

# ACCRUAL BASED ACCOUNTING IMPLEMENTATION: AN APPROACH FOR MODELLING MAJOR DECISIONS

Ratno Agriyanto\*, Abdul Rohman\*\*, Dwi Ratmono\*\*, Imam Ghozali\*\*

\* Faculty of Economic and Business, Diponegoro University, Walisongo State Islamic University, Indonesia

\*\* Faculty of Economic and Business, Diponegoro University, Indonesia

## Abstract

Over the last three decades the main issues of implementation of accrual based accounting government institutions in Indonesia. Implementation of accrual based accounting in government institutions amid debate about the usefulness of accounting information for decision-making. Empirical study shows that the accrual based of accounting information on a government institution is not used for decision making. The research objective was to determine the impact of the implementation of the accrual based accounting to the accrual basis of accounting information use for decision-making basis. We used the survey questionnaires. The data were processed by SEM using statistical software WarpPLS. The results showed that the implementation of the accrual based accounting in City Government Semarang has significantly positively associated with decision-making. Another important finding is the City Government officials of Semarang have personality, low tolerance of ambiguity is a negative effect on the relationship between the implementation of the accrual based accounting for decision making.

**Keywords:** Accrual Based Accounting, Decision Making, Tolerance of Ambiguity

**JEL Classification:** M41, M48

## 1. INTRODUCTION

Past three decades have witnessed a phenomenon where government institutions around the world have been preoccupied by the implementation of the accrual based accounting. However, the actual implementation of accrual based accounting in government institutions are still being debatable. Research has shown that the benefits of the implementation of normative base still prove dissent. Guthrie (1998) found the principal debate of the implementation of the accrual based accounting. The supporting arguments claim that the accrual basis of accounting has the following advantages: *first*, it focuses on the accrual based accounting resources that flow corresponding to the period in which they are produced or consumed thus helping to create a more accurate picture of the cost of service; *second*, accurate calculation of service fees will affect the effective and efficient services. On the other hand, those opposing the above opinion believe that the implementation of accrual based accounting will result in paperwork preoccupation at the expense of the government, leading to the loss of its purpose of services such as economic equality, provision of public facilities, and preserve the environment.

The debate over the implementation of accrual based accounting in government organizations has insisted the use of accounting information for decision making. The financial statements of a government entity do not stop with the presentation of financial statements. The importance of the accrual based financial statements is proven when

the financial statements become an important source of information for decision-making basis. Empirical evidence shows a difference of research on the use of accrual based accounting information for decision making. A study on the Swedish Government (Paulsson, 2006) found information about accrual based accounting used for budget decision- and policy-making. Cohen (2013), who performed a research on Greek government also found that the accounting information generated from accrual based accounting system was not in use when compared to the accounting information generated from cash basis accounting system. Hyndman and Connolly (2011) found that accrual based accounting information was only used during discussions when the management level was high, but of limited use at the operational level. Other studies found evidence on contrary that the accrual based accounting information in government institution was more useful than the information the cash basis for decision making (Alijarde and Julve, 2004; Andriani et al., 2010; Kober et al., 2010; Jagalla et al., 2011; Nogueira and Jorge, 2012; Nogueira et al., 2013; Sousa et al., 2013; Soleimani et al., 2015).

Based on the concept of debate on the accrual based accounting implementation of government institution and differences in the empirical facts of use of accrual based accounting information for decision making, the problem of this research was still going to provide inconsistent results dealing with the use of accrual based accounting information for decision-making. This research was important to determine the successful implementation of the accrual based accounting at

the municipal government of Semarang. The successful implementation of the accrual based accounting can be proven from the use of accrual based accounting information for decision making. The use of the accrual based accounting information for decision making is expected to give a better impact for the governance of city government institution Semarang. The accrual based financial statements in Semarang municipal government that was not used as a source of information for decision making only a formality document without having any meaning. Accrual based accounting was no more than a tool in which benefits could only be enjoyed when it was used by the managers as an important information for the decision-making.

## 2. LITERATURE REVIEW AND HYPOTHESES

### 2.1. Implementation of accrual based accounting in the public sector

Gradually, over the past three decades more and more government organizations around the world have been adopting accrual based of accounting from the private sector. The implementation of the accrual basis for government is in line with the movement of New Public Management (NPM) (Hood, 1995). The NPM has led many government organizations to review procedures and structures by adopting managerial innovation traditionally applied to the private sector. The adoption of the accounting accrual basis is suitable as an instrument to pursue the principles of the NPM that promotes efficiency, effectiveness, transparency, accountability in the management of government organizations (Pallot, 1992; Lapsley, 1999; Likierman, 2000; Hodges and Mellett, 2003; Mellett et al., 2009). In order to achieve efficiency, effectiveness, transparency and accountability, an organization must have a measurable output (Arnaboldi and Lapsley, 2009; Hyndman and Connolly, 2011).

The implementation of the accrual based accounting in the government institutions was initiated by the government of New Zealand and Australia (Carlin, 2005). Such initiative is then followed by other developed countries, even developing countries such as Indonesia. The Indonesian government under Government Regulation No. 71/2010 requires the implementation of accrual based accounting in 2015 for all government institutions nationwide. However, the Semarang municipal government, which is one of the Indonesian government entities, has implemented accrual based accounting since in 2004. A significant support to the implementation of accrual based accounting comes from Guthrie (1998), who claims that the accrual based accounting has advantages, such as the followings: *first*, the accrual based accounting focuses on the resources that flow corresponding to the period in which they are produced or consumed thus helping to create a more accurate picture of the cost of service; *second*, accurate calculation of service fees will impact the effective and efficient services. Likewise (Jagalla et al., 2011) which promoted the taxonomic benefit accrual basis of accounting implementation in the German government. Benefits of implementing accrual basis on the German government was the

first, their increased knowledge better as more transparent, comprehensive view of the assets and debts, improving the quality of information; *second*, better action in terms of decision-making more rational, structured and based on the information (costs, assets, liabilities, use of resources, long-term decisions); *Third*, changes in mindset are better in terms of focus on the outcome, the adoption of business thinking, increase accountability and improve motivation.

### 2.2. The effect of implementation of accrual based accounting in the decision making

Process management is generally defined as an activity planning, execution, control and decision making. One of the significant management function is to make a decision. Making decisions is an important drama, because decisions now will determine the survival and development of the organization in the future (Oana, 2012). Good decision-making must be based on adequate information. In most cases of decision-making, management may not consider all of the information. The function of accounting information is to reduce the uncertainty of the various alternative actions. Accounting information is an essential component for management considerations in decision-making. The accounting information used in the decision-making is mostly from managerial accounting. The managerial accounting is the main source of information in the management and administration activities.

However, financial accounting is reflected in the annual financial statements are still supplying the information required by the manager to the benefit of relations with third parties, selecting investment projects and to select the financial resources (Oana, 2012). Ross et al. (2009) also writes that the financial information needed by management to evaluate performance, project planning and checking the reasonableness of the assumptions made in the planning. The importance of accounting information for managers is not limited to manufacturing organizations. Manager in any organization must have sufficient ability in using accounting information. The use of accounting data as information for management decision making can be done on a profit to non-profit organizations, including government organizations (Hansen et al., 2010).

Various empirical studies have examined how accounting information affects decisions on public sector organizations. Likierman (2000) examined the British Government how the effect of changes in accounting from cash basis to accrual on several aspects as follows; usefulness for managers; impact on planning and budgeting; the impact on cost; the impact on the use of assets and the effect of the use of capital; the impact on the use of output and performance information; Awareness of the full potential of changes. The result showed that the change in accounting basis from cash to accrual has not had any impact.

Paulsson (2006) in his study on the Swedish Government find information about accrual based accounting was used for budget decisions and policy making. Cohen (2013), who examined Greek government, also found that the accounting

information generated from accrual basis accounting system was not in use when compared to the accounting information generated from cash basis accounting system. Hyndman and Connolly (2011) found that accrual information was only used during discussions at the management level is high, but of limited use at the operational level.

A new hope came from Kober et al. (2010) who studied different uses of accounting information generated by the three accounting standards for decision-making on the Australian government. The result proved that the accounting information generated from the standard accrual accounting was useful for the following activities: assessment of the performance of the department; assessment of the program performance; assessment of the effectiveness of the department in the delivery of goods/services; assessment of the efficiency of departments in the delivery of goods/services; assets and liabilities management; assisting in implementing departmental accountability obligations; helping determine department's resource allocation decisions; determining the department's main asset acquisition decisions; the decision to evaluate the allocation of departmental resources; assessment of future needs departmental resources; and identification of the costs of providing goods/services department. The different results only to determine the cash flow needs of the department, where the accounting information from a cash-based system is used.

Andrianiet et al. (2010) examined the Western Australian government about the differences in the use of accounting information generated from the system of accrual accounting and cash basis. The results proved that the accounting information generated from cash-based accounting system was used for: assessing the performance of the department; assessing the performance of the program; assessing managerial performance; assessing the effectiveness of the department in the delivery of goods and/or services; assessing the efficiency of departments in the delivery of goods and/or services; helping ensure the department is responsible for all assets and liabilities; assisting the implementation of the department's accountability obligations; assessing the cash flow needs of the department; assessing the department's ability to generate cash flows; input to internal departmental budget preparation; making major investment decisions; making decisions about the allocation of resources; evaluating decisions about the allocation of resources; assessing the level of resources that the department may need in the future; assessing whether resources are being used in a manner intended; identifying the cost of the goods and/or services provided by the department; assessing the capacity of the department to continue to provide goods and/or services into the future; measuring the extent of departmental goals and objectives have been achieved; and assessing the suitability of goals and objectives.

Sousa et al. (2013) examined the Brazilian government about the differences in the use of accounting information generated from the system of accrual accounting and cash basis by internal users, external and preparer. The study documented that there was no difference in the use of the accrual basis of accounting infromasi among internal users,

external and preparer. Accounting information resulting from accrual-based system was used for: evaluating the performance of the department; evaluating the performance of government programs; evaluating the effectiveness of products and services; evaluating of the efficiency of products and services; helping manage assets and liabilities; helping manage accountability; helping the resource allocation decisions; helping asset acquisition decisions; and identifying the costs of goods and services. The different result was dealing with the evaluation of the cash flow needs of the organization, where the cash basis of accounting information of more use.

Soleimani et al. (2015) performed a study of the implementation of accrual accounting basis for making decisions on Executives of Northwest University of Medical Sciences. They documented that the implementation of the accounting accrual basis significant effect on the timeliness of decision making and speed of decision making, decision-making in evaluation, decision making operational manager, adds to the confidence of decision-making, making budget decisions in detail and make a decision in the budgetary control, effectiveness evaluation and performance results. Based on the concepts and empirical research the first hypothesis in the wake of this research is:

H1: There is a correlation between the implementation of the accrual based accounting basis for decision making.

### **2.3. Moderating effect of tolerance ambiguity on the relationship between the implementation of accrual based accounting and the decision making**

Human is the decision-maker, therefore, many researches have been directed toward how the psychological differences affect the decision (Siegel and Marconi, 1989). One of the psychological sides of man is personality. Budner (1962) found that the human personality has two trends toward tolerance of ambiguity or toward intolerance of ambiguity. Intolerance of ambiguity is defined as a personality that has a tendency to see an ambiguous situation as a source of threat. Tolerance of ambiguity as a personality that has a tendency to see an ambiguous situation as a desirable situation.

Tolerance of ambiguity associates to some positive qualities, such as originality and openness to new ideas. Intolerance of ambiguity on the contrary, has been associated to lower mental flexibility and negative personality traits, such as mental rigidity. People with personality low tolerance of ambiguity find difficulty to change his or her behaviours. The link between personality tolerance of ambiguity in decision making based on accounting information is how the ambiguity affects the confidence of people in decision making.

Relevance personality tolerance of ambiguity with the usage behaviour of accrual accounting information for decision-making is to see how the reactions of individuals faced with a situation that is new, complex, and there is no solution. Individual responses will refuse because they do not like, repressive, dodge, and destructive. Accrual accounting information for local governments meets the elements of a new and complex situation. See individual responses when dealing with the accrual

basis of accounting information based on the theory of tolerance of ambiguity is very relevant.

Empirical research linking personality tolerance of ambiguity with the use of accounting information for decision-making has been done (Dermer, 1973; McGhee et al., 1978; Faircloth and Ricchiute, 1981; Gul, 1984; Chong, 1998; Tsirikas et al., 2012). The results showed no difference of opinion about the relationship between personality variables tolerance of ambiguity with the use of accounting information for decision-making by managers.

Dermer (1973) found that the tolerance of ambiguity had an effect on the preference information manager. Managers who have a high tolerance of ambiguity will receive accounting information and use it more easily than the manager who has a low tolerance of ambiguity. Chong (1998) found that managers with a low level of tolerance of ambiguity would have low confidence in making decisions that will be more use of the MAS information to reduce uncertainty.

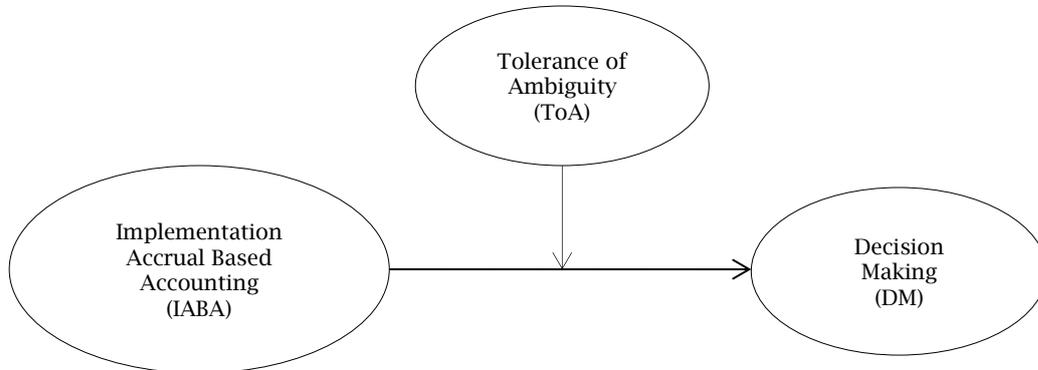
On the contrary Oliver and Flamholt (1978) found that people who had a low tolerance of ambiguity would use accounting information more easily than people who had a high tolerance of ambiguity. Other studies (McGhee et al., 1978; Faircloth and Ricchiute, 1981), found that the tolerance of ambiguity did not affect the decision-making based on accounting information. Ichsan (2013) suggests that one of the successful implementation of accrual basis in government organizations is largely determined by the

willingness to accept change. Bogt and Helden (2000) also point out that a large gap between the accounting change is expected to realization in government organizations, caused by too little attention to the process of change. The willingness to accept the changes is allegedly associated with the personality of tolerant or intolerant users of accounting information internal to the organization of the Government.

Referring to the research Chong (1998), this study puts a variable tolerance of ambiguity as moderating the relationship between the implementation of accrual basis accounting to accrual accounting information uses behaviour. Users of accounting information that has personality High Tolerance of ambiguity is possible will easily accept accrual accounting information and use it for decision making. Instead users of accounting information that has personality Low Tolerance of ambiguity is possible it will be difficult to receive new information accrual based accounting. Variable placement tolerance of ambiguity as moderating based also on the opinion of Baron and Kenny (1986) which says that the moderating variables can be applied when there are two consistent relationships between predictor variables with the criteria. The second hypothesis is constructed in this study are:

H2: There is a role of moderation tolerance of ambiguity in the relationship between the implementation of the accrual based accounting basis for decision making.

Figure 1. Model of the study



### 3. METHODS

#### 3.1. Research setting and sample

Having examined the research hypothesis, this research used a population of middle-level managers involved in the field of local government finance in the city of Semarang. Arguments election as the first, mid-level managers, mid-level managers have a large exposure to the financial statements of Semarang municipal government. The second, mid-level manager is possibly involved in various decision-making situations. The sample of research relevant to the research amounted to 111. Questioners were sent as many as 111 pieces accompanied with a cover letter explaining the purpose of the holding research. Of the 111 questioners send as many as 86 questioners were returned. Categories of respondents who became the

subject of research are the planning manager, financial manager, asset manager and general manager at the Semarang municipal government.

#### 3.2. Instruments

##### 3.2.1. Implementation of the accrual basis of accounting

The implementation of the accrual basis of accounting is the extent to which confidence in the accrual basis of accounting will bring benefits to government organizations. The implementation measure variables we use the accrual based of Likert's 7-scale accounting, ranging from strongly disagree to strongly agree. Indicator variable accrual based accounting implementations used the instrument that built on the taxonomy of the benefits of the implementation of the accrual based

accounting (Guthrie, 1998; Guthrie et al., 1999; Jagalla et al., 2011). Through initial research the questions were adapted to the context of Semarang municipal government. Items instrument were used for measuring the variable implementation of the accrual based of accounting: (1). Implementation of the accrual based accounting will increase transparency and accountability; (2). Implementation of the accrual based accounting will reflect the principles of better matching method for revenue and expenses are recognized when incurred. (3) Implementation of the accrual based accounting allows government organizations can more accurately identify costs (full charge) of the services provided; (4). Implementation of the accrual based accounting will provide better information on the value of assets; (5). Implementation of the accrual based accounting will increase the accountability of debts and receivables; (6). Implementation of the accrual based accounting will provide more accurate information on the Government's financial position.

### 3.2.2. *The use of accrual based accounting information for decision making*

The use of accrual based accounting information for decision-making is the extent to which users have used the financial statements based accounting information for decision making. Implementation measure variables we use the accrual based of Likert's 7-scale accounting, ranging from strongly disagree to strongly agree. Indicator variable usage accounting information for decision making adapted from (Andriani et al., 2010; Jagalla et al., 2011; Nogueira et al., 2013; Sousa et al., 2013; Soleimani et al., 2015). Through initial research the questions were adapted to the context of Semarang municipal government. Items instrument were used to measure the variable use of accrual based accounting information are: (1) accrual based financial statements have become important information to measure the extent to which goals and objectives have been achieved. (2). Accrual based financial statements has been the information to make estimates and check the reasonableness of the assumptions made in the planning. (3). Information receivables and debt has been used as a basis for planning cash flow planning. (4). Fixed asset depreciation information has been used in calculating the unit cost of service. (5). The book value of fixed assets has been the release of information in decision making and asset purchases.

### 3.2.3. *Tolerance of ambiguity*

Budner (1962) suggests that human personality has two tendencies tolerance or intolerance when faced with a situation no solution, complex, and a new situation. Individual responses will be the response of individuals there who are refused because they do not like, repressive, dodge, and destructive depends on the personality of ambiguity tolerance or intolerance of ambiguity. Measurement tolerance of ambiguity with sixteen items of questions. The conclusion of scale Budner (1962) is a score between 44 and 48 is considered neutral. A score below 44 indicates a high tolerance for ambiguity, while a score above 48 indicates a low tolerance for ambiguity (Tsirikas et al., 2012).

## 3.3. Analysis

To test the hypothesis, the study applied a structural equation modelling with partial least squares (PLS). Use of PLS to test our model due to being able to deliver results and value coefficient  $p$  for moderating variables. In addition PLS also can handle the relatively small sample size and multicollinearity between independent variables. Most importantly, a structural equation modelling analysis with PLS does not require the data were normally distributed (Chin et al., 2003).

The hypothesis test is preceded by estimating the measurement model (measurable model) and structural models (structural model). Measurement model is often called a model outside, focuses on the relationship between the unobserved latent variables that cannot be measured directly and measurable items, known as manifest variables (Hair et al., 2012). Structural model is also known as a model in, which focuses on the relationship between the pathways hypothesis and latent variables (Hair et al., 2012). Measurable models in terms of reliability and validity. Reliability is acceptable if the value of the loading composite reliability and Cronbach alpha above 0.70. Validity acceptable if the loading of convergent validity and discriminant validity above 0.70 and significant at the level of 0.50.

Structural model, also known as a measurement model, focuses on the relationship between the pathways hypothesis and latent variables (Hair et al., 2012). Structural models are seen from: (1) The coefficient of determination (R-Square) for any endogenous latent variables in the model can be interpreted substantial structural (0.75), moderate (0.50) and weak (0.25); (2) the relevance of predictive (predictive relevance) or  $Q$  (Squared) and (3) Effect Size (F-Squared effect size) the absolute value of the individual contribution of each predictor variable latent on R-Squared value criterion variables. Effect Size can be grouped into three categories: weak (0.02), medium (0.15) and large (0.35). The paradigm this study based on the moderating effects of opinion (Baron and Kenny, 1986) claims that a variable moderation can weaken or strengthen even change the direction of relationship predictor criteria. Proving the moderating effects then the model is processed twice, without the moderating variable and the moderating variable.

## 4. RESULTS

### 4.1. Descriptive analysis of data

To see further how each variable position in the municipal government of Semarang then performed a descriptive analysis. The mean value was used for determining the criteria of each variable. Based on the mean value it was found that the implementation of the accrual based of accounting only agreed with the criteria, decision-making levels in the category of personality just agree and internal users of accounting information that are in the category of low tolerance of ambiguity (Table 1).

**Table 1.** Descriptive analysis of data

Variable / Indicator	Mean	Category
<b>Implementation Accrual Accounting</b>		
Implementation of the accrual based accounting will increase transparency and accountability.	6.4	Just agree
Implementation of the accrual based accounting will reflect the principles of better matching method for revenue and expenses are recognized when incurred.	6.3	Just agree
Implementation of the accrual based accounting allows government organizations can more accurately identify costs (full charge) of the services provided.	6.1	Just agree
Implementation of the accrual based accounting will provide better information on the value of assets.	6.1	Just agree
Implementation of the accrual based accounting will increase the accountability of debt and accounts receivable.	6.2	Just agree
Implementation of the accrual based accounting will provide more accurate information on the Government's financial position.	6.4	Just agree
<b>Decision Making</b>		
Accrual based financial statements have become important information to measure the extent to which goals and objectives have been achieved public sector organizations.	6.1	Just agree
Accrual based financial statements has been the information to make estimates and check the reasonableness of the assumptions made in the planning.	6.0	Just agree
Information receivables and debt has been used as a basis for planning cash flow planning.	5.8	Just agree
Fixed asset depreciation information has been used in calculating the unit cost of service.	5.8	Just agree
The book value of fixed assets has been the release of information in decision making and asset purchases.	5.8	Just agree
<b>Tolerance of Ambiguity</b>	62.59	Low tolerance of ambiguity

#### 4.2. Measurement model analysis

The results of the data processing as indicated by Table 2 shows that the loading of composite reliability and Cronbach alpha above 0.70. This proves that the instrument used to measure the variables consistently have led to the same result

each time was measured. Likewise, the value of the variable loading each indicator has been above 0.70, indicating that the instrument is constructed in this study has been able to collect data on the same pattern produced by other instruments to measure a same construct.

**Table 2.** Composite reliability coefficients

IABA	DM	ToA	ToA*IABA
0.916	0.932	1.000	0.927
Cronbach's alpha coefficients			
0.890	0.909	1.000	0.905

**Table 3.** Combined loadings and cross-loadings

	IABA	DM	ToA	ToA*IABA	Type (a SE)	P value
IABA	0.829	-0.156	-0.307	0.211	Reflect 0.080	<0.001
IABA_2	0.827	-0.254	-0.251	0.169	Reflect 0.080	<0.001
IABA_3	0.825	-0.087	0.063	-0.149	Reflect 0.080	<0.001
IABA_4	0.785	0.201	0.418	-0.212	Reflect 0.080	<0.001
IABA_5	0.757	0.029	-0.062	0.040	Reflect 0.080	<0.001
IABA_6	0.794	0.290	0.164	-0.071	Reflect 0.080	<0.001
DM	0.318	0.829	-0.052	0.025	Reflect 0.080	<0.001
DM_2	0.048	0.890	-0.164	-0.026	Reflect 0.080	<0.001
DM_3	-0.015	0.879	-0.186	0.175	Reflect 0.080	<0.001
DM_4	-0.269	0.834	0.087	-0.015	Reflect 0.080	<0.001
DM_5	-0.081	0.849	0.330	-0.164	Reflect 0.080	<0.001
ToA	-0.000	0.000	1.000	0.000	Reflect 0.080	<0.001
ToA*IABA	0.121	-0.184	-0.235	0.800	Reflect 0.080	<0.001
ToA*IABA	0.051	-0.105	-0.264	0.788	Reflect 0.080	<0.001
ToA*IABA	-0.038	0.027	0.186	0.854	Reflect 0.080	<0.001
ToA*IABA	-0.059	0.101	0.057	0.806	Reflect 0.080	<0.001
ToA*IABA	-0.014	-0.000	-0.011	0.828	Reflect 0.080	<0.001
ToA*IABA	-0.053	0.146	0.232	0.863	Reflect 0.080	<0.001

Note: P values < 0.05

#### 4.3. Structural model analysis

Structural model analysis was used for testing the hypothesis. The first hypothesis claimed no correlation between the implementation of the accrual based accounting basis for decision making. Based on hypothetical test (see table 4, panel A), the implementation of the accrual basis of accounting was positively correlated to decision-making

(coefficients: 0.598; p<0.001). In other words, the first hypothesis of this study was acceptable.

There second hypothesis was moderating role of tolerance of ambiguity in the correlation between the implementation of the accrual accounting basis for decision making. The hypothetical test (see table 4, panel A) proves that there was a negative role moderation tolerance of ambiguity in the correlation with the accrual based of accounting implementation for decision making (coefficients: -

0183;  $p < 0.012$ ). In other words, the second hypothesis was acceptable. The role of negative tolerance of ambiguity is to weaken the relationship between the implementation of accrual based accounting in decision making.

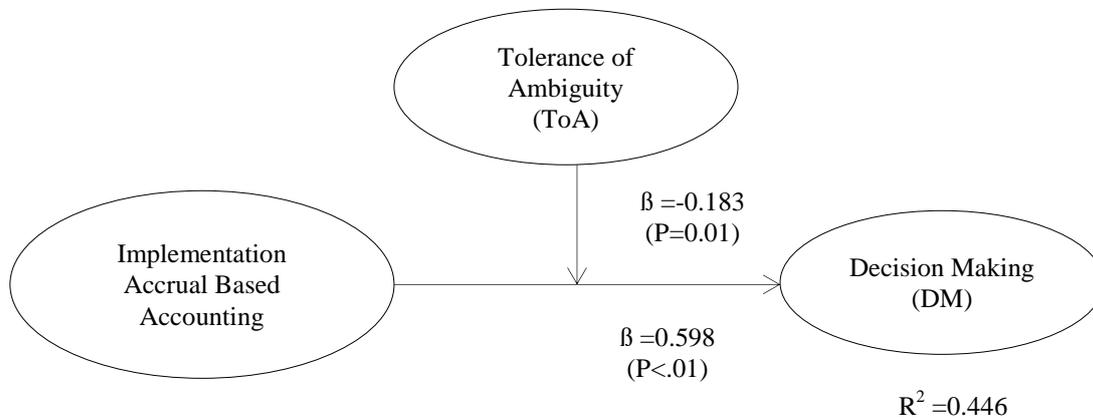
**Table 4.** Path coefficients and P values

	IABA	DM	ToA	ToA*IABA
IABA				
DM	0.598			-0.183
ToA				
ToA*IABA				
<b>P values</b>				
IABA				
DM	<0.001			0.012
ToA				
ToA*IABA				

**Table 5.** Latent variable coefficients

	IABA	DM	ToA	ToA*IABA
IABA				
DM		0.446		
ToA				
ToA*IABA				

**Figure 2.** PLS result by including moderating variable (toa)



## 5. DISCUSSION

This study investigated how the implementation of the accrual based of accounting influence on the decision making managers in public sector institution. The results of the study provide empirical evidence that the implementation of the accrual based of accounting in Semarang city has come to use the accrual based of accounting information for decision making. This result is in line with (Soleimani et al., 2015) which states that the implementation of the accrual based of accounting influence on decision making.

The results also provide empirical evidence that a low tolerance of ambiguity far the relationship between the implementation of accrual based accounting with decision making based on accounting information. These results are consistent with the concept that people who have a low tolerance of ambiguity would be difficult to accept the changes. In line also with Dermer (1973) who found that managers who have a high tolerance of ambiguity will receive accounting information and use it more easily than a manager who has a low tolerance of ambiguity. The results of this study conflict with (Oliver and Flamholt, 1978; Chong, 1998) which found that managers with a low level of tolerance of ambiguity would have low confidence in making decisions that will be more use of accounting information to reduce uncertainty.

The results also empirical evidence that the implementation of the accrual based of accounting is not just present the accrual based financial statements. Implementation of the accrual based of accounting has come to the substance, namely the information contained in the financial statements based on accrual has been the focus of internal decision makers. Implementation of the accrual based of accounting at the local government of Semarang city in substance has got the support of internal users. It thus known from the mean value of the indicator is the implementation of accrual accounting on the criteria just agrees. Results of research on local government Semarang provide empirical evidence of the group that supports the implementation of the accrual basis of accounting in the public sector (Guthrie, 1998).

This study provides empirical evidence that the decision-making on Semarang city has been based on accounting information. These results are consistent with some studies in other countries which found that implementation of accrual based accounting has produced useful information for decision-making (Andriani et al., 2010; Kober et al., 2010; Sousa et al., 2013; Soleimani et al., 2015). This research is contrary to several studies such as (Likierman, 2000; Paulsson, 2006; Hyndman and Connolly, 2011; Cohen, 2013).

## 6. CONCLUSION

Based on the results of research and discussion can be concluded that the implementation of the accrual basis of accounting in Semarang city has managed to produce accounting information that is useful in decision making. The study provides evidence that the implementation of the accrual based of accounting has shown usefulness. This study also provides fundamental knowledge that low tolerance of ambiguity weaken the use of accounting information for decision making. This study has limitations: (1). too focused on internal user respondents; and (2) this study only examined the accounting entity in government institutions that voluntarily apply the accrual based accounting. Future research can expand to examine the use of accounting information for decision-making by external users. External users such as community, supervisory elements important to investigate its behaviour in the use of accounting information. Research on government entities that implement the accrual basis as required is also very important to implement, because most local government entities in Indonesia to implement accrual basis waiting required.

## REFERENCES

1. Alijarde, I. B., and V. M. Julve. 2004. "Accrual Financial Reporting In The Public Sector: Is It A Reality?". *rev. innovar*, 24 (2) : 107-120.
2. Andriani, Y., R. Kober, and J. Ng. 2010. "Decision Usefulness of Cash and Accrual Information: Public Sector Managers' Perceptions". *Australian Accounting Review*, 20 (2): 144-153.
3. Arnaboldi, M., and I. Lapsley. 2009. "On the Implementation of Accrual Accounting: A Study of Conflict and Ambiguity". *European Accounting Review*, 18 (4) : 809-836.
4. Baron, R. M., and D. A. Kenny. 1986. "The Moderator-Mediator Variable Distinction Social Psychological Research: Conceptual, Strategic, and Statistical Considerations". *Journal of Personality and Social Psychology*, 51 (6) :1173-1182.
5. Bogt, H. J. t., and G. J. v. Helden. 2000. "Accounting change in Dutch government: Exploring the gap between expectations and realizations". *Management Accounting Research*, 11 (2): 263-279.
6. Budner, S. 1962. "Intolerance Of Ambiguity As A Personality Variable". *Journal of Personality*,30,(2): 29-50.
7. Carlin, T. M. 2005. "Debating The Impact Of Accrual Accounting And Reporting In The Public Sector". *Financial Accountability & Management*, 21(3): 0267-4424.
8. Chin, W. W., B. L. Marcolin, and P. R. Newsted. 2003. "A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study". *Information Systems Research*,14 (2): 189-217.
9. Chong, V. K. 1998. "Testing The Contingency 'Fit' Between Management Accounting Systems And Managerial Performance: A Research Note On The Moderating Role Of Tolerance For Ambiguity". *British Accounting Review*, 30 (2): 331-342.
10. Cohen, S. 2013. "Reaping The Benefits Of Two Worlds An Explanatory Study Of The Cash And The Accrual Accounting Information Roles In Local Governments". *Journal of Applied Accounting Research*, 14 (2) : 165-179.
11. Dermer, J. D. 1973. "Cognitive Characteristics and the Perceived Importance of Information". *The Accounting Review*, 48 (3) : 511-519.
12. Faircloth, A. W., and D. N. Ricchiute. 1981. "Ambiguity Intolerance and Financial Reporting Alternatives". *Accounting, Organizations and Society*, 6 (1): 53-67.
13. Gul, F. A. 1984. "The Joint and Moderating Role of Personality and Cognitive Style on Decision Making". *The Accounting Review*, 59 (2): 264-277.
14. Guthrie, J. 1998. "Application Of Acrual Accounting in Australian Publik Sector : Rhetoric or Realitic". *Financial Accountability & Management*, 14 (1) : 267-424.
15. Guthrie, J., O. Olson, and C. Humphrey. 1999. "Debating Developments In New Public Financial Management: The Limits Of Global Theorizing And Some New Ways Forward". *Financial Accountability & Management*, 15 (3): 209-228.
16. Hair, J. F., Sarstedt, Ringle, and Mena. 2012. "An assessment of the use of partial least squares structural equation modeling in marketing research". *Journal of the Academy of Marketing Science*, 40 (2) :414-433.
17. Hansen, D. R., M. M. Mowen, and A. M. Hermawan. 2010. *AkuntansiManajemen*. Jakarta: Erlangga.
18. Hodges, R., and H. Mellett. 2003. "Reporting public sector financial results". *Public Management Review*, 5 (1): 99-113.
19. Hood, C. 1995. "The "New Public Management" In The 1980s: Variations On A THEME". *Accounting Organizations and Society*, 20 (3) : 93-109.
20. Hyndman, N., and C. Connolly. 2011. "Accruals Accounting In The Public Sector : A Road Not Always Taken". *Management Accounting Research*, 22 (2): 36-45.
21. Jagalla, T., S. D. Becker, and J. Weber. 2011. "A Taxonomy Of The Perceived Benefits Of Accrual Accounting And Budgeting: Evidence From German States". *Financial Accountability & Management*, 27 (2) : 267-424.
22. Kober, R., J. Lee, and J. NG. 2010. "Mind Your Accruals: Perceived Usefulness Of Financial Information In The Australian Public Sector Under Different Accounting Systems". *Financial Accountability & Management*, 26 (3): 267-424.
23. Lapsley, I. 1999. "Accounting and the new public management: instruments of substantive efficiency or a rationalizing modernity?". *Financial Accountability & Management*, 15 (3) : 201-207.
24. Likierman, A. 2000. "Changes to managerial decision-taking in U.K. central government". *Management Accounting Research*, 11 (2): 253-261.
25. McGhee, W., M. D. Shields, and J. G. Birnberg. 1978. "The Effects of Personality on a Subject's Information Processing". *The Accounting Review*, 53 (3) : 681-697.
26. Mellett, H., N. Marriott, and L. Macniven. 2009. "Diffusion of an Accounting Innovation: Fixed Asset Accounting in the NHS in Wales". *European Accounting Review*, 18 (4) : 745-764.
27. Nogueira, S. P., and S. M. Jorge. 2012. "Adequacy of the Local Government financial reporting model in the context of internal decision-making: An exploratory study in the municipality of Braganca". *Review of Applied Management Studies*, 10 (2): 74-86.
28. Nogueira, S. P. S., S. M. F. Jorge, and M. C. Oliver. 2013. "The Usefulness Of Financial Reporting For Internal Decision-Making In Portuguese Municipalities". *Management Research: The*

- Journal of the Iberoamerican Academy of Management,11 (2): 178-212.
29. Oana, P. G. Year."The Role of Accounting Information in the Decision Making Process".Artikeldipresentasikanpada University Annals, Economic Sciences Series,Romania.
  30. Oliver, J., and E. Flamholt. 1978. "Human resource replacement cost numbers, cognitive information processing and personnel decisions: a laboratory experiment". Journal of Business Finance and Accounting, 5 (2) : 137-157.
  31. Pallot, J. 1992. "Elements of a Theoretical Framework for Public Sector Accounting". Accounting, Auditing & Accountability Journal, 5(1) : 38-59.
  32. Paulsson, G. 2006. "Accrual Accounting In The Public Sector: Experiences From The Central Government In Sweden". Financial Accountability & Management, 22 (1): 267-424.
  33. Ross, S. A., R. W. Westerfield, and B. D. Jordan. 2009.PengantarKeuangan Perusahaan. Jakarta: SalembaEmpat.
  34. Siegel, G., and H. R. Marconi. 1989. Behavioral Accounting. 1: South Western Publishing CO.
  35. Soleimani, S., M. Hassanzadeh, and N. K. Hafshijany. 2015. "The Effect Of Implementation Of Accrual Accounting In The Decision-Making Executives Of Northwest University Of Medical Sciences". Arabian Journal of Business and Management Review, 4 (7): 5-11.
  36. Sousa, R. G. d., A. F. d. Vasconcelos, R. L. Caneca, and J. K. Niyama. 2013. "Accrual Basis Accounting in the Brazilian Public Sector: Empirical Research on the Usefulness of Accounting Information". Cont. Fin. - USP, 24 (63): 219-230.
  37. Tsirikas, A. N., K. K. Katsaros, and C. S. Nicolaidis. 2012. "Knowledge Management, Tolerance Of Ambiguity And Productivity: Evidence From The Greek Public Sector". Employee Relations,34 (4): 344-359.