

# GRADUATES' ACCOUNTING COMPETENCIES IN GLOBAL BUSINESS: PERCEPTIONS OF INDONESIAN PRACTITIONERS AND ACADEMICS

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## ABSTRACT

*An important consequence of ASEAN Economic Community (AEC) implementation is the ratification of mutual recognition arrangement enabling accountants in the region can work and operate in all member states. Accounting department should prepare its graduates to have competencies to deal with internationalization of accountant profession. Indonesia Chartered Accountant (IAI) has yet finished establishing accounting competency framework. The research focusing on identifying international competency of accounting seems to be very limited in number. The objective of the study is to develop international competency indicators of accounting graduates. This research employed focused group discussion and survey by asking academics and practitioners to validate accounting competencies required by graduates to work in local and international levels. This study collected data from 120 respondents comprising of 59 academics and 61 practitioners. Using ten-point-Likert scale and descriptive analysis, this study identified 44 accounting competency indicators grouping into six competency factors. There is no significant difference of academics' and practitioners' perceptions toward international competency of accounting. Accounting departments should use the accounting competency indicators for designing a curriculum, while IAI could use the indicators for establishing accounting competency framework as well as for designing accountant profession curriculum.*

**Keywords:** Accounting Competency Framework, Accounting Graduate, Accounting Competency, Lecturer Perception, Practitioner Perception.

## INTRODUCTION

Economic globalization impacts on the reduction of states' borders to do business. The inflows and outflows of goods, services, labour, and capital become more intensive as international arrangements on free trading increase. Indonesia has joined ASEAN Economic Community (AEC). In relation to the AEC implementation, eight professions have been gratified to be able to work and operate in all member states (Teowira, 2015). One of ratified professions is accountant following by the issuance of Mutual Recognition Arrangement (MRA). This document allows AEC member states to recognize the competencies of accountants from other member states (The ASEAN Secretariat, 2015).

The globalization of accountants in ASEAN region could be both opportunities and challenges for accounting professionals (Aguirre, 2015). In this case, the opportunity for Indonesian accountant to work in ASEAN countries is open even wider. Conversely, MRA could

be a serious threat for Indonesian accountant, since the graduates from other member states would also participate in domestic employment competition. Therefore, Indonesian universities and colleges should prepare their accounting graduates for competing in regional and international levels. Other member states also preparing their accounting graduate seriously to ensure their accounting graduates would be able to to participate actively in AEC. For example, Suttipun (2014) found that the preparedness of accounting students in Thailand to anticipate AEC is relatively high.

Currently, accounting departments in Indonesian colleges and universities reach the number of 617 (BAN-PT, 2017). This is one of comparative advantages as they could produce accountants to fulfil the demand from both domestic and regional markets. Nevertheless, only qualified accounting graduates would be hired by employers (Aguirre, 2015). According to Mardiasmo (2016) in 2014 the number of accounting students in Indonesia reached the number of 265,000. He also stated that among ASEAN countries, Indonesia has the highest accounting graduates reaching the number of 34,799 annually. This number constitutes 45% of accounting graduates in AEC region.

Until recently, the study aiming to identify accounting competencies required by graduates for anticipating economic globalization seems to be very limited in number. In addition, as a partner of accounting department, Indonesia Chartered Accountant (IAI) has yet completed establishing of a competency framework for accounting graduates (Utama, 2016). Therefore, the study attempts to identify competencies of accounting graduates meeting local, regional, and international standards. Once these accounting competency indicators established, universities could use them as minimum competency standards for their accounting graduates (standards of output). Universities also could use the competency standards for adjusting their educational processes and inputs.

This research has two objectives, namely:

1. Developing accounting competency indicators required by accounting graduates for dealing with regional and international businesses.
2. Validating the indicators by asking both accounting practitioners and academics.

The validation by practitioners and academics aims at identifying any possible gap between competencies prepared by academics and competencies used in real work. Accounting departments could use these identified competencies to design their accounting curriculum. IAI also could take benefits from this study at least in two respects;

1. Obtaining the information regarding the competencies should be mastered by accounting graduates.
2. Using the competency standards for designing curriculum of professional education.

## LITERATURE REVIEW

To make sure accounting graduates have the capability to perform their duties as professional accountants, they have to master excellent competencies in matching with their field of work. Indonesia has enacted the presidential regulation No. 8/2012 on Indonesian National Qualification Framework (INQF). Therefore, all study programs at higher education institutions have to use this INQF to design learning outcome of their curriculum. This framework also ranks the competencies from formal education, training, and work experience (Ditbelmawa, 2012). Therefore, any curriculum developed by accounting departments should refer to the predetermined learning output and graduate's competency standards (GCS). GCS refers to the minimum standard of graduate's qualification (Ditbelmawa, 2012).

Accounting competency is defined as the ability to perform tasks and play roles as a professional accountant (Palmer et al., 2004). Accounting departments should continuously adjust their curriculum with the graduate users' needs as well as the minimum requirements established by INQF. Bachelor graduated from accounting department should have at least three competencies, i.e. attitude, knowledge, general skills, and specific skills (Ditbelmawa, 2012). Professional associations of accountants in some developed countries have established accounting competency frameworks to become benchmarks for academics in equipping accounting graduates with competencies. AICPA (2017) established AICPA pre-certification core competency framework consisting of three competency groups i.e. accounting competency, professional competency, and business competency. The accounting competency comprises of six indicators and the professional competency consists of seven indicators, and finally, the business competency has five indicators. Likewise, Government of Singapore (2017) also launched a framework for accounting competencies.

Earlier, AICPA has also published the core accounting competency comprising of functional competency, personal competency, and broad-business perspective competency (AICPA, 2006; Bolt-Lee & Foster, 2003). This framework has been used by Yanto (2012) to measure the level of harmonization of accounting graduates' competency from eight public universities in Indonesia. The functional competency consists of six factors, personal competency and broad business perspective competency respectively have seven factors. Every factor has more-detailed indicators reaching the number of 166 indicators. For example, the decision modelling part of functional competency has eight indicators.

### **Intellectual and Decision Making Competency (IDM)**

Intellectual competency is a holistic construct consisting of cognitive and non-cognitive qualities (Chamorro-Premuzic & Furnham, 2005) while decision making competency is the ability to make decisions using the appropriate methods. According to Finucane and Gullion (2010) decision making is a complex process that includes information comprehension i.e. information integration, relevant information identification, and avoidance of feeling. Therefore, intellectual and decision-making competencies are a tightly-closed aspect. The research conducted by Abayadeera and Watty (2014) found that intellectual and decision-making competencies are important for accounting students. Meanwhile, Ditbelmawa (2012) suggests that the learning output for bachelor degree program in Indonesia should fulfil four parameters, namely

1. Attitude.
2. General skills.
3. Specific skills.
4. Knowledge.

In this case, IDM has already met the knowledge and specific skills parameters.

The employment opportunities for accounting graduates are almost in all industrial sectors and government institutions. At work, accounting graduates should be effective decision makers. Nevertheless, Mahdi et al. (2016) found that accounting students do not receive sufficient learning in decision making. However, some accounting competency frameworks developed by professional associations always include decision-making competency. AICPA core competency includes decision making in functional competency (Yanto, 2012). Furthermore, AICPA (2017) also classifies decision making into professional competency for

accounting graduates who would become professional accountants. Therefore, IDM is feasible to be included as a competency factor for accounting graduates to meet the INQF as well as employment demand.

### **Communication and Negotiation Competency (CNC)**

To achieve good working performance, an employee should have competency of-of fluent oral and written communication. An earlier study found that communication skills have significant influence on the success of a project (Cervone, 2014). Research in banking companies also found that communication plays important roles in increasing success of an innovation (Lievens et al., 1999). Those studies provide evidences that communication competency is considered important for accounting graduates to work well with colleagues and to improve their working performance. Therefore, Abayadeera and Watty (2014) also contended that this competency is required by accounting students.

According to Anthony (2017) an entrepreneur needs to have both effective negotiation and communication competencies. It seems that communication and negotiation are two inseparable competencies. These competencies are required because in performing their job, employees sometimes act as an entrepreneur frequently encounter opinion and perception differences with colleagues. When this difference gets more intense, it could lead to conflicts, resulting in declined working performance of employees and organization (Tsung Jen, 2013). Therefore, the differences of opinion and perception should be solved immediately through discussion and negotiation to achieve the best possible results. In short, successful negotiations would instil mutual trust among employees to continue working collectively (Schamotta, 2017). Therefore, negotiation is an important competency for company's manager to perform both internal and external negotiations (Mahdi et al., 2016).

### **Operational Competency (OPC)**

To perform their daily tasks as a professional accountant, accounting graduates should be equipped with operational competency. This competency is similar to functional competency contended by AICPA (2006) and Bolt-Lee and Foster (2003). In this case, Bolt-Lee and Foster (2003) define functional competency as a competency closely related to technical work as an accountant. AICPA (2006) explicitly includes functional competency as core competency for accounting graduates. In the following competency framework, AICPA (2017) includes "*accounting competency*" consisting of six competency factors. The contents of this competency are not too different from those of functional competency formulated previously by AICPA (2006). Moreover, Abayadeera and Watty (2014) named this competency as key accounting/bookkeeping skills.

In the context of curriculum development in Indonesian higher education, operational competency in the form of specific skills should be included in the competency standard of graduates. In this case, specific skills are the work skills related to the major or study program (Ditbelmawa, 2012). Thus, the inclusion of operational competency in this study would fulfil INQF (Ditbelmawa, 2012) as well as meet the international standard of competency (Abayadeera & Watty, 2014; AICPA, 2006, 2017).

## Technology Competency (TEC)

The development of information technology has changed many ways of doing business, including how accounting is implemented in the company. The use of information technology provides benefits to the company to improve its effectiveness and efficiency in decisions making (Wessels, 2004). Technology competency is not limited only for recording accounting evidences, but also for finding information about businesses (Yanto, 2012). Information technology develops rapidly in globalization era because inventions of information technology in a country would be immediately adopted and adapted by other countries. In relation to this competency, Government of Singapore (2017) also included Infocomm technology as an important skill. This skill consists of six competencies. Inevitably, accounting graduates have to adapt to new technological developments to ensure they can work well.

AICPA core competency considers information technology as very important competency indicated by the inclusion of leveraging technology competency in each of its competency factors (Yanto, 2012). AICPA also included this competency into their new competency framework with the name of technology and tools. Moreover, according to AICPA (2017) technology and tools competency is the ability to identify and use relevant tools and technologies to process data, to perform the tasks effectively and efficiently, and to support other competencies. Abayadeera and Watty's (2014) contended that computer technology competency is considered useful for accounting graduates. Therefore, accounting graduates should master information technology for their daily works as well as for further competency improvement.

## Personality Competency (PLC)

Personality competency is a person's characteristics which are carried along to perform his or her jobs (Othman & Jaafar, 2013). Moreover, Othman & Jaafar (2013) also stated that "*personal competencies consist of honesty and integrity, alertness and quickness, energy and toughness, and decision making*". Professional accountant associations always incorporate this competency into their core framework. For example, AICPA included this competency into their core competency framework (Yanto, 2012). The following competency framework, AICPA (2017) also includes this competency into professional competencies under the name of ethical conduct and professional behaviour.

This competency is feasible for the inclusion in accounting competency at least for the following reasons. First, previous research contended that personal competency has a significant correlation with employee's performance (He et al., 2015). Second, many previous studies also found that personal competency influences employee's performance. Manaf et al. (2017) suggested that personality trait becomes a fairly strong moderating variable from accumulated managerial tacit knowledge on individual performance. Third, personal competency for accounting graduates is considered important, because these graduates should comply with the ethical conduct established by professional organizations. Moreover, the accounting profession is close to audit issues which require high independence and objectivity.

Environment is one of the main issues in ASEAN countries that should be solved together and comprehensively (Chandra and Astriana, 2015). Accounting graduates have to understand about environmental degradation caused by economic activities. Li et al. (2017) contended that companies should improve environmental management to be more transparent in

providing environmental information. Therefore, accounting graduates should be sensitive to environmental and social issues to make sure their decisions would consider environmental and social issues.

### Managerial Competency (MGC)

Managerial competency is considered essential for accounting graduates (Bolt-Lee & Foster, 2003), as the accounting alumni would frequently deal with managerial issues in the organization they work in. In addition, almost all accounting competency frameworks established in developed countries incorporate managerial competency. CGMA (2014) has included many indicators of managerial competency. Additionally, AICPA also included some managerial competency indicators in its core competencies (Daigle et al., 2007; Kaciuba, 2012). In developing its core competency for pre-certification, AICPA (2017) also incorporated some indicators of managerial competency. Lastly, Government of Singapore (2017) consider managerial skills as very important, since their accounting skill framework very much emphasizes in managerial issues.

In Indonesian business context, not much has been known about the importance of managerial competency for accounting graduates. For this reason, this study includes this competency to be confirmed to practitioners and academics. Based on the literature review, the study has already identified six factors of accounting competencies derived from local and international standards of accounting competencies. The following Table 1 shows competency factors and their references.

<b>Code</b>	<b>Competency Factor</b>	<b>Reference Source</b>
IDM	Intellectual and Decision Making Competency	AICPA (2006); AICPA (2017); Bolt-Lee and Foster (2003); Chamorro-Premuzic and Furnham (2005); Finucane and Gullion (2010); Ditbelmawa (2012); Abayadeera and Watty (2014)
CNC	Communication and Negotiation Competency	Cervone (2014); Lievens et al. (1999); Anthony (2017); Tsung Jen (2013); Mahdi et al. (2016)
OPC	Operational Competency	AICPA (2006); AICPA (2017); Ditbelmawa (2012); Abayadeera and Watty (2014).
TEC	Technology Competency	Wessels (2004); AICPA (2017); Government of Singapore (2017); Yanto (2012); AICPA (2006); Bolt-Lee and Foster (2003).
PLC	Personality Competency	Othman and Jaafar (2013); AICPA (2017); Yanto (2012); He et al. (2015); Manaf et al. (2017).
MGC	Managerial Competency	Bolt-Lee and Foster (2003); AICPA (2017); CGMA (2014); Daigle et al. (2007); Kaciuba (2012); Government of Singapore (2017).

### Perceptions of Academics and Practitioners

As previously mentioned that this study collected data from accounting academics and practitioners. Accounting academics are lecturers who prepare and equip students with accounting competencies, while practitioners are those working in accounting profession. It is likely that practitioners are also employers or users of accounting graduates. The different perceptions on competency between these two parties would possibly cause a gap where graduates may find difficulties to work in the companies. Abayadeera and Watty (2014) studied

the gap of competency as perceived by academics and users of graduates. The results of this study show that academics and users have nearly similar perceptions on competency indicators.

Competency gap always occurs, because businesses change more rapidly than the curriculum at colleges does. Therefore, IMA (2017) organizes an activity to solve the competency gap issues among management accountants. The research conducted by Lakshminarayanan et al. (2016) provides information that there is still an issue of incongruence competencies among managers.

In Indonesian business context, it is possible that this research would provide different results as compared to the previous studies conducted in international business context. Furthermore, the study held by Ningsih (2014) found that there is no different academics' and graduate users' perceptions toward accounting competencies. This indicates that there has been similar perception on the graduate's competencies prepared by the academics and the competencies required by the users. Considering that until recently the number of study focusing on accounting competencies seems to be very limited in number, this research then formulates a hypothesis that there is no significant difference between academics' and practitioners' perceptions towards accounting competencies.

## METHOD

This research uses two approaches, i.e. Focused Group Discussion (FGD) and Survey. The purposes of FGD are to validate the factors of accounting competency identified by the literature review and to list preliminary indicators of accounting graduates' competency based on the factors. In conducting FGD, the researchers invite six participants consisting of three senior accounting academics and three accounting practitioners.

FGD is a process of discussion moderated, monitored, and recorded by researchers in order to collect data from several informants simultaneously (Gill et al., 2008). The results of FGD are then transcribed for further analysis. The analysis consists of data reduction and coding (Kolb, 2012). The accounting competency indicators identified from FGD are then validated by academics and practitioners respondents through a survey. Using online survey, this research collected data from 135 respondents. However, from this number only 120 data are complete 59 accounting academics and 61 accounting practitioners for further analyses. Respondents are requested to complete a Likert-type questionnaire with 10 points starting from "very unimportant" at 1 point and "very important" at 10 points.

The collected data are analyzed using descriptive, validity, reliability, mean difference test, and discriminant analyses. The descriptive analysis in the form of minimum, maximum, mean, and standard deviation is used to provide information to judge the importance of competency items based on the academics' and practitioners' perceptions. Validity analysis is used to measure the accuracy of question items. A corrected-item-total correlation was employed to analyze the validity of question items by using 0.3 threshold value as used by Yanto et al. (2016). In addition, Cronbach's alpha formula was used to test questionnaire reliability by using a threshold value of 0.7 (de Vaus, 2002). Mean difference analysis with t-test technique for independent sample is used to test the mean difference of competency based on the academics' and practitioners' perceptions. In this case, the study performs t-test for each factor of accounting competency. Finally, the Discriminant analysis is employed to provide information if some identified factors is able to differentiate between the perceptions of academics and practitioners.

## RESULT AND DISCUSSION

### Result

The factors of competency are identified based on previous studies and competency framework developed by accountant associations. Furthermore, competency indicators are developed through FGD. Identified competency indicators are then validated by more academics and practitioners through a survey. The competency indicators are considered important by both the academics and the practitioners when they have mean scores above 6.00 at 1 to 10 scale.

### Intellectual and Decision Making Competency (IDM)

The first factor of accounting competency required by graduates to work in economic globalization is Intellectual and Decision Making (IDM) competency. Based on the academics' and practitioners' perceptions, this study found seven indicators of IDM competency. Both academics and practitioners reported that the abilities of graduates in making decisions are considered important competencies all indicators have mean values more than 8.00. Likewise, intellectual competency indicators are also importantly indicated by the mean values of more than 8.00.

To provide clearer picture about the importance of IDM competency indicators, Table 2 provides information on descriptive statistics, validity, and reliability coefficients from each indicator. The results indicate that the corrected item-total correlation (CITC) shows highly satisfactory accuracy questionnaire items as well as consistency of questionnaire with Cronbach's Alpha coefficient of 0.966. Therefore, the questionnaire statements to measure IDM meet the validity and reliability requirements.

Code	Competency	Min	Max	Mean	Std.	CITC
IDM-1	Choosing the best alternative to solve problems	5	10	8.60	1.57	0.870
IDM-2	Analyzing data for the purpose of making decisions	5	10	8.60	1.57	0.950
IDM-3	Using experience to solve working problems	5	10	8.51	1.53	0.855
IDM-4	Formulating alternative problem solutions	5	10	8.44	1.51	0.941
IDM-5	Motivated to improve intellectual ability	5	10	8.22	1.66	0.815
IDM-6	Thinking critically about the problem encountered	5	10	8.17	1.63	0.890
IDM-7	Creating new ideas	5	10	8.01	1.62	0.833

Cronbach' Alpha: 0.966

### Communication and Negotiation Competency (CNC)

The results of analysis show that Communication and Negotiation Competency (CNC) is also perceived as important by the practitioners and the academics. This research identifies seven CNC indicators with high mean values (above 8.0), except CNC-7 indicator with a statement of "*oral and written communication in foreign language(s)*". This competency indicator obtains a mere mean value of 6.87. Thus, communication and negotiation in Indonesian language could be as more important than those in foreign languages.

The descriptive analysis also shows that CNC-7 has higher data distribution with minimum and maximum values of 3 and 10 respectively. In addition, CNC-7 also has higher standard deviation at 2.15. However, this factor has high coefficients of validity and reliability.



The validity test using corrected item-total correlation (CITC) produces coefficients higher than 0.3. The reliability of this factor also reaches a Cronbach's alpha coefficient of 0.917 at 0.7 threshold. For further detail, Table 3 below presents descriptive statistics as well as validity and reliability tests.

Code	Competency	Min	Max	Mean	Std.	CITC
CNC-1	Communicating well in writing	5	10	8.61	1.63	0.874
CNC-2	Adapting to work environment	5	10	8.49	1.50	0.833
CNC-3	Communicating well orally	5	10	8.43	1.52	0.862
CNC-4	Delivering ideas in many formal forums	5	10	8.33	1.56	0.893
CNC-5	Communicating informally	5	10	8.30	1.66	0.761
CNC-6	Performing negotiation	5	10	8.16	1.61	0.733
CNC-7	Oral and written communication in foreign language(s)	3	10	6.87	2.15	0.424

Cronbach' Alpha: 0.917

### **Operational Competency (OPC)**

This research identifies ten indicators of operational competency required by accounting graduates. Both academics and practitioners perceived that “*understanding the regulations related to organization*” is the most important competency, followed by “*performing the function of corporate internal control*”. The ability to “*make an accounting system and the ability to provide financial information for management*” are also important, yet they are ranked as the least important competencies.

The question items of operational competency have met the validity and reliability requirements satisfactorily. All coefficient values of CITC are above 0.3 at a Cronbach's alpha coefficient of 0.941 above the cut off value of 0.7. For further detail, Table 4 below presents the ranking of operational competency indicators along with the information of descriptive statistics of each indicator.

Code	Competency	Min	Max	Mean	Std.	CITC
OPC-1	Understanding regulation related to the organization	5	10	8.61	1.51	0.479
OPC-2	Performing the function of corporate internal control	5	10	8.33	1.58	0.416
OPC-3	Analyzing the existing and possible risks	5	10	8.14	1.66	0.548
OPC-4	Performing the accounting recording according to the applicable standards	2	10	7.75	2.42	0.839
OPC-5	Performing assessment of company's performance	4	10	7.72	2.05	0.761
OPC-6	Performing financial statement audit	2	10	7.23	2.66	0.918
OPC-7	Preparing financial statements as needed by stakeholders	2	10	7.17	2.54	0.907
OPC-8	Making an effective, relevant, and efficient budgeting	1	10	7.05	2.78	0.914
OPC-9	Providing financial information for management	2	10	6.91	2.50	0.858
OPC-10	Making an accounting system	1	10	6.48	2.71	0.873

Cronbach's Alpha: 0.941

### **Technology Competency (TEC)**

The use of information technology for accounting is urgent, since the scale of accounting process and complexity are increasing significantly. Accounting practitioners and academics perceived that “*to adapt themselves with the technology development*” is the most important competency. The mean value of this competency reaches 8.40 and its standard deviation is 1.65. The validity of this indicator is not satisfying, since it still has CITC coefficient below 0.3. Nevertheless, this indicator is included into technology competency, since it is perceived as the most important one.

The competency of “*using accounting software to prepare financial statements*” and the competency of “*finding economic data using internet*” are both important, despite their low mean scores respectively at 6.47 and 6.93. The validity of this instrument is problematic only in TEC-1 indicator, because its CITC is merely 0.275. However, in general this instrument has met the reliability requirements. Table 5 below provides more detailed information about technology competency.

<b>Code</b>	<b>Competency</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std.</b>	<b>CITC</b>
TEC-1	Adapting to new technology development	5	10	8.40	1.65	0.275
TEC-2	Using spreadsheet and word processor well	2	10	7.70	2.54	0.854
TEC-3	Using software for data analysis	1	10	7.15	2.58	0.777
TEC-4	Dealing with problems in using software	4	10	7.14	1.84	0.778
TEC-5	Finding economic and accounting data using internet	1	10	6.93	2.91	0.842
TEC-6	Using accounting software to prepare financial statements	1	10	6.47	2.71	0.721

Cronbach's Alpha: 0.887

### Personality Competency (PLC)

This research identifies six personality competency indicators that accounting graduates should possess. The academics and practitioners perceived that being honest in delivering information as the most important competency followed by hard work, and discipline. Moreover, out of six competencies that accounting graduates should have, a competency of being sensitive to social and environmental issues has a mean score of 7.42.

The results of validity and reliability analyses on questionnaire items show that all question items have satisfactory performance. Nearly all items have CITC coefficient above 0.8, except PLC-6 indicator that has a CITC coefficient of 0.457. All CITC coefficients are far above the minimum limit of 0.3. From the data distribution, the study found that PLC-6 also has higher distribution level (2.26) compared to the data distribution of other indicators which on average have standard deviation of around 1.5. Nevertheless, the questions of this competency have satisfactory reliability with its Cronbach' Alpha up to 0.926. Table 6 provides more detailed information about personality competency.

<b>Code</b>	<b>Competency</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std.</b>	<b>CITC</b>
PLC-1	Honest in delivering information	5	10	8.78	1.58	0.904
PLC-2	Working hard and persistently	5	10	8.73	1.56	0.898
PLC-3	Discipline in performing tasks	5	10	8.65	1.51	0.895
PLC-4	Open-minded to suggestions and criticisms	5	10	8.61	1.53	0.857

PLC-5	Working in compliance with the applicable professional ethics	5	10	8.51	1.52	0.922
PLC-6	Sensitive to social and environmental issues	3	10	7.42	2.26	0.457

Cronbach's Alpha: 0.926

### Managerial Competency (MGC)

The analysis results show that managerial competency consists of eight indicators. Both academics and practitioners perceived that “*cooperating in team*” is the most important competency at a mean value of 8.94 with standard deviation 1.47. The ability to become leader of a team is also perceived as important at a mean value of 8.67 and standard deviation of 1.58. The competency of managing resources is ranked the least important, yet it has relatively high mean value of 8.49.

The study found that all indicators are perceived as important by both academics and practitioners indicated by the mean values of all indicators are above 8.00 with standard deviation of around 1.50. The question items of managerial competency have excellent performance of validity and reliability. CITCs of all items are at least 0.80 with Cronbach's alpha value of 0.974. The following Table 7 provides more detailed information.

Code	Competency	Min	Max	Mean	Std.	CITC
MGC-1	Cooperating in team	5	10	8.94	1.47	0.907
MGC-2	Becoming the leader of a team	5	10	8.67	1.58	0.910
MGC-3	Making strategic planning in organization	5	10	8.67	1.54	0.912
MGC-4	Building network with external parties	5	10	8.67	1.58	0.878
MGC-5	Organizing coordination with many parties	5	10	8.60	1.56	0.888
MGC-6	Motivating others	5	10	8.53	1.58	0.861
MGC-7	Monitoring and evaluating a program	5	10	8.53	1.51	0.895
MGC-8	Managing resources	5	10	8.49	1.48	0.921

Cronbach's Alpha: 0.974

### Practitioners' and Academics' Perception towards Accounting Competency

The previous part discusses the identification of accounting competency graduates to deal with business in globalization era. This part discusses the different perceptions of academics and practitioners towards identified competencies. This comparison aims at identifying possible gap between competencies prepared by the academics (academics' perception) and those required by work (practitioners' perception).

The results of analysis using t-test with independent sample show that in general there is no significant difference between academics' and practitioners' perceptions toward to competencies required by accounting graduates to work in local and international levels. The F coefficient of Intellectual and Decision Making (IDM) competency shows a value of 0.012 ( $p > 0.05$ ) and t coefficient of -0.269 ( $p > 0.05$ ). Likewise, the Managerial Competency (MGC) has F coefficient of 0.048 ( $p > 0.05$ ) and the t coefficient value of -0.416 ( $p > 0.05$ ). This analysis results show that there is no difference between academics' and practitioners' perceptions towards IDM and MGC.

The difference tests between academics' and practitioners' perceptions on Operational Competency (OPC), Communication and Negotiation (CNC), Technology Competency (TEC),

and Personality Competency (PLC) indicate that all F coefficients are insignificant ( $p > 0.05$ ). The same applies to the t-value of each t-test on these competencies showing insignificant t coefficients ( $p > 0.05$ ). Therefore, this research found that there is no significant difference between academics' and practitioners' perceptions towards the identified accounting competency of graduates. In other words, the competencies prepared by the academics at campuses are not different from those required by the practitioners. Table 8 below provides more detailed information on all t-tests for all factors of accounting competencies needed by graduates to cope with globalization business.

<b>Competency</b>	<b>F</b>	<b>Sig.</b>	<b>t</b>	<b>df.</b>	<b>Sig. (2-tailed)</b>
Intellectual and Decision Making (IDM)	0.012	0.913	-0.269	118	0.788
Operational Competency (OPC)	0.005	0.945	-0.439	118	0.661
Communication and Negotiation CNC)	0.006	0.939	0.383	118	0.702
Technology Competency (TEC)	0.039	0.844	0.106	118	0.915
Personality Competency (PLC)	0.080	0.778	0.099	118	0.921
Managerial Competency (MGC)	0.048	0.826	-0.416	118	0.678

In addition, the study also employs discriminant analysis to identify if competency factors are able to differentiate the perceptions of academics and practitioners. The results of analysis show that all Wilk's Lamdas are insignificant ( $p > 0.05$ ) meaning that all competency factors are not able to differentiate the perceptions of academics and practitioners. Wilks' Lamda test using Chi-square shows the coefficient of 4.258 ( $p > 0.05$ ). Therefore, these results strengthen the t-test analysis that there is no significant difference between academics' and practitioners' perceptions. The following Table 9 shows more detail information about the equality of group mean test.

<b>Competency Factor</b>	<b>Wilks' Lamda</b>	<b>F</b>	<b>df1</b>	<b>df2</b>	<b>Sig.</b>
Intellectual and Decision Making (IDM)	0.999	0.073	1	118	0.788
Operational Competency (OPC)	0.999	0.193	1	118	0.661
Communication and Negotiation CNC)	0.998	0.147	1	118	0.702
Technology Competency (TEC)	1.000	0.011	1	118	0.915
Personality Competency (PLC)	1.000	0.010	1	118	0.921
Managerial Competency (MGC)	0.999	0.173	1	118	0.678

## Discussion

Economic globalization has started to be implemented at regional level, resulting in ratification of accountant profession allowing them to operate in all member states (Teowira, 2015). The accountant ratification was followed up by mutual recognition arrangement (The ASEAN Secretariat, 2015). Nevertheless, until recently IAI is still working on establishing accounting competency framework harmonized with international standards for graduates (Utama, 2016). Using the accounting competency framework developed by AICPA (2017), Bolt-Lee and Foster (2003), CGMA (2014), Daigle et al. (2007) and Kaciuba (2012), Government of

Singapore (2017), and other studies, this research designs six competency factors required by accounting graduates to cope with business globalization. Those competency factors are

1. Intellectual and Decision Making Competency.
2. Communication and Negotiation Competency.
3. Operational Competency.
4. Technology Competency.
5. Personality Competency.
6. Managerial Competency.

The first group competency developed by this research is Intellectual and decision making (IDM) competency consisting of seven indicators. This competency is perceived as important by both practitioners and the academics. Therefore, this is consistent with the learning output required by INQF (Ditbelmawa, 2012), the competency framework set by AICPA (2017) as well as the previously determined AICPA core competency (Yanto, 2012). The statistical test indicates that there is no difference between practitioners' and academics' perceptions towards this competency. It implies that the IDM competencies are important for accounting graduates to deal with local and international businesses. This finding is consistent with the results of previous studies conducted by Finucane and Gullion (2010) and Abayadeera and Watty (2014).

The ability to communicate for accounting graduates is perceived as important by both practitioners and academics. This confirms the previous studies which found that communication determines the success of a project (Cervone, 2014) and determines the success of an innovation (Lievens et al., 1999). The negotiation is also deemed as important competency confirming the research conducted by Anthony (2017) that a manager should have the excellent abilities to communicate and negotiate. Negotiation is highly necessary to solve internal problems (Schamotta, 2017) and it is also important when dealing with those parties from outside the company (Mahdi et al., 2016).

To be able to perform the job well, accounting graduates should master the basic competencies. This research identifies ten indicators for operational competencies. Previous competency framework includes functional competency AICPA (2006, 2017). Bolt-Lee and Foster (2003) also listed this competency in their accounting competency framework. This is also consistent with the standards of learning output established by INQF (Ditbelmawa, 2012). Having satisfactory reliability and validity performance, this competency should be a minimum standard of competency set by accounting curriculum developers.

The results of evaluation by practitioners and academics provide information that accounting graduates should master at least six technology competency indicators. Accounting graduates should be able to master information technology for effective and efficient working and decision making (Wessels, 2004). This competency has been consistent with the competency framework developed by AICPA (2006, 2017), Bolt-Lee and Foster (2003) and Abayadeera and Watty (2014). The competency of being able to adapt with technology development is perceived as highly important by the practitioners and the academics. However, further study should improve a questionnaire item (TEC-5) that still has unsatisfied accuracy in measuring technology competency.

The respondents reported that personality competency is considered important for accounting graduates. This is in line with the competency framework developed by AICPA (2006, 2017) and the personal competency indicator suggested by Othman and Jaafar (2013). This competency is highly important for accounting graduates, because personality competency would help graduates to have a sound performance when they are employed (He et al., 2015;

Manaf et al., 2017). In brief, accounting students should be equipped with personality competency to make sure they would be able to work well in globalization era.

Accounting department should equip their students with managerial competency as well. Universities could use indicators of managerial competency for developing curriculum and implementing them in the teaching and learning process. The results of this study are consistent with the findings of Bolt-Lee and Foster (2003), the competency framework from AICPA (2006, 2017), and Abayadeera and Watty (2014) and Government of Singapore (2017). Previous studies such Kaciuba (2012) and Daigle et al. (2007) have also used AICPA core accounting competency as indicators of learning output.

Six factors of accounting competency have been identified based on the practitioners and academics' perceptions. Further analysis using t-test shows that there is no significant difference between practitioners' and academics' perceptions on the importance of competency factors. In other words, the practitioners' perception is similar to that of the academics on the competency of graduates. Moreover, accounting department can use these competency indicators to reduce competency incongruence as found by Lakshminarayanan et al. (2016). This finding also confirms the study conducted by Ningsih (2014) that academics and graduate users have similar perceptions on accounting graduates' competency. Likewise, research in Sri Lanka also came up with the same findings that academics and graduate users have similar perceptions toward accounting competency indicators (Abayadeera & Watty, 2014).

This study combines international competencies of accounting standards-AICPA (2006, 2017), Bolt-Lee and Foster (2003), CGMA (2014), Abayadeera and Watty (2014), Government of Singapore (2017), and so forth with the perceptions of Indonesian practitioners and academics. It is expected that these identified competencies could be a minimum reference in designing and implementing accounting curriculum. Until recently IAI has yet completed establishing accounting competency framework which could be used by accounting departments at universities (Utama, 2016). To fill this gap, the study provides minimum standards of competencies that should be mastered by accounting graduates. Therefore, accounting graduates would be able to cope with accountant globalization as indicated by Toewira (2015). More importantly, accounting graduates would be able to deal with any changes of business environment in economic globalization.

## CONCLUSION

For Indonesian accountants, the ASEAN Economic Community (AEC) could be both opportunities and threats. The AEC has ratified a document that accountants could work and operate in all member states. Even though AEC have already approved Mutual Recognition Arrangement, accountant competencies would be a very pivotal issue. Moreover, until recently IAI has yet completed establishing competency framework enabling accounting graduates to work harmoniously in local and international levels.

This research identified six accounting competency factors required by accounting graduates to work in national and international levels. Those competency factors are

1. Intellectual and Decision Making Competency.
2. Communication and Negotiation Competency.
3. Operational Competency.
4. Technology Competency.
5. Personality Competency.
6. Managerial Competency.

These six factors consist of 43 competency indicators that should be mastered by accounting graduates to work well in global business. The study also found that practitioners and academics share the same perceptions on the identified competency factors and indicators.

The accounting departments could use this accounting competency indicators for the following three purposes i.e. formulating learning outputs of accounting education, designing curriculum, and implementing competency indicators in teaching and learning processes. Researchers could also use these competencies as a reference in measuring accounting students' achievement. Lastly, Indonesia Chartered Accountant (IAI) could utilize these competency indicators for developing an accounting competency framework. These competencies are preliminary results which possibly still has some limitations. Further research should be conducted to improve this framework to ensure all competencies required by market are included. In addition, the next agenda of research is to understand on how universities equip their accounting graduates with accounting competencies identified by this study. Since the study involved only 59 accounting academics and 61 accounting practitioners, additional respondents might provide different conclusion.

### LIST OF ACRONYM

AEC	: ASEAN Economic Community
ASEAN	: Association of Southeast Asian Nations
AICPA	: American Institute of Certified Public Accountants
CGMA	: The Chartered Global Management Accountant
CITC	: Corrected Item-Total Correlation
CNC	: Communication and Negotiation Competency
FGD	: Focused Group Discussion
GCS	: Graduate's Competency Standards
IAI	: Ikatan Akuntan Indonesia (Indonesia Chartered Accountant)
IDM	: Intellectual and Decision Making Competency
IMA	: Institute of Management Accountant
INQF	: Indonesian National Qualifications Framework
MRA	: Mutual Recognition Arrangement
MGC	: Managerial Competency
OPC	: Operational Competency
PLC	: Personality Competency
TEC	: Technology Competency

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