



**Research Publishing  
Academy (RPA)**  
London, United Kingdom (UK)

**JIBM**

Journal of International Business and Management (JIBM)  
Journal Homepage: <https://rpajournals.com/jibm>

## **Impact of E-Accounting Practice on Overhead Cost Performance: Bangladesh Ready-made Garments (RMG) Industry Experience**

Md. Ismail Hossain<sup>1\*</sup>

Major Md. Ferdausur Rahman<sup>2</sup>

Bangladesh University of Professionals (BUP), Bangladesh<sup>1</sup>

Military Institute of Science & Technology (MIST), Bangladesh<sup>2</sup>

### **Abstract**

E-accounting is alluded as the internet based accounting software usage in accomplishing accounting functions. E-accounting practice through e-recording and e-reporting of financial transactions, lessens the overhead cost of user firms. In respond to the evidence that Bangladesh's economic backbone RMG sector do this accounting practice at large scale, this study aims to analyze the impacts e-accounting practice on overhead cost of the factories. To achieve the objective, the study deploys sequential mixed research strategy constructed with pseudo case study and survey. Based on DeLone and Mclean's updated IS Success model (2003), and e-accounting literature, questionnaire was formed for case study. Using 'Overhead cost performance' in lieu of Purposive and snowball sampling technique five case factories were chosen for data collection. Using content analysis case data were analyzed. Case findings was used to form structured questionnaire for survey. This firm level study considers 3500 active RMG factories as the population. Using G-power 3.1 sample size calculating software, envisaging of smaller effect size  $f=0.06$ , the study has taken 200 sampled factories. Using convenience as well as snowball sampling technique, the study conducted the survey. The owners or managers of factories were taken as respondents. MS Excel, SPSS 20.0 and the Smart PLS 3.3.3 were used to analyze survey data. Using PLS SEM the hypotheses were tested. The study reveals that e-accounting practice has significant impact on abating overhead cost of RMG industry of Bangladesh. The study also concludes that administrative overhead cost is more affected by the e-accounting practice than that of factory and selling.

Keywords: E-accounting practice, Purposive and snowball sampling, RMG factories, Bangladesh

DOI: <https://doi.org/10.37227/JIBM-2023-10-6261>

### **Introduction**

Electronic accounting, abbreviated as e-accounting, means the internet based accounting system in which online accounting software or ERP is used for performing ubiquitous accounting functions of business sector (Dimitriu & Matei, 2014a, pp. 842; Toshniwal, 2016, pp. 579; and Tarboush, 2017, pp. 05, Hossain & Rahman, 2022, Hossain & Rahman, 2023). With this usage of internet based accounting software, accounting functions are in such as in e-

recording and e-reporting. All types of countries such as first world, second world and third world countries are practicing this updated form of accounting system. Bangladesh, a LDC country, does not remain far behind in this aspect. Its govt as well as non govt sector i.e. business sector are practicing this updated form of accounting practice. Bangladesh's economic backbone and the largest business sector, RMG industry had been practicing this modern accounting system for more than 10 years (Nipa, 2020, Hossain & Rahman, 2022 and Hossain & Rahman, 2023). The other title of this accounting is cloud accounting. According to e-accounting effect literature such as Phillips, (2012), and CCH, (2013), e-accounting user firms generally receive overhead cost minimizing benefits. That means for using internet based accounting system, either of created or rented, the user firms' overhead cost such as printing and stationery, telephone and postage, data storage cost of corporate office, factory office and selling wings office are being abated. Accordingly e-accounting practicing RMG factories of Bangladesh are also supposed to receive overhead cost minimizing at factory, administration and selling wings office which remains at out of research. The prevailing e-accounting literature such as Hossain & Rahman, (2022) and Hossain & Rahman, (2023) tried to explore scenario and to identify influencing factors of e-accounting practice. But there remains gap to identifying the overhead cost minimizing concern of e-accounting practice in RMG sector of Bangladesh. This study is going to fill up that vacuum of literature.

### **Problem statement**

Bangladesh RMG industry is called the economic life line of the country. But this life blood business sector has been suffering from overhead cost increasing problem and inefficiency in accounting system for many years (Textietoday.com, 2020). To solve these problems, for several years many RMG owners had been uttering the demand for adopting mobile and internet based accounting system (Ahad et al, 2021). In contrast to this background, a good number of RMG and textiles factories do the e-accounting practice. The e-accounting post adoption stages literature states e-accounting practice through its functions such as e-recording, e-reporting, e-financial statement, and e-storage, minimizes overhead cost up to 50% of user firms. In manufacturing companies overhead costs are of three types that are involved with factory, administration and selling wing. According to literature (Phillips, 2012), e-accounting practicing RMG factories are supposed to receive overhead cost minimizing benefits. That means, e-accounting practicing RMG factories are assumed to minimize factory overhead cost, administrative overhead cost and selling overhead cost. But these overhead costs minimizing aspect is yet to be studied in RMG sector. The prevailing RMGs e-accounting literature (such as Hossain & Rahman, 2022 and 2023) explored and identified the e-accounting adoption. The effect on overhead still remains in the dark. Therefore, at the above significant gap, this e-accounting adoption study advances for new knowledge related to identifying the impact of e-accounting practice on overhead cost performance of RMG sector of Bangladesh.

### **Rationale of the study**

This study is basically the effort to verify the statement of Phillips (2012), an American cloud accountant (CPA), whether e-accounting practice enables a firm to minimize overhead cost or not. The context of this study is Bangladesh's economic backbone RMG industry. Overhead cost increasing is the main headache of Bangladesh RMG owners. For many years, in RMG sector, huge efforts were expended to manage this cost. If this cost could be minimized a little, product cost would have been minimized at a significant level. At the

competitive business context, the importance of minimizing overhead cost such as factory overhead, administrative overhead and selling overhead of Bangladesh RMG sector is unparalleled. In this regard, e-accounting practice is crucial. Literature states that with the usage of e-accounting, less staff, less depreciation, less information system operating cost, is incurred. Bangladesh RMG factories which have been practicing the e-accounting for more than 10 years are also supposed to achieve this financial benefits. But no study discovered this issue. This current study is going to fill the gap investigating the impact of e-accounting practice on overhead cost performance of Bangladesh RG industry.

### **Research questions**

The problem statement leads to the research questions whether the e-accounting practice has any impact on factory overhead cost, administrative overhead cost and on selling overhead cost of Bangladesh RMG industry.

### **Research objectives**

According to research questions raised, this study has set up two types of objectives. One is general objective and another is specific objectives. This study has one general objective which is to analyze the impact of e-accounting practice on overhead cost performance of Ready-made Garments (RMG) industry of Bangladesh. This study sets also the specific objectives which are to identify the impact of e-accounting practice on factory overhead cost, administrative overhead cost and selling overhead cost of Ready-made Garments (RMG) industry of Bangladesh.

## **Review of Literature**

### **E-Accounting practice**

E-accounting is the most updated version of double entry system that was invented in 1494 by Luca di Pacioli in Italy (Medius 2020). After the invention of WWW (world wide web) in 1990, like other changing to electronic and online form, accounting, the debit credit identification of financial transactions and its reporting to users has also been redesigned to online electronic form that is called as e-accounting. Similar to that of electronic mail (e-mail), electronic accounting helps to perform accounting tasks such as transactions recording, classifying, summerrising, and communicating to users through online (Toshniwal, 2016 and Teru et al, 2019). In 1998 Joan Mann pronounced the word 'e-accounting' at first n 1998 in America (Adedoyin, 2017). In 2006, in New Zealand, 1<sup>st</sup> e-accounting provider company Xero was established. In 2011 mobile based accounting came to the world and e-accounting emerged at a large scale. In order to implement e-accounting, internet connection with laptop, tablet or smartphone are used. Login ID is required to enter the system and data is saved with appropriate privacy and security. In e-accounting practice, financial transactions are being processed and analyzed in e-recording, e-reporting, e-reconciliation form (Phillips, 2012).

### **Overhead cost of a firm**

Overhead refers to the ongoing business expenses not directly attributed to creating a product or service. It is any expense incurred to support the business while not being directly related to a specific product or service (Tuovila, 2023). Overhead cost can be categorized as factory, administrative and selling according the business operation (Tuovila, 2023). In factory to prepare a product, in excess of raw materials and wage, few extra cost is incurred that is factory overhead. Factory depreciation, factory insurance are the examples here.

Administrative overhead includes costs related to the general management and administration of a company, such as the need for accountants, human resources, receptionists, printing and postage, meeting expense, newspaper and periodicals expenses. This can also include the cost of stocking the office with the necessary supplies, the salaries of office associates, and external legal and audit fees. Selling overhead relates to activities involved in marketing and selling the good or service. It may include printed materials and television commercials, as well as the commissions of sales personnel.

### **Bangladesh RMG industry and its overhead cost**

Bangladesh RMG industry is the only fifty-billion-dollar manufacturing and exporting industry (BGMEA.com, 2023). Currently, the sector is consisted with 3552 active factories both of textile, composite, knit and woven type. This sector stands as the destination of 41 lac people's earnings. RMGs are divided mainly into two broad categories, such as woven and knit. Recently new category emerged named 'sweater' made from mainly knitted fabrics. According to BGMEA database, main products are upper garments such as shirts, t- shirts, polo shirts, sweater, and jacket, bottom garments i.e. trousers, jeans, socks and undergarments of both male and female. The main raw materials are woven fabrics and knit fabrics. The overhead expense incurred in those factories to make garments are salaries of staff of both factory, office and showroom or merchandisers. The printings, stationery, postage expense, meeting expense, paper used, depreciation of office space, or office rent, meeting of the owners with and buyers (Choudhary, 2015).

### **E-accounting practice in RMG Industry and its overhead cost performance**

Very few researches have been observed regarding e-accounting adoption in RMG sector of Bangladesh. The main contribution of the cloud accounting adoption in the sector can be depicted below in literature review matrix:

**Table 01: Literature Review Matrix of e-accounting adoption in RMG industry**

| <b>Author<br/>s<br/>(with<br/>Year)</b> | <b>Title</b>                                                                                      | <b>Research<br/>Objectives</b>                                                  | <b>Method<br/>ology</b>                               | <b>Analysis</b>                                      | <b>Findings</b>                                                                                                    | <b>Gap</b>                                              |
|-----------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Nipa<br>(2020)                          | Validating<br>Existing<br>ICT<br>Infrastructu<br>re of RMG<br>Sector: A<br>Study on<br>Bangladesh | To inform<br>the ICT<br>infrastructur<br>e of RMG<br>factories of<br>Bangladesh | Quantita<br>tive<br>research<br>strategy.             | Descriptive<br>statistics                            | 28% RMG<br>factories<br>use saas<br>based<br>accountin<br>g system<br>which has<br>cost<br>minimizin<br>g features | Effect<br>on cost<br>has not<br>been<br>shown           |
| Hossai<br>&<br>Rahma<br>n<br>(2022)     | Scenario of<br>E-<br>Accounting<br>Practice in<br>Ready-<br>made                                  | To explore<br>the e-<br>accounting<br>practice in<br>RMG                        | Mixed<br>research<br>strategy<br>construc<br>ted with | Content<br>analysis and<br>Descriptive<br>statistics | 86% RMG<br>factories<br>are now<br>use e-<br>accountin<br>g system.                                                | No<br>effect of<br>the<br>practice<br>has been<br>shown |

|                         |                                                                                                  |                                                                                             |                                                                           |                     |           |                                                                                                       |                                           |
|-------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------|-----------|-------------------------------------------------------------------------------------------------------|-------------------------------------------|
|                         | Garments (RMG) Industry of Bangladesh                                                            | industry of Bangladesh                                                                      | KII and survey                                                            |                     |           | Knit sector is clearly ahead in this regard                                                           |                                           |
| Hossain & Rahman (2023) | Factors Influencing the E-Accounting Practice in Readymade Garments Industry (RMG) of Bangladesh | To identify the factors influencing the e-accounting practice in RMG industry of Bangladesh | Quantitative research strategy. Survey on 300 RMG factories of Bangladesh | PLS using PLS 3.3.3 | SEM Smart | System Quality, information quality, top management support and resisting factors influence to adopt. | No effect of the practice has been shown. |

### Research gap

Hasan (2017) focuses on wage digitation practice, Rashid, (2019) affirms on workers e-wallet practice, Nipa (2020) validates online accounting practice, Hossain & Rahman (2022) explore the e-accounting practice and Hossain & Rahman (2023) identified the influencing factors of e-accounting practice of Bangladesh RMG industry, but no study portrayed the effect of the practice on overhead cost of RMG sector of Bangladesh. This study is going to fill up the gap focusing on the impact of e-accounting practice on overhead cost of RMG industry of Bangladesh.

### Theoretical framework

To meet up the objective of the study, this study adopted the DeLone and Mclean's updated Information System Success model (2003) as the theoretical lens of the study. The said model is presented below:

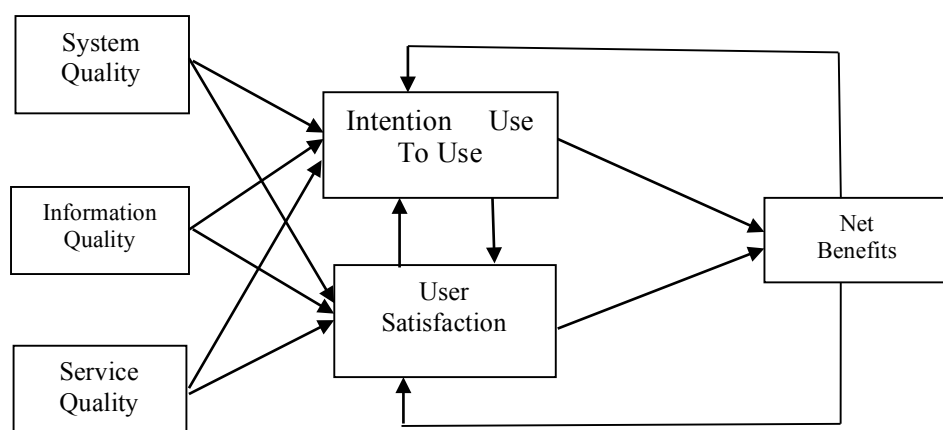


Figure 01 DeLone & McLean's updated IS success Model (2003)

The model shows three influencing factors influence use, and user satisfaction which also affect net benefits. One of the model validating studies, Perez Mira (2010) opined that, user

satisfaction indicates the individual level research. The current study is at firm level study, so user satisfaction has been ignored here. Also, this study attempts to identify the effect of the e-accounting practice on overhead cost, hence this study is not concerned with influencing factors. Therefore, in this study, the model stated three influencing factors have been omitted. Rather this study assumes net benefits as the factory overhead cost, administrative overhead cost and selling overhead cost.

So, the research model can be framed in the following way:

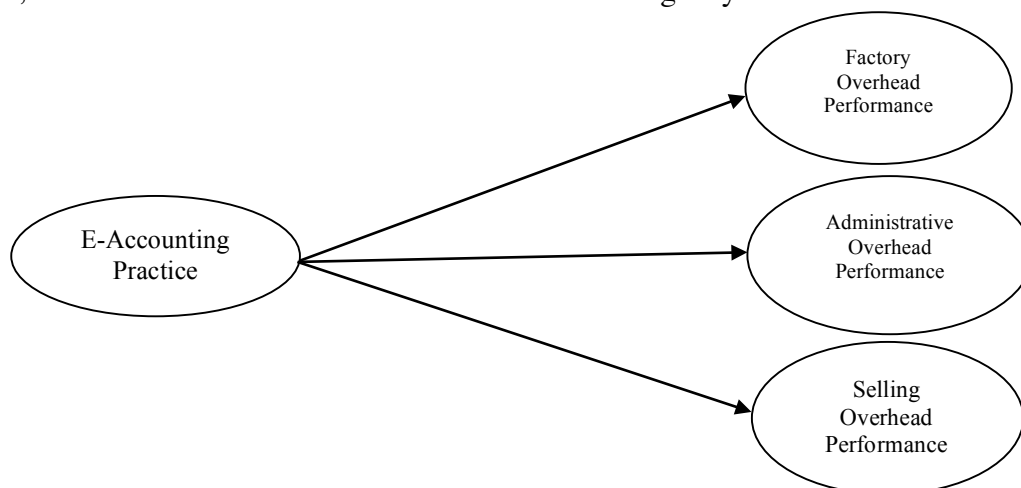


Figure: 02: Research Model

### Variables and hypothesis of the study

The research model presented above, has four variables of which conceptualizations and relationships are presented below.

#### E-accounting practice

This study takes the e-accounting concept from Phillips, (2012) that paradigm transformation of accounting. With using online accounting software or ERP, recording, reporting and invoice system are generally redesigned into electronic form. Then e-recording, e-reporting, e-reconciliation, e-invoice, e-storage usage has been conceptualized as e-accounting practice in this study.

#### Factory overhead cost performance

Bukenya (2014, pp. 185) states that expenditure performance means the abating expenditure. Accordingly, factory overhead cost performance means the minimizing the factory overhead cost. Factory overhead cost has been conceptualized according to Choudhary, (2015) and Tuovila, (2023). As per those studies, in order to produce a product, several direct cost such as direct material, direct labor and direct other cost such as freight in, are incurred of which summated value is titled as prime cost. With this cost, few additional expenses are needed to incur such as factory drawing officer's salary, factory insurance, factory rent, utilities, factory information system installation and maintenance and factory staffs salary, factory depreciation etc. According to Phillips (2012), few factory overhead cost could be abated with the e-accounting practice. According to CCH (2013) study, the biggest benefit of using the e-accounting system is that it can be accessed from multiple locations, and the users need not to worry about maintenance or purchasing hardware or accounting software which abates the factory overhead cost. According to Rashed et al (2011) internet based factory information system (FIS) installed in RMG factory, makes the factory office works easier

and cost effective. And e-wallet practice (Rashid, 2019) in the Bangladesh RMG factory makes wage digitation that minimizes the wage paying efforts and cost. So, hypothesis can be drawn in the following way:

*H1: E-accounting practice positively influences factory overhead cost performance of RMG industry of Bangladesh.*

### **Administrative overhead cost performance**

With the discussion of Choudhary, (2015), Tuovila, (2023), administrative cost of RMG industry may be of official additional expenses such as printing, stationery, postage, telephone, newspaper, meeting expenses, etc. Hossain & Rahman (2022), explore that 86% Bangladesh RMG factories implement e-accounting system in their office and factories. Hossain & Rahman (2023) found that perceived system quality, perceived information quality influence to adopt e-accounting practice in Bangladesh RMG factories. The e-accounting literature informs that with the e-accounting practice, the corporate office or head office of the users' firms remains updated for 24/7. Every moment financial statement is provided on e-reporting form. Accordingly, with the implementation of e-accounting practice in the Bangladesh RMG industry, the owners and or merchandisers remains aware of accounting information every moment. Hence meeting expense, reporting expense, printing, stationery, postage expenses is supposed to be minimized in the Bangladesh RMG sector. So, on the basis of Choudhary, (2015), Tuovila, (2023), Phillips (2012), CCH (2013), Rashid (2019) Hossain & Rahman (2022), and Hossain & Rahman, (2023) studies, the following hypothesis can be formulated:

*H<sub>1</sub>: E-accounting practice positively influences administrative overhead cost performance of RMG industry of Bangladesh.*

### **Selling overhead cost performance**

According to the discussion of Choudhary, (2015) and Tuovila, (2023), selling overhead cost of RMG industry is related to selling RMGs with Buyers or buying houses. Those expenses may be of showrooms, rent, depreciation, insurance, printing stationery, etc. With the use of e-accounting software, information of receiving and selling RMGs is reached to the merchandisers, owners and every department with just a moment when the selling is made. In this accounting system, e-invoice, e-reminder to buyers about payment, e-payment, and e-receipt are done easier which abate selling wing's overhead cost (such as recording and reporting cost, telephone, telex, fax and other communication cost). Since there remains a significant implementation of e-accounting in the Bangladesh RMG factories, the following hypothesis can be developed:

*H<sub>2</sub>: E-accounting practice positively influences selling overhead cost performance of RMG industry of Bangladesh*

## Methodology of the Study

### Research Design

Research design depends on the type of research questions and the research questions containing 'what' indicates to adopt both the survey and case study strategy. Also at the time of asking effect of a technology adoption survey is the first priority (Yin, 2003, pp. 05). Hence, mixed research design i.e. the mixed with qualitative and quantitative research strategy was deployed in this study. Accordingly, the quantitative part is dominating one in this study. The sequential mixed strategy in accordance of Creswell, (2009), the qualitative part has been accomplished at first, then survey has been conducted and analyzed.

### Sampling technique

The study considers 3500 RMG factories listed in BGMEA website (BGMEA.com, 2023) as the population. In the pseudo case study five e-accounting practicing RMG factories were chosen using purposive and then snowball sampling technique. The survey was accomplished on 200 RMG factories, sampling calculated using the *G\*power 3.1* (Faul et al., 2007) software with the setting  $f^2 = 0.06$  (small),  $\alpha = 0.05$  and number of predictors = 4 and the power was set at 80% (Gefen et al., 2011). Here for survey, factories were chosen using convenience as well as snowball sampling technique. In both cases, respondents were the policy level personnel of RMG factory such as owners or managers. Individual respondents from individual factory has been chosen that is similar to that of Huynh, (2019, pp. 64) study.

### Apparatus

For case study, five broad questions (see Table 02) were asked to case interviewees. In survey structured questionnaire has been used to elicit primary data from the above-mentioned respondents. The sections of questionnaire such as e-accounting practice and overhead cost performance have been measured using five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree.

### Procedure of Data Analysis

Case study was analyzed using content analysis as per Ahmad, (2011). The survey data was analyzed using descriptive statistics and PLS SEM (Partial Least Squares Structural Equation Modelling) with running the Smart PLS 3.3.3. Following the recommended two-stage analytical procedures, the researcher tested the measurement model followed by an examination of the structural model as similar to that of Ramayah et al., (2013). Again, using  $R^2$ ,  $Q^2$  and  $f^2$  with VIF values,  $p$ -value,  $t$  value, (Heir et al, 2019), the analysis was conducted and concluded.

### Analysis and Findings

According to the research methodology stated in the previous section, this study conducted, five pseudo case study on five e-accounting practicing RMG factories and a survey on 200 RMG factories located in Bangladesh territory. Again, to triangulate the primary data analytical results, this study analyzed the secondary data published in form of annual reports. These three analysis and findings have been presented here chronologically:

## Case analysis and findings

In case study interview, the five questions were asked to five owners of selected five RMG factory. The questions are in the following table:

| <b>Table 02: Semi-structured questionnaire for case study</b> |                                                |                                                                                      |
|---------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>S.N</b>                                                    | <b>Topic</b>                                   | <b>Questions</b>                                                                     |
| 1                                                             | E-accounting practice                          | What do you mean by e-accounting practice in your RMG factory?                       |
| 2                                                             | Overhead cost                                  | What are the overhead costs of your factory? (factory, administrative and selling)   |
| 3                                                             | Effect of e-accounting practice on overhead of | How e-accounting practice affect to minimize factory overhead cost?                  |
| 4                                                             | Bangladesh RMG industry                        | How e-accounting practice affect to minimize administrative overhead cost?           |
| 5                                                             |                                                | How e-accounting practice affect to minimize selling and distribution overhead cost? |

According to content analysis described in Ahmad, (2011), the pseudo case were analyzed. After analysis, the following constructs and items were identified:

| <b>Table 3: Variables or Items identified in case study</b> |                                                                    |            |            |            |                                                           |
|-------------------------------------------------------------|--------------------------------------------------------------------|------------|------------|------------|-----------------------------------------------------------|
| <b>Model No</b>                                             | <b>Construct</b><br>( Total no. of items under each construct)     |            |            |            | <b>Total accepted no. of items under each participant</b> |
|                                                             | <b>EAP</b>                                                         | <b>FOH</b> | <b>AOH</b> | <b>SOH</b> |                                                           |
|                                                             | <b>Accepted no. of variables under each construct in 5 figures</b> |            |            |            |                                                           |
| 1 <sup>st</sup> Case                                        | 5                                                                  | 5          | 5          | 5          | 5                                                         |
| 2 <sup>nd</sup> Case                                        | 4                                                                  | 3          | 5          | 4          | 5                                                         |
| 3 <sup>rd</sup> Case                                        | 5                                                                  | 5          | 5          | 5          | 5                                                         |
| 4 <sup>th</sup> Case                                        | 5                                                                  | 4          | 3          | 2          | 5                                                         |
| 5 <sup>th</sup> Case                                        | 5                                                                  | 3          | 5          | 4          | 5                                                         |
| <b>Conclusive model</b>                                     | 5                                                                  | 5          | 5          | 5          | 20                                                        |

Here, the constructs are similar to that of figure 2, i.e. research model of the study. This model has been tested through survey. In addition, under each construct, case study analysis identified items which are as follows:

In e-accounting practice, e-recording, e-invoice, e-reporting, e-financial statement and e-storage usage have been identified as the items. Under every overhead type, five items have been identified as the indicators. These are printing and stationery, postage and telephone, staffs' salary, staffs' insurance premium, staffs meeting cost.

## Survey analysis and findings

According to methodology stated above, survey on 200 RMG factories were conducted. The analysis of collected data can be presented in following way

## Demographics

Tables and graphs present descriptive information about the respondents in this study.

### i. Designation of respondents

The table 4 shows that 55% respondents are of factory managers

**Table 04: Designation of respondents**

| Designation                | Percent |
|----------------------------|---------|
| Factory Manager            | 55.00%  |
| Owners/Managing Director   | 15.00%  |
| Executive Director         | 13.30%  |
| Assistant General Manager  | 13.30%  |
| Chief Accounting Executive | 13.30%  |
| Total                      | 100.00% |

### ii. Gender

The figure 03 shows that about 85% respondents are male. Only 15% is of female.

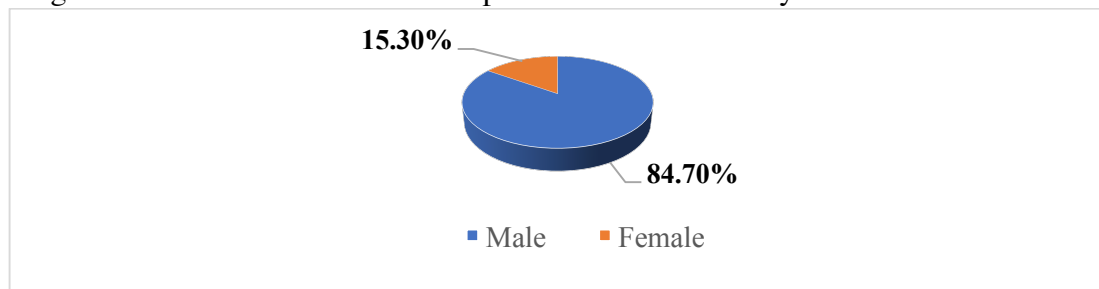


Figure 03 Gender of respondents

## Data analysis via Structural Equation Modelling (SEM).

As described previously in sections 8.4, PLS SEM performs model assessment in two sequential stages which are as follows:

### i. Assessment of measurement model

In SEM analysis, measurement model is basically the four types of calculation and interpretation. Item loading calculation, constructs' internal consistency calculation through Cronbach's alpha and composite reliability, convergent validity determination through AVE (Average Variance Extract) and Discriminant validity through HTMT (heterotrait-monotrait) ratio calculation (Hensler et al, 2015 and Heir et al 2019). The table 04 and 05 shows those calculation results. According to rule of thumb, all the results are within threshold value. Items matrices, Cronbach's alpha and composite reliability metrics are equal or more than 0.708, AVE values are also equal or more than 0.50. And HTMT ratios of every construct are within 0.90 or 0.85. That means measurement model analysis of the surveyed data are ready for structural analysis which is used for hypothesis testing.

**Table 05: Measurement of construct validity**

| Constructs              | Items | Item Loading | Cronbach's Alpha | CR    | AVE   |
|-------------------------|-------|--------------|------------------|-------|-------|
| Administrative Overhead | AOH1  | 0.878        | 0.887            | 0.922 | 0.748 |
|                         | AOH2  | 0.766        |                  |       |       |
|                         | AOH3  | 0.866        |                  |       |       |
|                         | AOH4  | 0.939        |                  |       |       |
| E-Accounting Practice   | EAP1  | 0.888        | 0.905            | 0.926 | 0.715 |
|                         | EAP2  | 0.884        |                  |       |       |
|                         | EAP3  | 0.834        |                  |       |       |
|                         | EAP4  | 0.865        |                  |       |       |
|                         | EAP5  | 0.750        |                  |       |       |
| Factory Overhead        | FOH1  | 0.881        | 0.868            | 0.902 | 0.648 |
|                         | FOH2  | 0.845        |                  |       |       |
|                         | FOH3  | 0.75         |                  |       |       |
|                         | FOH4  | 0.736        |                  |       |       |
|                         | FOH5  | 0.804        |                  |       |       |
| Selling Overhead        | SOH1  | 0.874        | 0.915            | 0.934 | 0.739 |
|                         | SOH2  | 0.83         |                  |       |       |
|                         | SOH3  | 0.881        |                  |       |       |
|                         | SOH4  | 0.799        |                  |       |       |
|                         | SOH5  | 0.91         |                  |       |       |

Notes: For having lower loadings AOH5 has been deleted.

CR means composite Reliability and AVE means Average Variance Extract

**Table 06: Discriminant Validity (HTMT Ratio)**

|                         | 1     | 2     | 3     |
|-------------------------|-------|-------|-------|
| Administrative Overhead |       |       |       |
| E-Accounting Practice   | 0.677 |       |       |
| Factory Overhead        | 0.47  | 0.326 |       |
| Selling Overhead        | 0.54  | 0.55  | 0.653 |

### *ii. Appraisalment of structural model*

In PLS SEM, for hypothesis testing structural model analysis is done. Apparently,  $R^2$  calculation is the prime way to conclude. Besides, few other calculations are needed such as  $Q^2$  for predictive relevance checking,  $f^2$  for effect checking and t values and p values for hypotheses testing. Before going to  $R^2$  calculation, inner VIF (Variance Inflation Factor) calculation is done to check whether data are manageable (Ramayah et al, 2017, pp. 08 and Hair et al 2019, pp. 11). These calculations results have been presented in the following 07, 08, 09, 10 and 11 number table:

**Table 07: Inner VIF Values**

|                       | Administrative Overhead | Factory Overhead | Selling Overhead |
|-----------------------|-------------------------|------------------|------------------|
| E-Accounting Practice | 1                       | 1                | 1                |

**Table 08: Co-efficient of Determination R<sup>2</sup>**

|                         | R Square |
|-------------------------|----------|
| Administrative Overhead | 0.468    |
| Factory Overhead        | 0.123    |
| Selling Overhead        | 0.345    |

**Table 09: Effect size f<sup>2</sup>**

|                       | Administrative Overhead | Factory Overhead | Selling Overhead |
|-----------------------|-------------------------|------------------|------------------|
| E-Accounting Practice | 0.878                   | 0.14             | 0.527            |

**Table 10: Predictive relevance Q<sup>2</sup>**

|                         | Q <sup>2</sup> |
|-------------------------|----------------|
| Administrative Overhead | 0.315          |
| Factory Overhead        | 0.047          |
| Selling Overhead        | 0.193          |

**Table 11: Bootstrapping result**

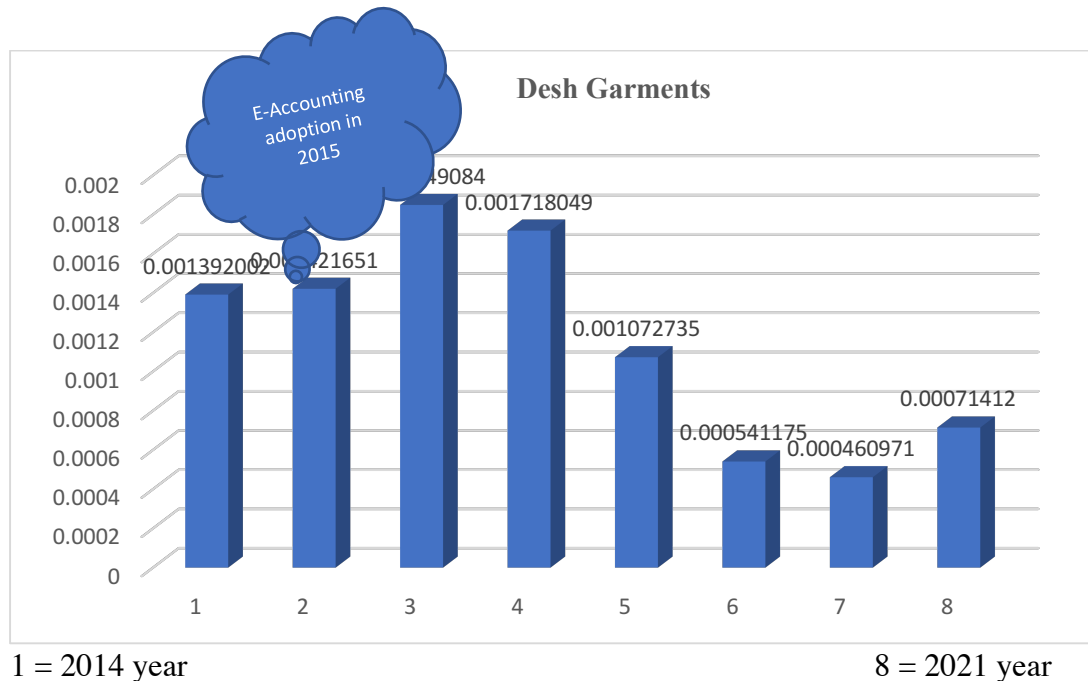
| Hypothesis | Relationship | Std. Beta | Std. Error | t values | P Values | Decision  |
|------------|--------------|-----------|------------|----------|----------|-----------|
| H1         | EAP -> AOH   | 0.684     | 0.022      | 31.067   | 0.000    | Supported |
| H2         | EAP -> FOH   | 0.350     | 0.046      | 7.594    | 0.000    | Supported |
| H3         | EAP -> SOH   | 0.588     | 0.036      | 16.239   | 0.000    | Supported |

The calculated value got from the above tables (07-11), remains within threshold value according to rules of thumb. The R<sup>2</sup> value 0.468 in administrative overhead means that e-accounting practice influence on administrative overhead by 46.8%. It expresses the strong influence. The selling overhead is also influenced by e-accounting practice by 35%, i.e. moderate influence. Factory overhead is influenced a little by EAP. The construct's effect size (f<sup>2</sup> value) is higher in administrative overhead cost. It has matrix 0.878, which expresses the strong effect size. Again, selling is the second i.e. 53%, it is also strong effect size. Factory overhead has 14% effect size that expresses little effect. In case of predictive relevancy checking administrative overhead cost is also the higher than other two. In hypothesis testing bootstrapping result, t values are within threshold value i.e. more than 1.64. Again, p values are 0.00 in every relationship which indicates to support all the hypothesis. Then PLS SEM analysis states that e-accounting practice has significant influence on overhead cost performance of Bangladesh RMG factories. The survey data analysis also clarifies that administrative overhead cost is largely affected by the e-accounting practice. Selling overhead is also significantly affected by the practice. On the contrary factory overhead is little affected by e-accounting practice.

Now, this survey result needs to be validated with the using secondary data analysis. This study collected the financial report of two RMG public limited company of 10 years. Focusing on efficiency ratio calculated using ‘overhead cost to sales’ formula, the 10 years overhead cost trends has been presented in the following:

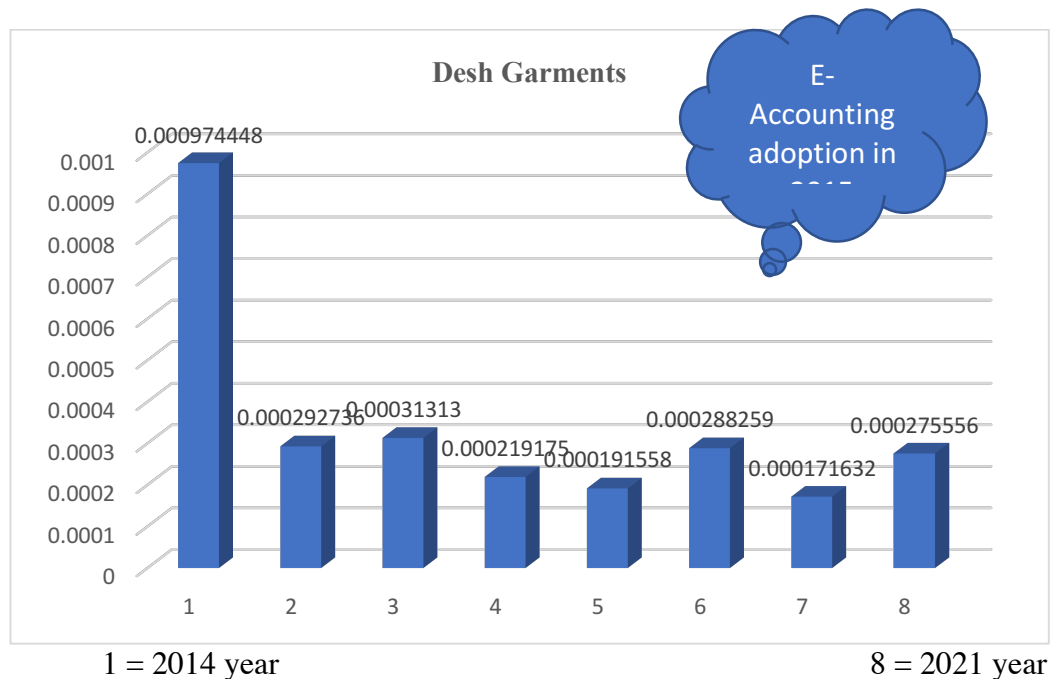
Now, this survey result needs to be validated with the using secondary data analysis. This study collected the financial report of two RMG public limited company of 10 years. Focusing on efficiency ratio calculated using ‘overhead cost to sales’ formula, the 10 years overhead cost trends has been presented in the following:

**i. Stationery and printing cost to sales ratio**



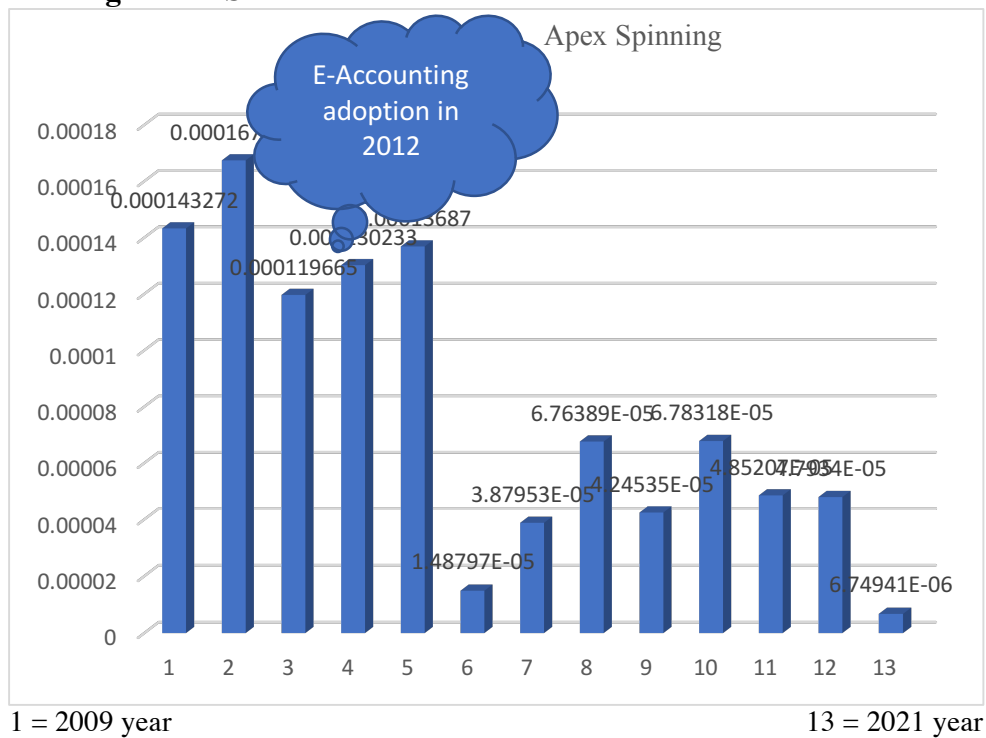
### Chart 01: Stationery and Printing Cost-Sales ratio: Desh Garments

**ii. Postage and telephone cost to Sales**

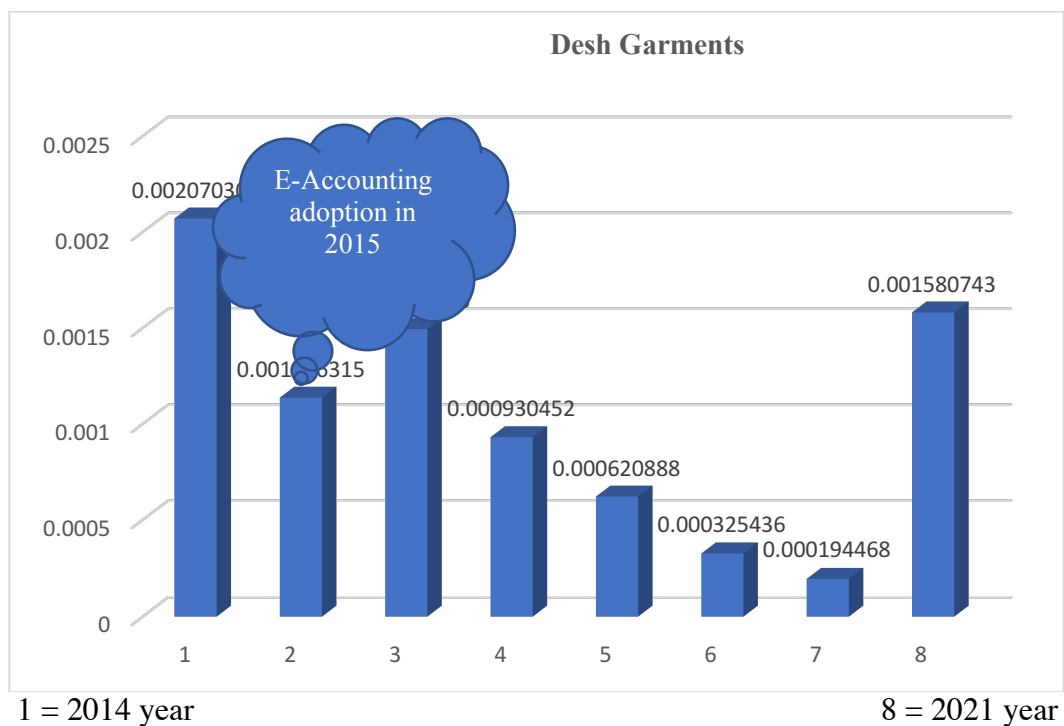


### Chart 02: Postage Expense-Sales ratio: Desh Garments

iii. **Meeting cost to Sales**

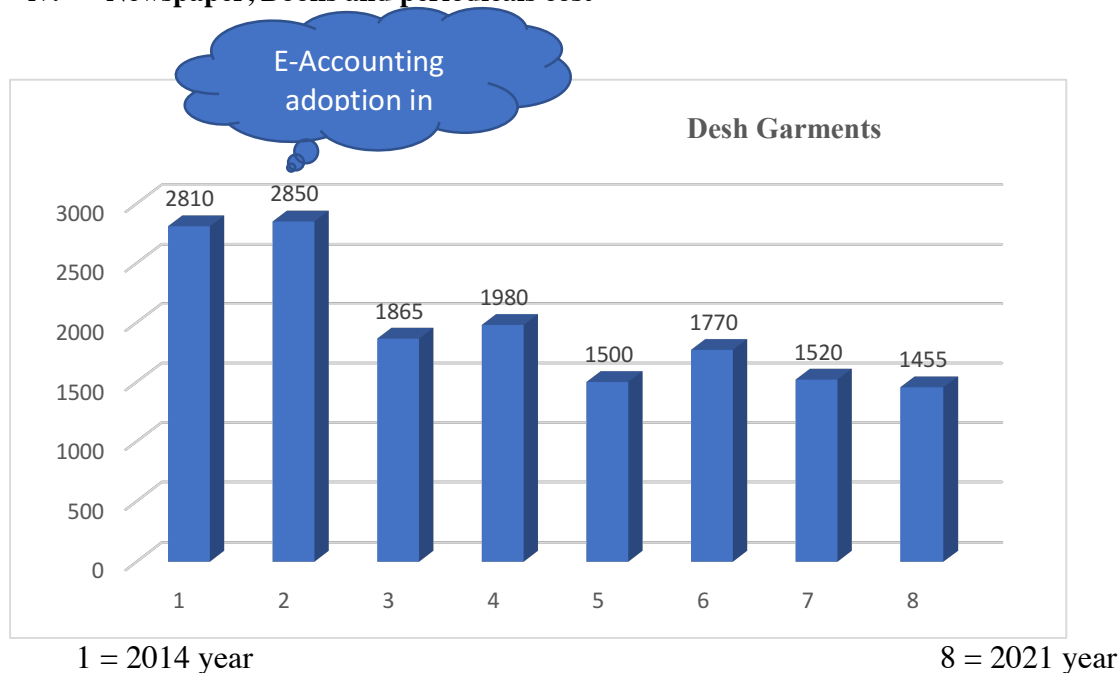


**Chart 03: Meeting cost-Sales ratio: Apex Spinning**



**Chart 04: Meeting cost-Sales ratio: Desh Garments**

#### iv. Newspaper, Books and periodicals cost



**Chart 05: Newspaper, magazine, & Books cost trends**

The bar diagram presented above are downward slopping which expresses that selected overhead costs are on abating trends over the year.

#### Discussion on Findings

The content analysis of case study's qualitative data, PLS SEM analysis of survey's quantitative data and the ratio analysis of secondary quantitative data, reveals that online accounting practice through its online functions accomplishment, enables a firm to reduce overhead cost. The study also finds that administrative overhead cost is significantly affected by the e-accounting practice in RMG factories of Bangladesh. Through e-invoice, e-recording, e-reconciliation, e-reporting practice e-accounting practice abates the office overhead costs such as postage cost, printing cost, stationery cost, telephone cost, meeting cost, newspaper and periodicals cost, and staffs' salary cost. In e-accounting usage, e-storage is being used which enables a factory to reduce large memory cost for repository of data. Online communication to customer also helps to reduce cost. Additionally, merchandisers are highly helped with the online accounting information. The findings would help RMG policy maker to install and use e-accounting practice for achieving financial benefits. Hence, this study findings are helpful to the sector to be competitive. This study also verifies the truth of Phillips (2012).

#### Concluding remarks

The study attempted to analyze the impact of e-accounting practice on overhead cost of RMG factories of Bangladesh. Using sequential mixed research strategy this study made endeavor to meet up the objective. Based on the analysis of primary and secondary data, the study found the outcomes that online accounting usage enables a RMG factory to abate overhead cost. In online accounting practice, with online transactions recording and reporting overhead cost can be minimized in any firm. In RMG factory, through e-accounting practice with minimizing overhead cost, product cost can be minimized. Therefore, this study

findings are significant to RMG policy holder to take policy for competitiveness of the sector in the international market

### Research Limitations and Directions for Future Research

This research bears few limitations. First important limitation involves sampling technique. Convenience and snowball technique bears generalized problem. But it is the ultimate reality that RMG owners do not share any information with unknown or semi-known persons except friend and family. Another limitation is related to conceptualize the e-accounting practice. Mere five items do not cover all functions of the internet based accounting. In order to minimize the volume, the researcher was bound to do adapt that. The future research may adopt simple random sampling which could take much time and effort. E-accounting concept might be broadened in the future research. Taking the view of Phillips (2012) that for e-accounting practice, a paradigm shift is occurred and hence the whole information system is redesigned in the firms, the future researcher should move to such type of effect showing research.

### References

- Adedoyin, E.O. (2017). *Organizational Determinants and E-Accounting System Implementation in Micro and Small Enterprises (MSEs) in South-West Nigeria*. [Doctoral Thesis] pp. 01-228. Available at: <https://core.ac.uk/download/pdf/129903402.pdf> [Accessed 2 Apr. 2021].
- Ahad, T., Busch, P., Blount, Y. and Picoto, W. (2021). Bangladeshi Ready-made Garment Development via Ubiquitous and Mobile Computing. *The Electronic Journal of Information Systems in Developing Countries*. 87. 10.1002/isd2.12170.
- Ahmad, A. (2011). *Business Intelligence for Sustainable Competitive Advantage: the Case of Telecommunications Companies in Malaysia*, Doctoral Thesis, Graduate School of Business, Curtin Business School, Curtin University of Technology, Perth, Australia.
- Benjamin, A. (2018). *The Effects of Computerized Accounting on Financial Performance of Banks. A Case Study on Centenary Banks Ishakha Branch*. [BBA in Accounting and Finance] pp.01-47. Available at: <https://ir.kiu.ac.ug/bitstream/20.500.12306/9102/1/img-0042.pdf> [Accessed 8 Jul. 2021].
- BGMEA.com, (2023) Story: *The Bangladeshi garment sector has made remarkable progress in recent years*. [Online] Available at: [https://www.bgmea.com.bd/page/A\\_success\\_story:\\_The\\_Bangladeshi\\_garment\\_sector\\_has\\_made\\_remarkable\\_progress\\_in\\_recent\\_years](https://www.bgmea.com.bd/page/A_success_story:_The_Bangladeshi_garment_sector_has_made_remarkable_progress_in_recent_years) [Accessed 29 Mar. 2023].
- CCH. (2013). *CCH Research 2013 Cloud Computing A Matter of Survival For The Accounting Industry | Cloud Computing | Economies*. [online] scribd.com. Available at: <https://www.scribd.com/document/323197576/CCH-Research-2013-Cloud-computing-a-matter-of-survival-for-the-accounting-industry-pdf> [Accessed 28 Mar. 2021].
- Choudhary, A.S., 2015. Cost Analysis in Garment Industry. *International Journal of Recent Advances in Multidisciplinary Research*, 2(9), pp.702-704.
- Christauskas, C., & Miseviciene, R. (2012). *Cloud-computing based accounting for small to medium sized business*. *Engineering Economics*, 23(1), pp. 14-21.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd ed. Thousand Oaks, California, USA: Sage Publications.

- Delone, W. and Mclean, E. (2003): The DeLone McLean model of information system success: a ten-year update, *Journal of Management Information Systems*, Vol. 19(4), pp. 3–9.
- Dimitriu, O., and Matei, M. (2014a). A New Paradigm for Accounting through Cloud Computing. *Procedia Economics and Finance*, 15, pp. 840-846.
- Dimitriu, O., & Matei, M. (2014b). The Expansion of Accounting to the Cloud. *SEA-Practical Application of Science*, (4), pp. 237-240.
- Faul, F., Erdfelder, E., Lang, A.G. and Buchner, A. (2007). G\* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods*, 39(2), pp.175-191.
- Fornell, C. and Larcker, D.F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of marketing research*, 18(1), pp.39-50.
- Gefen, D., Straub, D. and Boudreau, M.C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, 4(7), p. 2-79.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*.
- Hasan, M. (2017). Wage Digitization in Readymade Garment (RMG) Sector in Bangladesh is Crucial for Women Empowerment, Social Compliance and Competitiveness. *Engineering International, Asian Business Consortium*, 5(1), pp. 37-44.
- Henseler, J., M. Christain, R. Ringle, and Sinkovics. (2009). The Use of Partial Least Square Path Modelling in International Marketing. *Advances in International Marketing*, 20: pp. 277-319.
- Hossain, M.I. and Rahman, M.F. (2022). Scenario of E-Accounting Practice in Ready-made Garments (RMG) Industry of Bangladesh. *Journal of International Business and Management*, 5(7), pp. 01-21.
- Hossain, M.I. and Rahman, M.F. (2023). Factors Influencing the E-Accounting Practice in Readymade Garments Industry (RMG) of Bangladesh, *Padakkhep Onward March*, 22, pp. 30-56.
- Huynh, Quang. Linh. (2019). The Relationship between Organizational Performance and Computerized Accounting: The Role of Business Environment. *International Journal of Humanities and Social Science Invention*, 8(6), PP 62-68.
- Khanom, T. (2017). Cloud Accounting: A Theoretical Overview. *IOSR Journal of Business and Management*, 19(06), pp.31–38.
- Mutula, D.K. (2018). *Effect on Electronic Accounting on the Financial Performance of Commercial State Corporation in Kenya*. [Master's Thesis] pp.01-61. Available at: <http://erepository.uonbi.ac.ke/handle/11295/106247> [Accessed 5 Apr. 2021].
- Nipa, N.J. (2020). Validating Existing ICT infrastructure of RMG Sector: A Study on Bangladesh. *International Journal of Industrial and Manufacturing Systems Engineering*, 5(3), pp. 28-38. Doi: 10.11648/j.ijimse.20200503.11
- Phillips, B. A. (2012). *How the Cloud Will Change Accounting Forever*. [online] *Docplayer.net*. Available at: <https://docplayer.net/2537016-How-the-cloud-will-change-accounting-forever.html> [Accessed 1 Sep. 2020].
- Ramayah, T., Yeap, J.A., Ahmad, N.H., Halim, H.A. and Rahman, S.A. (2017). Testing a confirmatory model of Facebook usage in SmartPLS using consistent PLS. *International Journal of Business and Innovation*, 3(2), pp.1-14.

- Rashed, C. A. A., Bagum, N., Khan, S. and Hasan, M. (2011). A Model on Factory Information System (FIS). *Review of General Management*, 14(2), pp. 139-150.
- Rashid, M.H. (2019). E-Wallet for RMG Workers. *www.daily-sun.com*. [online] 28 Dec. Available at: <https://www.daily-sun.com/printversion/details/449801/EWallet-for-RMG-Workers> [Accessed 20 Jan. 2022].
- Tarboush, S.A. (2017). Cloud Accounting As a New Business Model and Its Influence on Accounting Process. *Multi-Knowledge Electronic Comprehensive Journal For Education And Science Publications*, 2, pp.1–14.
- Teru, S.P.P., Idoko, I.F.P. and Bello, L. (2019). The Impact of E-Accounting in Modern Businesses. *International Journal of Accounting & Finance Review*, 04(02), pp.1-4.
- Textiletoday.com, (2020). *Failure of Proper Costing Dragging RMG Industry Down*. [online] Available at: <https://www.textiletoday.com.bd/failure-of-proper-costing-dragging-rmg-industry-down/> [Accessed 11 May 2020].
- Toshniwal, R. (2016). E-accounting: The Necessity of Modern Business. In: *Proceedings of the '4<sup>th</sup> International Conference on Science, Technology and Management*. [Online] Indian International Centre, New Delhi, India: pp. 579-583. Available at: [http://www.ijstm.com/images/short\\_pdf/1462872883\\_1507ijstm.pdf/](http://www.ijstm.com/images/short_pdf/1462872883_1507ijstm.pdf/) [Accessed 25 April, 2021].
- Tuovila, A. (2023). *Overhead: What It Means in Business, Major Types, and Examples*. [online] <https://www.investopedia.com>. Available at: <https://www.investopedia.com/terms/o/overhead.asp> [Accessed 14 Sep. 2023].
- Yin, R. K. (2003). *Case Study Research Design and Methods*. 3rd ed. [online] California: Sage Publications, Inc., pp.01-179. Available at: [https://iwansuharyanto.files.wordpress.com/2013/04/robert\\_k-\\_yin\\_case\\_study\\_research\\_design\\_and\\_mebookfi-org.pdf](https://iwansuharyanto.files.wordpress.com/2013/04/robert_k-_yin_case_study_research_design_and_mebookfi-org.pdf) [Accessed 8 Jul. 2021].