Scenario of E-Accounting Practice in Ready-made Garments (RMG) Industry of Bangladesh
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Abstract
E-accounting is referred as the internet based accounting software usage in performing accounting functions. Responding to the evidence that Bangladesh’s top business sector, Ready-made Garments (RMG) factories largely using e-accounting, the study is aimed to explore the scenario of the practice in those factories. To achieve these objectives, the study deploys mixed research strategy constructed with interview and survey. Based on the prevailed e-accounting literature, and interview with user RMG factories authority and vendors, structured questionnaire was formed for the survey. This firm level study considers 3552 listed RMG factories as the population. Using G-power 3.1 sample size calculating software, considering smaller effect size f2=0.04, the study has taken 300 sampled factories both of woven, knit, composite and sweater. The study conducted interview using semi-structured interview schedule at convenient way. Also, using convenience sampling technique, a survey on sampled factories was executed with the use of structured questionnaire. Survey respondents were the policy level personnel of RMG factory such as owners, managing directors, executive director, factory manager, and or chief accountants. IBM SPSS 20.0 has been used to analyze survey data. Using descriptive statistics, the collected data was presented and analyzed. The study reveals that about 86% RMG factories are using internet based accounting solution for performing accounting, inventory and payroll functions. The study also results that ERP usage is more than that of stand-alone accounting software modules and private cloud usage is more popular in RMG sector than that of public, hybrid or community cloud. This study also finds that knit sector remains ahead in using e-accounting and sweater factories is slightly back in e-accounting implementation. The study bears the significance to the RMG factories and other cloud applications users.

Keywords: E-Accounting, Online accounting solution usage, Ready-made Garments Industry, Bangladesh

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Background of the Study
E-accounting elaborated as electronic accounting is regarded as the industry 4.0 technology in accounting throughout the world. E-accounting refers to the internet based on-demand accounting solution usage for performing ubiquitous accounting functions of business sector (Awara Direct Search, 2013; Dimitriu & Matei, 2014a, pp. 842; Rao, 2019, pp. 281; and Jaiswal and Jaiswal, 2019, pp. 123). With the use of this online accounting software,
different functions of business such as recording economic transactions, classifying those to general ledger, bank reconciliation, cash management, accounts payables and receivables, billing payroll, budgeting, management of recorded asset and detailed financial analysis, collection management, credit management, generation of financial reports are prepared and communicated totally through online (Kumar, 2008a). This cloud based accounting solutions used by client organizations are of two forms such as in public or customized stand-alone form covering accounting functions exclusively such as Xero, Tally and QuickBooks or ERP form such as Freshbooks, Sage50cloud, NetSuite ERP, Zoho Books, Peachtree, Sage, and Extreme that covers financial and managerial accounting, customer relationship management (CRM), production, and marketing and other division of a firm. This sophisticated accounting solution is generally operated with the use of mobile devices like laptop, tablet or smart phone.

In this modern accounting system, similar to software as a service (saas) business model, accounting data is sent to ‘the cloud’, there it is processed, and returned to the users. Here, the whole accounting system of client organizations are hosted on remote server which allows employees of other divisions or branch offices to access the same software at same time with using log in ID and password. Like many other developed and developing countries’ business sector of North America, Europe, Asia Pacific (APAC) regions, South America, and Middle East Africa (MEA) and South Asian countries are using e-accounting system in business sector. Like many other ‘industry 4.0 technology’ such as Robotics automation, Cloud Computing (CC), and Industrial Internet of Things (IIoT), e-accounting is being used in the world’s top competitive business sector, Ready-made Garments Industry (RMG). Bangladesh’s top business sector, RMG industry that bearing the prestigious title ‘2nd largest apparel supplier in the world’ earns annually average $32 billion dollar export value, contributes 10% to the country’s GDP, shares average 83% of the country’s total export and creates 4.1 million people’s job breeding ground (Akter, 2020; BGMEA, 2021 and Bdcgtoronto.ca 2021), has also started to adopt this modern accounting technology (Rony, 2020; Abdullah, 2020) which is yet to be discovered and studied in the prevailed literature.

The existing RMG studies (such as Adnan et al. 2019; Nuruzzaman, 2013; Shahriar et al, 2014; Miraz et al, 2018; Hossain et al. 2019; Mia & Akter, 2019; Kamal, 2019; Khan, 2020; Huq, 2021; Bdcgtoronto.ca 2021 and Do, K.D. 2021), and the world’s e-accounting literature (such as Loikkane, 2018 in Finland; Amidu et al, 2011 in Ghana; Soudani, 2013 in UAE; Kumar. 2008a, & Relhan, 2013 in India, Adedoyin, 2017 in Nigeria, Venegas, 2017 Alfartoosi & Jusoh, 2020 in Malaysia and Alfartoosi et al 2020 in Iraq), did not explore the implementation of e-accounting practice in RMG factories of Bangladesh. Although there remains the practice among Bangladesh RMG factories, the descriptive statistics of factories adopting the e-accounting system, the status, nature, and forms of the usage is yet to be screened which bears the significance to the e-accounting users and country policy formulaters. Therefore, at the above significant gaps, this e-accounting adoption stages study will advance for new knowledge that is related to portraying the scenario of the e-accounting practice in RMG factories of Bangladesh. This study will be helpful to RMG sector to encourage the factory owners to become a smart factory with the usage of industry 4.0 technology like online accounting practice. This study is rationale to the factory owners in the sense that e-accounting practice minimizes informational lead time. Overall, to achieve the benefits of e-accounting practice, this study will contribute a lot exploring the actual scenario of the practice in the Bangladesh RMG sector.
Research Questions
The problem statement of the study leads to the following research questions:

1. What is the status of e-accounting practice in the Bangladesh RMG sector?
2. What is the forms of online accounting solutions usage in RMG factories under study?
3. What is the types of e-accounting practice in RMG factories of Bangladesh?

Research Objectives
The study has been undertaken with the three specific objectives which are as the followings:

1. To assess the status of e-accounting practice in the Bangladesh RMG sector?
2. To find out the forms of online accounting solutions usage in RMG factories under study?
3. To identify the types of e-accounting practice in RMG factories of Bangladesh?

Literature Review

E-Accounting Practice
Toshniwal (2016, pp. 580) states that e-accounting’ is the composition of two words i.e. ‘e’ and ‘accounting’ in which ‘e’ means ‘electronic’ and ‘accounting’ refers to the art of recording, classifying and summarizing transactions. Then, e-accounting means the art of recording, classifying, summarizing and communicating transactions in electronic form. Electronic form means the presence and absence of electricity. Hence according to Deshmukh, (2006, pp. 1) e-accounting can be defined as the ‘digital accounting’ which perform accounting functions using binary digits ‘0’ and ‘1’, referring to the absence and presence of electricity in computer. In supporting this, some authors such as Amidu et al (2011 pp. 146); Zakaria et al, (2011, pp. 128); Soudani, (2013, pp. 18), Guney, (2014, pp. 854); and Alfartoosi & Jusoh, (2020, pp. 23735) attempted to define e-accounting as computerized accounting, ICT based accounting or accounting information system usage or the computer technology usage in accounting. Again, Binuomote et al, (2019, pp. 184) define e-accounting as the spreadsheet using. But in the true sense, e-accounting advances from this narrow focus on computer-based accounting to a broader concept of applying mobile technologies over the internet (Oladejo & Yinus, 2020, pp. 16). The logic lies in the name as ‘e-accounting’ stated by Toshniwal (2016, pp. 579) that is similar to e-mail, being an electronic version of traditional mail over the internet, e-accounting is the ‘electronic enablement’ of lawful accounting and traceable accounting process through internet. VNMT.solutions.com (2021) informs that from using calculators to spreadsheets to Tally and QuickBooks, accounting over the years continued to advance with new technologies and now, cloud accounting has emerged as the latest facet for managing accounting and financial tasks. In a nut shell, e-accounting is the upper version of accounting than computerized accounting because in computerized accounting, purchased package accounting software is used with using computer whereas internet-based accounting software is used with using mobile devices in e-accounting.

This basic concept has also been stated apparently in Kumar (2008a) web accounting education. There he mentioned that, in e-accounting system, all source documents and accounting records related to general ledger book keeping, bank reconciliation, cash management, accounts payables and receivables, billing payroll, budgeting, management of
recorded asset, management of detailed financial analysis, collection management, credit management, generation of financial reports are prepared and communicated totally through online. In regard of tools used in online accounting. Oladejo (2014, pp. 181), Yadav (2015, pp. 20) and Teru et al (2019, pp. 01) inform that, in performing the accounting functions, e-accounting system use digital tools such as web links, various international web-based materials, internet based institute and company databases, online electronic financial spreadsheet and internet based accounting software. Among the above online tools, internet based accounting software usage is the principal applications of e-accounting system. Tarboush (2017, pp. 05) posits that cloud accounting software provision issue is at the heart of the cloud accounting system and Awara Direct Search, (2013), supports that the use of online accounting software such as QuickBooks, Xero, Peachtree, Quicken, and Sage is named as e-accounting. Dimitriu & Matei, (2014a, pp. 842), Aman & Mohamed (2017, pp. 01), Rao, (2019, pp. 281) and Jaiswal and Jaiswal (2019, pp. 123) also mention that accounting service got from online accounting solution usage is called cloud accounting.

On the other hand, Allahverdi (2017, pp. 92) clarifies that ‘cloud’ is used instead of the word ‘internet’, and, cloud accounting refers to internet accounting which is also termed as e-accounting. Now-a-days, stand-alone accounting software and ERP accounting software are being practiced. Broetje, (2019) state that startup business or young firms use stand-alone cloud accounting software such as payroll solutions of which examples are ADP, QuickBooks, Gusto, and Paychex; expense solution of which example is SAP Concur; payment solution of which example is Bill.com; and accounting software such as QuickBooks Online and Xero. He also states that comparatively larger firms tend to use cloud ERP accounting solution such as Intacct, Dynamics - all versions, NetSuite and MIP fund accounting software. When an entity’s stand-alone accounting software accomplishing functions are supplemented with some activity-specific modules like supply chain management (SCM), CRM, reporting, and analysis, then the entire structure of the organization would be effectively turned into an ERP financial accounting system that covers the holistic firm (Deices, 2020).

E-accounting Practice in Business Sector of the World
Sage.com, (2017) states that in the world, two-thirds i.e. 67% accountants prefer cloud accounting over more traditional systems. Djurovic (2021) informs that throughout the world almost one-third (31%) of accounting companies have over 80% of their clients online and in UK 18% of firms have 98% of their clients in the cloud. Antonelli (2013, pp. 6), through his survey entitled as ‘Cloud Solutions Best Practices: 2013 Benchmark Study’, published by cloud accounting institute (CAI), informs that 52% companies of USA, which is, at 2021, 94% (Djurovic, 2021), use cloud accounting solutions for accounting or financial Management. CCH (2013, pp. 03) informs that in Australia 14% SMEs are practicing cloud accounting solution.
Table 1: Literature on e-accounting practice

<table>
<thead>
<tr>
<th>Studies</th>
<th>Concentration (topic)</th>
<th>Country</th>
<th>Type of country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loikkanen (2018)</td>
<td>Entrepreneurship in agriculture</td>
<td>Finland,</td>
<td>Developed</td>
</tr>
<tr>
<td>Ionescu et al. (2013)</td>
<td>Business sector</td>
<td>Romania</td>
<td>Developed</td>
</tr>
<tr>
<td>Huynh (2019)</td>
<td>SMEs</td>
<td>Vietnam</td>
<td>Developing</td>
</tr>
<tr>
<td>Hamundu et al. (2020)</td>
<td>MSMEs</td>
<td>Indonesia,</td>
<td>Developing</td>
</tr>
<tr>
<td>Relhan (2013); and Rao, (2019)</td>
<td>SMEs</td>
<td>India</td>
<td>Developing</td>
</tr>
<tr>
<td>Oladejo (2014); Adedoyin, (2017); Ndubuisi, et. al, 2019; Oladejo &amp; Yinus (2020)</td>
<td>SMEs and Deposit Money Banks</td>
<td>Nigeria</td>
<td>Developing</td>
</tr>
<tr>
<td>Venegas (2017)</td>
<td>Firms</td>
<td>Mexico</td>
<td>Developing</td>
</tr>
</tbody>
</table>

Bangladesh, the developing country as well as N11 member (Goldman Sachs, 2007) of which govt sector has started to use e-accounting by applying ‘e-Nothi’ (Khatun, 2019) in 2016 and non-govt sector has been enjoying cloud accounting applications before of 2016. In this country, public vendors like Xero, Microsoft extreme office, Oracle and Robi Amar Hisab, provide online accounting software for non-govt sector and SMEs (Bangladesh post.net, 2020) but few SMEs are using this efficient accounting system. In addition to, Tally, Troyee, QuickBooks, Sage, and Excel are widely used accounting being adopted by Bangladeshi SMEs. Rahman et al (2014) found that in Bangladesh 65% SMEs are interested in excel based accounting system while 16% preferred the use of Tally software, 10% use Troyee and 6% respondent use Quick Books (Rahman et al, 2014, pp. 80).

Bangladesh RMG Industry

This section discusses few specific relevant studies in the literature about the Bangladesh RMG sector. The structure of the Bangladeshi RMG industry is totally different and therefore the accounting information system under information wing of supply chain in the CMT (cutting, making and trimming)-based industry is also quite unique. Moreover, there have many studies on the RMG industry but these have been very general in nature and mainly deal with the industry’s prospects, growth and development (Rahman et al 2017 Hasan et al 2018; Shimu & Islam 2018; Bdcgtoronto.ca 2021). From the relevant literature the main problems identified in the RMG sector now a days, are basically higher lead time (Nuruzaaman 2013), less price, higher product cost, less diversification of product, less technology usage, less productivity. But now–a days, after COVID 19, among many other problems, less profitability problems stands as the key issue in this export oriented sector (Textile today.com, 2020). Many factories had to shut down their operation due to lack of profitability (Huq, 2021). The RMG researcher monthly paper also analyzed the issue and identifies that lack of proper accounting system remains as responsible against the problem. Due to lack of open costing presentation to buyers, Bangladesh RMG is being categorized as B, the less priced RMG, maximum comes under this category. Apart from this, due to lack of actual costing information owners or managers cannot make proper decision timely and owners cannot bargain for price with buyers. Another concern is that labor cost and utility cost increasing makes the product cost higher. Siddique (2018) opines that low labor cost is not yet to be considered as the competitiveness of the Bangladeshi RMG sector. He suggest that in order to remain competitiveness cost must be reduced. But no researcher
conducted any study to portray the accounting section and its financial performance in this sector.

E-accounting Adoption in RMG Industry of Bangladesh

There remains little research in cloud computing based accounting information system adoption in RMG sector as this journey is too much up to date in the country. The main contribution of the cloud adoption in the sector can be depicted below:

Roney (2020) informs that about 2% users enlisted in their e-accounting users are from RMG merchandiser. Among the 350 users, only 7 (seven) use the Microsoft extreme office cloud accounting solution. Over the phone interview, this cloud vendors informs that RMG manufacturers those use extreme xlcloud accounting solution are Young one of Chittagong, Okay Printing, M. N. Group, Alif Printing, Prima Concept Ltd, Lucky Group, Hope Apparels, and Buying houses those use this e-accounting service are Janfdafashion, and Protthasha Fashion House.

Abdullah (2020) investigates and comments in the news article that saas based ERP will be the game changer in the RMG sector of Bangladesh. Since the existing practiced package ERP cannot provide expected service and saas based ERP possess the cost minimizing nature, flexibility, scalability, huge memory and backup facilities, cloud ERP will define the future RMG sector’s performance. The study mentions that fakir group a, renowned RMG factory has already adopted saas based ERP.

Nipa (2020, pp. 33-34) validates the ICT application in the Bangladesh RMG sector. The researcher conducted survey research on 100 RMG factories. With descriptive statistics, the restudy finds that in Bangladesh about 86% RMG factories have internet access in which 83% have organizational websites. She adds that average 79% factories use general ICT applications such as e-mail, VOIP, and bulk SMS, and 33% factories use accounting package software and 65% use package ERP. She also validates that approximately 30% factories use advanced ICT applications in which software as a service (saas) using rate is 28% and cloud computing using rate is 35%, and 45% factories use mobile payment system.

Ahad et al (2021) investigated Bangladesh ready-made garment’s development via ubiquitous and mobile computing. Mentioning the major challenges the sector faces are the inefficiency in communication, worker disempowerment, and long lead times to produce finished goods, the study suggests that mobile information system has potential development impact to improve communication, co-ordination, and empowerment. This study narrows the gap through utilizing affordance theory as a theoretical lens to examine MbUS affordance applied to Bangladeshi RMGs. Using 39 interviews, this research explores five MbUS affordances - connectivity, mobility, agility, empowerment and governance, and their relationship to Bangladeshi RMGs. Furthermore, the study identifies empowerment as a crucial affordance rarely identified in prior RMG literature.

Research Gap

From the literature reviewed in the previous sections, it is observed that there remains apparent gap related to e-accounting adoption of Bangladesh RMG industry. Several RMG studies such as Khan & Ullah, (2017); Rahman et al (2017); Ali et al (2017); Siddiqui, (2018), Shimu & Islam (2018); Hasan et al (2018); Adnan et al. (2019); Hossain et al. (2019); Mia & Akter, (2019); Kamal, (2019); Khan, (2020); Huq, (2021); and Bdcgtoronto.ca (2021); focus on the Bangladesh RMG sector’s strengths and challenges to be competitive in the international market. Few studies knocked to the technology adoption of the RMG

Theoretical Framework

The study is basically ‘e-accounting adoption’ study that explore the nature, forms and types of the practice. Based on the DeLone and Mclean’s Information System Success model (1992) stated ‘usage’ definition, existing e-accounting literature, and the interview taken with e-accounting users RMG factories and vendors, e-accounting adoption has been conceptualized.

E-Accounting Practice

The study refers the e-accounting practice as the three types of nature of the system usage adapted from by DeLone & McLean (1992, pp. 84-85) and with the interviews findings. The nature of usage are as the followings:

i. The status of e-accounting i.e. the factory authority is deeply discussing for use, or strongly intended to use, or searching vendors or developers to use, or already started to use different online accounting software module for different purposes or using the sophisticated online ERP. This situation has been modified from Huynh & Yaling, (2013, pp. 751); and Huynh (2019, pp. 64)

ii. The second nature is the forms of online accounting software usage, i.e. whether the RMG authority do not use any online accounting software or, using only online accounts related software, or using online inventory, and accounts related software, or using online inventory, accounts, and payroll software or using online inventory, accounts, payroll, and other software in aggregated forms.

iii. And the third nature is the type of cloud the RMG factory is using, i.e. whether they are not using any cloud accounting software, or, private cloud, public cloud, hybrid cloud or community cloud.

Research Methodology

Research Design
Research design depends on the type of research questions and the research questions containing ‘what’ indicates to adopt both the qualitative and quantitative design constructed with interview and survey respectively (Yin, 2003; Islam & Aldaihani, 2022). Thus, the study employed mixed research design i.e. both of qualitative design based on interview and quantitative design based on survey.

Sample
The study considers 3552 RMG factories listed in BGMEA website (BGMEA.com.bd, 2022) as the population. This firm level study calculates sample size using the G*power 3.1 (Faul et al, 2009) software with the setting as follows: $f^2 = 0.04$ (small), $\alpha = 0.05$ and number of predictors $= 4$ and the power was set at 88% that is higher than 80% (Gefen et al., 2011), the sample size calculated, was 296. This study collected data from 300 RMG factories located in Bangladesh territory. Respondents were the policy level personnel of RMG factory such as owners, managing directors, executive director, factory manager, and or chief accountants. One person from one factory has been chosen as respondents that similar to that of Huynh, (2019, pp. 64) study. Apart from this four e-accounting users RMG factories and two vendors have been choosing for interview that is supported by Seethamraju, (2014).

Instruments
Primary data has been collected from the above-mentioned respondents using semi structure interview schedule and structured questionnaire. The semi-structured interview schedule included 5 questions. The questionnaire was divided into 2 sections; Section ‘A’ asking demographic information, Section ‘B’ asking the scenario of e-accounting adoption in RMG factories.

Procedure of Data Collection and Analysis
Primary data have been collected from the said respondents by the researcher himself and with an appointed research assistant. Interviews were conducted by the researcher physically and it was recorded, translated and reported. Survey was conducted with the active help of the research assistant. The study is basically descriptive statistics in nature which is supported by Khisa & Kariuki (2022). To meet the objectives of the study, i.e. to assess the scenario of e-accounting practice, IBM SPSS 20.0 has been used to present the descriptive statistics of the summarized data. At first in the MS excel data was recorded and then transferred to SPPS. Tables, figures, and different histograms are being used to present the processed data.

Presentation of Data and Analysis

The Interview Data
The two vendors who make and provide online accounting software to RMG factories stated that maximum RMG owners want private natured cloud services because of ensuring the security. They do belief on public cloud less. Sophisticated ERP or general ERP forms is also popular to RMG owners. The CEO of Tech View, a leading native software developers over the internet, tells in such way

'In Bangladesh, in the back, RMG factories kept their accounting with paper based system. But now, days has been changed and they are now approaching to internet.'
Since they have to deal with the international buyers, and this age is Facebook, twitter and what’s app, and e-mail, they have realized for online accounting solution. Now, maximum RMG factories are anxious about the security of accounting information. They want to conceal their accounting information and do not disclose to anyone. So, they want aggregated accounting software although some wants separate software. But they prefer private nature of cloud and separate ID and password are the crucial matter here.

The e-accounting users ‘Enrich’ woven factory’s Managing Director states that

‘When I stay in India, I want to deal accounts, and e-accounting is preferred to me, since, it helps me to see account balances and control inventory staying in outside the country.

The executive director of Base Tex Fashions Limited says

We want every day’s financial statement. And e-accounting system supplies us that and so I and my factory choose it. We also prefer to use separate software using internet. We have three types of software, accounts, inventory and payroll.

The chief accounting executive of NRN Knitting Limited states

We send open costing to buyers’ through e-email. Internet is the part and parcel of our buying and selling functions. So, we use this e-accounting system. But we are very much anxious about the security. So we have adopted hybrid cloud that some information is privately owned and some are in public nature but in public vendors provided software using, separate ID and password are strictly maintained.

The owners of a Global Green Sweater Limited, states

Online accounting has many benefits, I hear, discuss, but has not adopted it in my garments factory yet. I am just using MS excel to calculate the overall accounting functions. I have dream to implement that.

The top merchandiser of Blue Planet Group says

Our group expended about Tk. 2 crore in making the internet based ERP. We use and satisfied. I hear, it is private cloud based software. Monthly little maintenance cost is to pay to software developer. But it is easy and beneficial.

The Survey Data

The demographic information of the respondents has been resented below:

**Designation of Respondents**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Director</td>
<td>45.0%</td>
</tr>
<tr>
<td>Executive Director</td>
<td>13.3%</td>
</tr>
<tr>
<td>Assistant General Manager</td>
<td>15.0%</td>
</tr>
<tr>
<td>Factory Manager</td>
<td>13.3%</td>
</tr>
<tr>
<td>Chief Accounting Executive</td>
<td>13.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Gender

![Gender Pie Chart](chart)

Figure 1: Gender

Age

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 to 40 Years</td>
<td>29.7%</td>
</tr>
<tr>
<td>41 to 50 years</td>
<td>50.0%</td>
</tr>
<tr>
<td>51 to 60 Years</td>
<td>14.7%</td>
</tr>
<tr>
<td>Above of 60 Years</td>
<td>5.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 3: Age

Educational Status

![Educational Status Bar Chart](chart)

Figure 2: Educational Status of Respondents
Factory Information

![Factory location chart]

Figure 3: Factory location

Factory Type

![Factory type chart]

Figure 4: Factory type

Scenario of e-accounting practice in RMG industry of Bangladesh

Accounting Software Usage Rate

Table 4: Accounting Software Using Rate

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Status of E-accounting Practice

Figure 5: E-accounting usage status

E-Accounting Status as Per Factory Types

Table 5: Status of e-accounting usage as per type of factory

<table>
<thead>
<tr>
<th>Types of factory</th>
<th>Deeply discussing about the e-accounting adoption</th>
<th>Searching the vendors for e-accounting practice</th>
<th>Using different online accounting solution for different functions</th>
<th>Using sophisticated ERP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woven</td>
<td>5</td>
<td>5</td>
<td>55</td>
<td>40</td>
<td>105</td>
</tr>
<tr>
<td>Knit</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>65</td>
<td>105</td>
</tr>
<tr>
<td>Composite</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>20</td>
<td>45</td>
</tr>
<tr>
<td>Sweater</td>
<td>5</td>
<td>5</td>
<td>20</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>120</td>
<td>140</td>
<td>300</td>
</tr>
</tbody>
</table>
Forms of E-accounting Software Usage

E-Accounting Solution Usage as Per Factory Types

Table 6: Forms of e-accounting usage as per factory types

<table>
<thead>
<tr>
<th>Types of factory</th>
<th>Forms of online accounting software usage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not using e-accounting just using MS Excel</td>
<td></td>
</tr>
<tr>
<td>Woven</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>Knit</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Composite</td>
<td>0</td>
<td>35</td>
</tr>
<tr>
<td>Sweater</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>180</td>
</tr>
</tbody>
</table>

|                  | Using online accounts software only |       |
| Woven            | 5                                         | 25    |
| Knit             | 0                                         | 15    |
| Composite        | 5                                         | 15    |
| Sweater          | 20                                        |       |
| Total            | 20                                        | 40    |

|                  | Using online accounts and inventory software |       |
| Woven            | 15                                        |       |
| Knit             | 0                                         |       |
| Composite        | 5                                         |       |
| Sweater          | 0                                         |       |
| Total            | 20                                        |       |

|                  | Using online accounts, inventory, and payroll software |       |
| Woven            | 25                                        |       |
| Knit             | 15                                        |       |
| Composite        | 0                                         |       |
| Sweater          | 15                                        |       |
| Total            | 40                                        |       |

Types of Cloud Computing Usage

Figure 6: Forms of e-accounting software usage

Figure 7: Types of cloud in e-computing usage
Types of Cloud Computing Usage as Per Factory Types

Table 7: Types of cloud accounting usage as per factory type

<table>
<thead>
<tr>
<th>Factory</th>
<th>Not Applicable</th>
<th>Community cloud</th>
<th>Hybrid cloud</th>
<th>Public cloud</th>
<th>Private cloud</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woven</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>50</td>
<td>105</td>
</tr>
<tr>
<td>Knit</td>
<td>20</td>
<td>5</td>
<td>0</td>
<td>25</td>
<td>55</td>
<td>105</td>
</tr>
<tr>
<td>Composite</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>Sweater</td>
<td>10</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>140</td>
<td>300</td>
</tr>
</tbody>
</table>

Cloud Accounting Using Years

Figure 8: Years of e-accounting practice

Name of the Online Accounting Software Usage

Table 8: E-accounting Providers Name

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tally</td>
<td>25.3%</td>
</tr>
<tr>
<td>Extreme Office</td>
<td>3.3%</td>
</tr>
<tr>
<td>QuickBooks Online</td>
<td>6.7%</td>
</tr>
<tr>
<td>Oracle Net Suite ERP</td>
<td>10.0%</td>
</tr>
<tr>
<td>SAP</td>
<td>6.3%</td>
</tr>
<tr>
<td>Sage50@Cloud</td>
<td>3.0%</td>
</tr>
<tr>
<td>Animus Software Development Ltd</td>
<td>9.7%</td>
</tr>
<tr>
<td>Tech View</td>
<td>12.7%</td>
</tr>
<tr>
<td>Others</td>
<td>9.7%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>13.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Discussions
From the above presentation of analyzed data it is observed that policy levels personnel working in the RMG factory are mainly in male person aging 41 to 50 years. That means young and energetic generation of Bangladeshi people are encouraging to do job in RMG sector. They are also highly educated, which opposes the traditional speech that garments owners are illiterate. The study’s factory profile informs woven and knit still remains at the apex point in number than that of composite and sweater and maximum garments are located in Dhaka and Gazipur arena although a significant RMGs are located in Narayangonj and Chottogram. The sampled 100% factories are now using accounting software that means computerized software which opposes the myth that large number of RMG factories are still using paper based traditional accounting system (Textiletoday.com, 2020b). Among the factories about 14% has not started to use internet based modern accounting system. But maximum (86%) factories have started to adopt this industry 4.0 technology in accounting and information system section of the sector. Sophisticated ERP using tends is observed among factories and they choose to use private cloud. The software developers make customize software such as the inventory, accounts and payroll software according to the demand of the authority. Knit sector apparently goes ahead in using online ERP than that of woven, sweater and composite. It is also found that sweater sector is large company and they remains back in using e-accounting practice. The e-accounting using age is average below of 10 years which indicates that recently it has been started to be adopted in Bangladesh RMG sector which supports Abdulla, (2020) study. It is also found that ‘Tally online accounting software’ using rate remains at the zenith. It is also discovered that local software developers are more popular to the RMG owners in making their internet based accounting and inventory and payroll software than that of international IT giants.

Research Limitations and Future Directions
The study discussed the e-accounting practice of Bangladesh RMG sector from the client view, not from the vendor’s view. The e-accounting practice stated in the study is limited to the usage of saas based stand-alone accounting solution or ERP, it avoids other cloud service forms served in accounting such as Platform as a service (Paas), or Infrastructure as a service (Iaas). In collecting data, the researcher has faced many barriers since the RMG factories’ owners or managers remain very busy in their daily works. Rather, the eliciting of the huge data in amount and confidential (accounting related) in nature, was troublesome activities that the researcher faced during field study and survey. However the study concentrates on the scenario of e-accounting practice only, it avoids to identify the factors influencing the practice and the effects of the practice on tasks performance on which future study may be conducted. Additionally, this study portrays the picture of e-accounting practice on RMG manufacturers only and obviously future studies may proceed on accessories and textiles and buying houses which are the significant firms related to RMG industry.

Conclusions
The objectives of the study were to explore the scenario of e-accounting usage in RMG factories of Bangladesh. The study adopted mixed method to meet the objectives. Using interviews and survey, data were collected and using descriptive statistics data were presented and analyzed. The study concludes that Bangladesh RMG sector which bears the 2nd largest apparel supplier title and is highly emerging business sector, is aggressively adopting industry 4.0 technology to compete with the international competitors. The mentionable token of being a smart factory is screened through the implementation of e-
accounting practice largely among the RMG manufacturers’ factories. The study suggests that woven factory should keep pace with that of knit in e-accounting practice and sweater factory should be also conscious about the e-accounting implementation.

References


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