knowledgeable educator accountant have numerous creative ideas that simplify research making, that support in improving educator accountant research performance in Surabaya.

Psychological Capital (PCP) towards skill (KT) and educator accountant research performance (KPA)

Statistical test result of this research indicated that psychological capital (PCP) indirectly able to intervene relationship between knowledge on educator accountant research performance, evidenced with p value 0.01 ($p = 0.01$). Educator accountants with initiative skill, specifically skill owned by educator accountant in performing research without having to wait for super ordinate order, initiative in performing job without order could make job fast completed and lessen risk of problems on later day.

Educator accountants' skill in providing assurance, influence, collaborate, can provide excellent impression on other people could also support the concerned educator accountant in completing their research as relationship with other party is certain in performing research, that influencing and collaborating skills are highly necessary. Research result indicated that skill have positive effect on performance had been carried out by Xu and Ye (2014), Xu and Ye (2014), Amias and Segumpan (2018), Blaskova et al. (2014), and Zaimet *al.* (2013).

An educator accountant with high psychological capital (PCP) would have high self-confidence and optimism characteristics. This can be manifested by having strong self-belief to succeed and successful in completing job. Individual with psychological capital would not be doubt to receive challenging job, have initiative on how solve problems, could survive in facing difficulties, and failure would make such individual raise instead of down that they could re-start their job in timely manner.

Educator accountants with initiative skill and also skill in influencing and collaborating with other party are supported with self-confidence characteristic, hope, high optimism, and never give up characteristic. All these would simplify them in implementing research pillars. Individual with high psychological capital tend to have numerous creative ideas, having high self-confidence and optimism could complete job provided to them (Luthans et al. (2007); Luthans et al. (2016); and Saithong-Ussahawanitchakit, 2016).

Creative ideas, self-confidence, optimism and never give supported with collaborating skill and influencing other party are characteristics that highly support individual in improving their job. Roopa & Blaskovich

(2012) and Agarwal & Ferndale (2017) stated that psychological capital could intervene relationship between individual skill and performance.

Psychological Capital (PCP) towards attitude (PR) and educator accountant research performance (KPA)

Statistical test result of this research indicates that psychological capital (PCP) intervenes relationship between attitude (PR) and educator accountant research performance (KPA). It is indicated by the p value of statistical test that is less than 0.01 ($p < 0.01$). This research result suggests that psychological capital could intervene educator accountants' attitude affecting their performance in Surabaya. Attitude is educator accountant ability to control their emotion in facing difficulties during research, could face challenges and rejection from other party, could prevent and control them from conducting negative action in spite of facing pressure in performing research. Educator accountants with good attitude shall be able to self-adjust, could work effectively and efficiently in every condition, could collaborate with colleagues and could also respect opinions and able to receive critique and advice provided on them. They need self-control skill, self-confidence and ability to work effectively and efficiently.

Psychological capital dimension states that individual with high psychological capital would have numerous creative ideas, self-belief that they could perform job and challenges provided on them, easily raise when encounter failure, and have high optimism that what they do today shall provide success for themselves in nowadays and in the future. Educator accountant with excellent attitude supported with high psychological capital are characteristic combination that could encourage educator accountant in improving their research performance.

This research supports the studies conducted by Koperski (2017), Roopa & Blaskovich (2012), Agarwal & Ferndale (2017), Damayanti, (2015), Saithong-in & Ussahawanitchakit (2016), dan Roopa & Blaskovich (2012), Thoet *al.*(2013), Abas& Raja (2015), Huang & Lin (2015), Gupta & Sigh (2014), Erkutlu (2014), and Kalman & Summak (2017), stating that psychological capital could intervene relationship between attitude on individual performance).

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

It can be concluded that educator accountants' research performance in Surabaya is affected by their knowledge, skill, and attitude level. Educator accountants with good knowledge, skill, and attitude could improve their research performance. Psychological capital could intervene educator accountants' performance, skill, and attitude in improving their research performance, but unable to intervene relationship between knowledge and their research performance.

There was a limited research sample used in this research. It only addressed educator accountants in Surabaya, that research result could not be generalized for much wider scale. This research also did not include educator accountants' performance differences such as working in public and private universities. It did not conduct gender and marriage status differences. Therefore, the following are recommendation for future research:

1. Adding the number of the total educator accountants as the sample in universities in East Java. It can take higher number of the total sample to make the result more generalizable.
2. Future research could make research performance comparison between public and private higher educations. It can be done by comparing research performance between female and male educator accountant.
3. Adding other variables such as family support to job (work family enrichment), academic position, functional position, education level, university grant as dependent variables. Statistic testing tools could use other model of structural equation model (SEM) such as SMART PLS, Lisrel, as well as AMOS. Different statistic testing tools are also expected to provide different result to vary research result.

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