

# THE IMPACT OF TRAINING AND INFORMATION TECHNOLOGY ON (ABC) ADOPTION AMONG JORDANIAN SERVICES COMPANIES

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## ABSTRACT

*This paper attempts to investigate the impact of training and information technology on ABC adoption, based on a previous studies showed shortage in effect adoption of ABC for many of service companies are weak. The scope of the study encompasses the service companies in Jordan, also the financial managers and head of accounting department were determined as respondents for the questionnaire survey. The findings could facilitate policies formulation among the relevant bodies in developing countries, particularly those policies concerning services in Jordan. In addition enriching the knowledge of ABC adoption for service organizations', this study can become a starting point for further investigation and analysis of ABC adoption among Jordanian service companies.*

**Keywords:** Training, Information Technology, ABC Adoption, Service Companies

## INTRODUCTION

The services businesses need to accurate costing information and information for strategic decision, to maintain a competitive advantage due to the traditional costing system leads to cost information distortion. (Malmi, 1990; Johnson & Kaplan, 1987) the high level for Activity-Based Costing (ABC) adoption prepares an attractive chance to revision the methods of such improvement. The increase and usability of ABC system has leads to spread management accounting practices for all service businesses (Valanciene, 2007). The previous studies indicated the impact of ABC has formed different facts. Furthermore, supporters of ABC have argued that ABC aims to support the economics of construction processes, more strongly than traditional cost systems, and may afford more accurate and low costing data (Ittner, 1999; Cooper & Kaplan, 1991). Most research's mentioned that the implementation of ABC lead to equipped and strategic advantages in service companies (Anderson, 1995; Ittner, 1999). On other side some studies have that operational profits may start from enhanced visibility into the Finances of the manufacture processes and fundamental charge drivers. Strategic benefits may happen from accessibility of better information for services growth, sourcing, service blend and other strategic decisions service and has developed to cover most financial behaviors such as business, service, and industrial.

The previous studies on ABC adoption showed that an understanding of the elements that support to the success and adoption of ABC has been high interest in the field of Management Accounting Practices (MAPs). Moreover, these studies explain that organizational antecedents can influence ABC adoption and implementation like training and information technology (Maelah & Ibrahim, 2007; Al-Omiri & Drury, 2007; Ahamadzadeh, (n.d.)). Furthermore, they explained that

the effect of ABC adoption on organizational performance for services companies due to the ABC can play main role in providing accurate information for managerial operating decisions and reflect that on profitability in services organizations.

Further studies on the ABC adoption s focused in developed countries, (e.g., Askarany & Yazdifar, 2009; Pavlatos & Paggios, 2009; Rahmouni & Charaf, 2010; Rajasekaran et al., 2011; Saxena et al., 2011; Arora, 2013; Hornngren et al., 2013; Shaban, 2014). Limit studies was focusing in developing countries such as Jordan (Maelah, 2010; Fei & Isa, 2010; Rbaba'h, 2012; Al-Refa'ee, 2012; Nassar et al., 2013; Mansour, 2015), as will existing studies also, give more attention for services organization (Al-Omiri & Drury, 2007; Yazdifar & Tsameny, 2012) and few studies investigated the relationships in the Jordanian services organizations (Rbaba'h, 2012; Hutibat, 2012; Nassar et al., 2013; Mansour, 2015).

Nassar, et al., (2009; Al-Refa'ee (2012); Rbaba'h (2012); Nassar (2013) mentioned that the most cited factors affect to adopt ABC are adequate from training level and the role of information technology (Al-Refa'ee, 2012; Rbaba'h, 2012; Nassar, 2013). The level of awareness about the ABC system among financial managers in high positions is an important factor in its successful adoption in Jordanian services companies it can be improve their performance because the competition levels in Jordan will be influenced greatly by the adoption of the ABC system; this type of system greatly enhance the profitability, y (Al-kahdash & Nassar, 2010; Al-Refa'ee, 2012; Rbaba'h, 2012). Within the Jordanian case, Jordan is a developing country. It is very attractive for foreign investments, due too many reasons such as safety, political stability and its central location in the Middle East. In same time the service sector in Jordan is significantly support to promoting the Jordanian dinar exchange rate in light of their stability by supporting the Jordanian foreign currency reserves (Jaradat et al., 2018). As explained in Jaradat et al., (2018), the sector of manufacturing greatly affects the achievement of financial stability through support the treasury every year from the direct and indirect taxes.

## THEORETICAL REVIEW

### Training

Training is defined as the effort made by gaining a person's knowledge and experience about system or to transfer their organizational skills regarding specific service (Omotayo, 2015). Therefore, this research, it is important to ascertain enhance the training level for all the staffs are trained so as to enhance their knowledge about an ABC system before its adoption, and how this factor effects on organizational performance in service organizations. Additionally, the employees in service organizations through the training help share responsibility and are aware of their role on the organization and enables them to identify what they are and aren't engaging with. Thus, this leads to ensure that your employees get better training in any system.

### Information Technology

Information technology is very important in operational process provides the ability to present timely and accurate information, resulting in supported managerial and employee decision-making processes. In the service organizations, information technology can be practised in both accounting-related and non-accounting processes (Al-Nuaimi et al., 2017; James, 2013; Daoud et al., 2015; Darko et al., 2016). Information technology is consider main role communications networks for a company, safeguarding data and information and helping employees doing a range of other action to ensure the efficiency and security of information are required for management in service organizations (Al-Nuaimi et al., 2017).

## **ABC Adoption**

Adoption is a term as the acceptance and the use of something new idea. Adoption refers to make a decision to complete use of an innovation as the available top course of action (Burgess, 2012). In the context of the service organizations, Tatnall & Burgess (2012) explained that adoption to the admission of a novel innovation for the purpose of adoption. In this research, adoption refers to the ability of the service organizations to acceptance of the ABC as an innovation. This innovation has been created interest in researchers' and practitioners' for the implementation of ABC in service organizations as a result of ABC's excellence over traditional costing methods and its significance in enhancing organizational performance (Fei & Isa, 2010; Fatma & Habib, 2014; Jibril, 2018).

## **Hypothesis Development**

The idea of activity based costing system adoption are based conceptual framework. Figure (1) explains the framework of research. In this conceptual framework, the main factor ABC adoption by (training, information Technology and ABC adoption independent and dependent variables respectively. This research attempts to bridge the gap by providing a basis for discerning the effect the ABC factor successes.

### **Training and ABC adoption**

Training is required as considered the effort put forth by any service organization to transfer knowledge and experience about organizational skills regarding specific services (Botelho, 2012). It is very necessary for the staff to be trained as to enhance their knowledge about ABC systems before its adoption. The studies showed that there is a significant employee's improvement in the skills of after going through a training regime (Maelah et al., 2006; Botelho, 2012). Therefore, the ABC's attempt to is to not only educate staff about the system; it is also to counter any resistance any new system application may cause.

The training is helps the receiver (employee) acquire a certain minimum amount of knowledge on how the system works, attaining a desired level of skill (Prabowo & Simpson, 2011; Darko et al., 2016; Daoud et al., 2015). The contingency theory considers adequate training as a main factor necessity to effect the adoption of the ABC. Thus, this research is going to test the following hypothesis:

*H1: The training is positively related to ABC adoption.*

### **Information Technology and ABC adoption**

Jusoh & Miryazdi (2015) explained that the role of Information Technology (IT) is more significant to influence ABC diffusion, also Cagwin & Bouwman (2002) explained that ABC requires higher levels of IT for providing detailed data compared with the traditional costing system due to its need high IT quality and resolves the difficulty in identifying an accurate cost driver within the ABC adoption stages. In same time, Jibril (2018) mentioned that the quality of IT is likely to influence ABC adoption among service companies. Fie and Isa (2010) further investigated that the relationships between IT and ABC adoption. He found that the quality of IT is positively related to ABC adoption.

(Ruhanita, 2006; Jibril, 2018) explained that the Information technology has important role ABC to performance measure and influenced the ABC adoption significantly. Additionally, Fie &

Isa (2010) found that the impact of Information technology can be give effective role on ABC adoption and implementation. From the aforementioned discussion, therefore, the following hypothesis is proposed by this study:

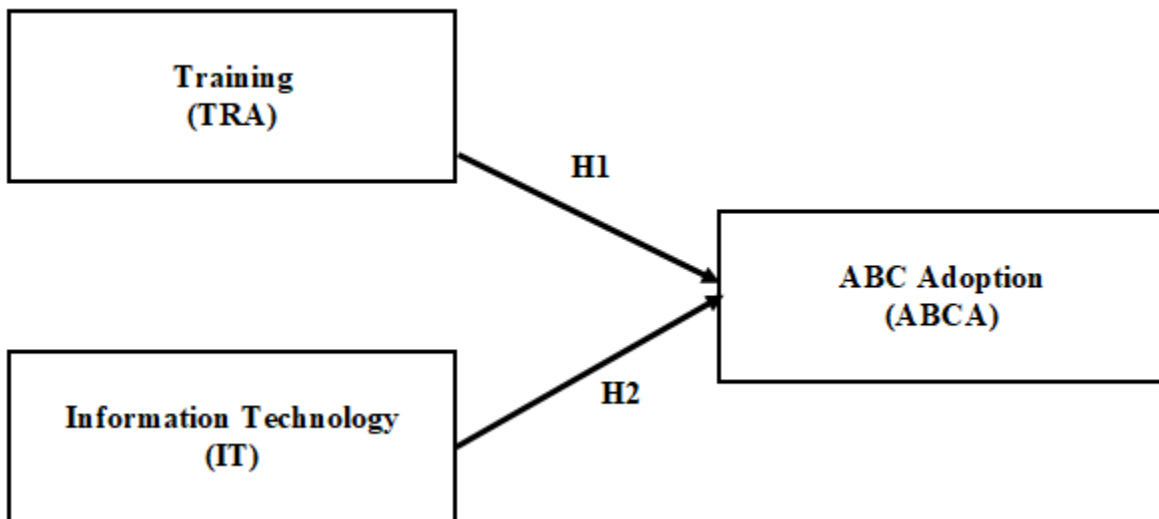
**H2:** *The Information technology is positively related to ABC adoption.*

## RESEARCH MODEL

In general, the contingency theory is an organizational theory that based that the best way to lead the company, or to make decisions, the optimal action is contingent upon the internal and external situation of the company (Jibril, 2018). The contingency perspective has been employed in management accounting studies to indicate a range of contingent variables including organization structure (Chia, 1995; Gosselin et al., 2005), training (Chenhall & Langfield-Smith, 1998b), and accounting information system design (Otley, 1980).

Contingency theory explains the factors that impact on the ABC adoption (Cadez & Guilding, 2008; Jibril, 2018; Kallunki & Silvola, 2008; Liu & Skillet, 2007). Based on this theory, there has been change on the present management accounting innovation in order to responding the conditions faced by firms; thus, these the change to practice were affected by the contextual and organizational factors and these are turned as contingency factors (Jebril, 2018).

According to the contingency theory perspective, this research will highlight the role of training and information technology the internal organizational such as contextual and organizational factors and external environmental variables. These factors will directly effect on the ABC adoption. The significant determinant of ABC adoption is the contingent fit between the organizational internal and the contingencies. Also, the contingency theory reported the factors influencing its adoption. Hence, these factors have effect on the accounting and information systems. This enables the managers and companies to adapt quickly to changing markets and technologies for the adopting accounting and organizational changes.



**FIGURE 1**  
**ABC FACTORS IN ABC ADOPTION**

## RESEARCH METHODOLOGY

Zikmund, et al., (2013) mentioned that objectives, availability of information, and cost for conducting research, this research adopts a survey method since the data obtained from a survey

is used to examine the relationships between the dependent and independent variables (Bryman & Bell, 2015). In addition, as the respondent is financial managers, has expected to be highly educated, making a survey approach the most suitable technique for this context (Cooper et al., 2006). Jarrdat (2018) reported that the advantage of the survey strategy is that a large amount of data can be gathered from respondents, and the results can be generalized to the population at large.

Oppenheim (2000) explained that an instrument should fulfil two requirements: Relevancy and accuracy. In terms of fulfilling the relevancy requirement, this research employed questionnaires to gather information on the research objectives. Concerning the fulfilment of the accuracy requirement, (Zikmund et al., 2013).

The effect of training and information technology on the ABC adoption was examined in this research *via* the application of questionnaires distributed to financial managers of 291 randomly selected Jordanian service organizations. The questionnaire consists of three main sections: Part A to Part C Part A gathers demographic data of the respondent and his/ her companies. Part B focused on the factors (training and information technology) influencing the ABC adoption; Part C gathers data related information about ABC adoption in companies.

Five items representing the construct of training and ABC adoption were supplemented with a 5-point Likert scale S1-S5 range as well where S1 “strongly disagree” while S5 signifies “strongly agree.” five items representing the construct of information technology were supplemented with a 5-point Likert scale with S1-S5 range as well where S1 “strongly disagree” while S5 signifies “strongly agree.” Meanwhile, a total of six items were representing the construct of ABC adoption.

## RESULTS AND DISCUSSION

### Data Analysis

Factor analysis was in this research, and evaluation was made to the measures of the construct to determine both its reliability and validity. Further, the model proposed in this study demonstrates the used variables’ unidimensionality, in the explaining of factor analysis. With the use of AMOS-SEM, the (measurement model) and the (structural model) were evaluated after the data have been checked and screened. In particular, AMOS-SEM analysed this study’s direct results.

### Measurement Model

Based on the Amos-SEM. The component measurement was included in the model and this model provides the determination the indicators (items) hypothetically and link to the resultant constructs. In this study, the model analysis results affirm that the items of the survey measure the constructs as they should, affirming both their validity and reliability.

| <b>Construct</b> | <b>Items</b> | <b>Loadings</b> | <b>Cronbach's Alpha</b> | <b>CR</b> | <b>AVE</b> |
|------------------|--------------|-----------------|-------------------------|-----------|------------|
| TRA              | TRA1         | 0.74            | 0.950                   | 0.948     | 0.786      |
|                  | TRA2         | 0.84            |                         |           |            |
|                  | TRA3         | 0.87            |                         |           |            |
|                  | TRA4         | 0.81            |                         |           |            |
|                  | TRA5         | 0.85            |                         |           |            |
| IT               | IT1          | 0.83            | 0.853                   | 0.854     | 0.662      |

|      |       |      |       |       |       |
|------|-------|------|-------|-------|-------|
|      | IT2   | 0.80 |       |       |       |
|      | IT3   | 0.81 |       |       |       |
|      | IT4   | 0.83 |       |       |       |
|      | IT5   | 0.86 |       |       |       |
| ABCA | ABCA1 | 0.86 | 0.931 | 0.933 | 0.697 |
|      | ABCA2 | 0.83 |       |       |       |
|      | ABCA3 | 0.83 |       |       |       |
|      | ABCA4 | 0.84 |       |       |       |
|      | ABCA5 | 0.81 |       |       |       |
|      | ABCA6 | 0.84 |       |       |       |

For each construct used in this study, its values of CR and Cronbach's alpha were determined (see Table 1). The constructs used in this study all achieved the values of CR and Cronbach's alpha that are greater than the suggested threshold value of 0.70 (see Hair et al., 2013; Henseler et al., 2009; Wong, 2013). Furthermore, Henseler, et al., (2009) elaborated that convergent validity relates to the degree to which measures of constructs with theoretical association are linked.

### Hypotheses Testing

In this research, the test was executed on the hypothesised model with the first stage in application of Amos-SEM algorithm. Accordingly, as explained in Table 2:

| Hypotheses | Path coefficient | T. Statistics | P-Values | Decision     |
|------------|------------------|---------------|----------|--------------|
| TRA→ABCA   | 0.200            | 3.275         | 0.075    | H1 Supported |
| IT→ABCA    | 0.268            | 4.036         | 0.000    | H2 Supported |

Concerning with the path between TRA, IT constructs and ABCA construct (Hypotheses (H1 and H2), the beta coefficient is positive and statistically significant at  $p\text{-value} < 0.001$  ( $\beta=0.200$ ;  $t=3.275$  and  $\beta=0.268$ ;  $t=4,036$ , respectively).

### Discussion of Results

This research found that the relationship between TRA and IT with ABC adoption is positive; this result supported by hypothesis H1 and H2. Based on that, it seems that TRA and IT make effective role on ABC adoption. This result in line with studies that support a positive relationship between TRA and ABC adoption (Jibril, 2018; Nassar et al., 2011; Al-Refa'ee, 2012; Fadzi & Rababah, 2012; Rababah, 2014). Also, this result in line with studies that support a positive relationship between IT and ABC adoption (Nassar et al., 2011; Al-Refaee, 2012; Rababah, 2012, Jibril, 2018).

Based above discussion in the previous sections, the Following framework is, explained by Figure 1, for this research. This research aim to investigate the roles of the ABC factors on ABC adoption among Jordanian service companies. The research seek to as a wake-up call for reforming the management innovations in Jordan.

## CONCLUSIONS AND RECOMMENDATION

The calls for additional research using a contingency perspective to understanding of ABC adoption in service companies and the increasing importance of service companies globally, especially in developing countries has motivated this research. Therefore, among service companies, this research explores training and information technology in terms of the factors influencing on ABC adoption.

Considering the positive effect training and information technology on ABC adoption, the managers and decision-makers should increase the knowledge of ABC adoption. Likewise, professional bodies should enrich the knowledge of ABC adoption particularly concerning in service companies through the use of workshops and conferences. As the effect training and information technology on enhance the level of ABC adoption, policymakers should encourage these role on ABC adoption in service companies. Therefore, considering the positive impact of these factors on ABC adoption, managers and decision-makers in service companies should take these factors into consideration when making their decisions.

This research provides knowledge on ABC adoption in service companies in developing countries. According to study results, the concerned bodies could be assisted in reformulating the policies associated with service companies. Also, the awareness of factors affecting ABC adoption assists the professional bodies in the enrichment of service companies understanding particularly concerning the ABC adoption affecting factors. In the context of service companies, this research can stimulate more scrutiny and analysis concerning service companies.

However, there are several limitations related to this study which are worth considering. Firstly, the variables employed in this research were limited and this may cause the neglect of certain vital variables. Hence, there is merit in having the understanding of other factors related to ABC adoption on service companies. Accordingly, among these factors are: organizational culture, as well. Another notable limitation is the use of limited sample in this research, whereby it consisted the service companies. The use of limited sample reduces the generalizability of the outcomes of this research to other types of organisations in other service. Hence, it might be of value to consider other sectors, for instance, service and manufacturing companies as this would allow comparison of outcomes, increasing the generalisation.

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