



“Technology advances – specifically in the areas of E-commerce and E-business 2.0 – have rendered traditional models of organisational structure and theories of management roles obsolete in the light of the changing nature of 21<sup>st</sup> century corporations”. Evaluate whether this claim is justified – in relation to a business sector of your choice – and provide evidence for or against it, especially in relation to the management changes it implies.

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## Re-work Assignment

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***Vision for the Future***

LCDB7006

**Student ID:** 1813539

**Module Leader:** Dr. Amare Desta

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## **1. Introduction**

The Internet was one of the greatest inventions of humanity in the 20<sup>th</sup> century as it had a great influence on social economic development. During the 21<sup>st</sup> century, the Internet has advanced at a rapid speed, the number of Internet users worldwide was 400 billion people in 2000 and it has increased more than 4.5 billion people (Clement, 2020; Roser et al., 2020). With this brisk development, the Internet has become a necessary part of human life. Its application is extremely diverse, it is not only a “tool” to help connect people from distance, researching information, but also helping businesses to trade with customers and partners oversea, which means it has created a virtual market for different traders and buyers. This Internet-based services called E-business that combines E-commerce where trading and transactions are processed on Website. E-business 2.0 is claimed to represent a new way of “intellectual” and shed lights to new management and operational structure for 21<sup>st</sup> century businesses. However, this statement is doubtful since researches about E-commerce mostly focus on theory and concentrate widely on technology adaption among varies industries. Therefore, in this paper, the writer would like focus on the adoption of E-commerce and E-business 2.0 in a particular industry, which is E-grocery with an aim to have deep understanding about its impacts and to gain precise conclusion about the vanishing of traditional management and operational structure. Furthermore, grocery sector is stated to pioneer the adoption of innovation technologies to develop efficiency and provides an appropriate context to examine E-commerce technology adoption.

## **2. The flow of Management theories:**

### **2.1. Classical Management Approach**

From the second half of the nineteenth century to the twentieth century, the theory and methodology of management had changed following the phenomenon of technical transformation. By the beginning of the twentieth century, there were several famous concepts of management, one of which was based on the scientific approach. This scientific management theory was introduced by Taylor (1911) who began by analysing the actions of his workers to find ways of making the work both faster and less fatiguing. In 1911, he was convened at the US House of Representatives to present his theory and the belief that “payment by results” would be motivational for employees. Currently, Taylor’s principles of scientific theory have been adopted widely and treated as a core competency in business. For example, the American fast food chain, McDonald’s, allocates suitable tasks that match employee’s ability to perform and trains workers to act in accordance with tick lists of employees’ activities. Technology was developed to control production lines as well as scripts prepared for call centre operatives. Besides Taylor’s work, Fayol (1916) applied the administrative principles, called “command and control”, in his theory that combined rules of management: foresight, organisation, command, coordination and control. In the current business’s environment, the term “command and control” seems to have become a buzz word for efficient operation in an organisation with a degree of hierarchy and transparent lines of control.

Weber (1947) built his theory on engineering approaches to recognise the effects of bureaucracies. The theorist realised that the most regular kind of plausible legal control was bureaucracy and it had replaced charismatic and traditional form of authority. Moreover, the theorist accredited bureaucracy as an indication of “the process of rationalisation of society” (Robinson, 2005). In 1973, Mintzberg published “The Nature of

Managerial Work” which described the reality of management, the actual actions and behaviours of the managers. This provided a practically oriented view rather than presenting the theory as depending on the manager’s actions. During the 90s, Peter Senge, who is the “youngest” theorist in this paper, is the father of “the learning organisation” management theory. The idea of learning organisation is portrayed as a centre where “ people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning to see the whole together”. Additionally, Senge claimed that business has the ability to accommodate economic changes and high engagement with employees will subsist and outperform (Robinson, 2005). Therefore, it is noticed that management theories have changed through time of human being. This possibly due to movement and development of economy, inventions as well as customer oriented, thus, when e-commerce and e-business 2.0 “penetrated”, it certainly would change operational structure and management of business.

### **3. Revolution of Technology: E-business and E-commerce**

In the 1990s, the presence of e-business or e-commerce simply consolidated about the birth of Websites, administering the desire of every enterprise of establishing an online business and ensuring that there was information published online. The concept of the Internet was not popular at that time and there were uncertainties in understanding the meaning of the Internet, however, individuals still perceived that it was essential to have the Internet.

From 1997 to 2000, electronic commerce was recognised as transactions. This visualised the action of purchasing and ‘vending’ on the Internet and it had the main focus on the flow of order and gross revenue. It allowed suppliers or sellers to connect with customers

or buyers from distance and it simplified the process of taking transactions that were traditionally involved with paperwork. Nevertheless, during this phase, the proclamation concentrated on order flow: “why-sell-it-when-you-can-give-it-away business models”. Dr. Ravi Kalakota and Marcia Robinson (2001) demonstrated that most of the first movers were having sharply drawn breaths or even drawing their last breaths in this period. Value America is an example.

In the 21<sup>st</sup> century, people, especially leaders, became concerned about the profitability that resulted from the Internet or the e-commerce. The definition of profit was no longer about the expansion of revenue; gross margin is also figured. The current phase is called E-business, which covers all aspects and movements facilitating an enterprise to proceed with transactions. Moreover, E-business encompasses all applications of a business, front and back office, which create the major motive for a modern business. In general, E-commerce and online transactions conducted on a website are not the only aspects of E-business; E-business is about reformulating outdated business models into ‘up-to-date’ models with the support of technology.

The question is why one should bear in mind the impact of E-business and does the advancement of technology impact the business? The number of individuals and businesses connected digitally has increased regularly. The low-cost technology binding buyers and sellers is “as significant a technological advance as the invention of the steam engine, electric power generation, telephone or the assembly line” (Kalakota and Robinson, 2001). Technology was claimed to be the cause and core driver of a business. Although it was not the Rodney Dangerfield of the business and it did not have an apparent impact on the company, it would have an incessant and aggregate effect similar to the effect of water.

Undoubtedly, E-business was concerned as a weighty challenge to business since the appearance of computers. However, computers alone could not change the business; with the combination of E-commerce, the business foundation changed. Therefore, structural conversion of a business became difficult to manage since technology had penetrated into business processes and problems related to technological innovations rose on larger scale. The Internet redefined the obsolete commerce by replacing it with modern industries like portals, application service providers and Internet service providers which commensurately equalled the arise of virginal markets. Good will, reputation, external relationships and other intangible assets were affected by the development of the Internet along with other tangible assets. Moreover, communication is key in operating a business. For organisations with subsidiaries or owning multinational businesses, communication technology must be carefully invested. Travelling globally for a business trip or having a meeting outside of the company is not only time-consuming but also costly and reduces productivity. Hence, the use of the Internet or video calls, video conferencing technologies help to transmit information quicker, increase the interaction between managers and employees and reduce the cost of operation.

On the other hand, adopting technology can help organisations to gain exclusive customer experience. Taking the example of the most famous transportation company – Uber, the company builds and operates business on a “user-friendly mobile app”, which has courageously transformed the taxi industry. The invention has mostly replaced the action of ringing a taxi station and deliver exact updates on when and where the driver is (Gough, 2017). The Deloitte, Touche Consulting Group and IBM defined E-business as “the use of electronic networks for business usually with web technology” and the revolution of business over internet technology (Chaffey and Smith, 2008). In an elementary understanding, E-business could be observed as the act of exchanging goods

and services on the Internet. In a broad view, E-business comprises E-commerce and it is a universal platform where engagement between business and customers exists. E-business is an advanced method of operating business which concerns with clarity, distribution, rectitude and connectivity. Thanks to the development of e-business, large corporations with global subsidiaries can easily connect and function as an entity by way of digital connections from partners to employees or from the enterprise to the supplier or from the business to customers. Assimilation and adjustment in organisational structure, human resource and technology are necessary in adopting e-business (Hackbarth and Kettinger, 2000). In other words, E-business helps reducing hierarchy of business.

Furthermore, the quality and efficiency of “the planning process of information systems” is affected by the business characteristics (Kao and Decou, 2003). Business characteristics also correlated with the adoption of technology, which has been demonstrated in numerous empirical and authoritarian researches (Phan, 2003; Yap and Thong, 1995; Davenport, 1993; Brynjolfsson and Hitt, 1996). It is proved that organisational frameworks and consolidation manipulates “telecommunication technology” (Grover and Goslar, 1993). According to Yap and Thong (1995), the size of the company is one of the determinants that has a huge impact on the use of technology. Small size companies might face disadvantages in establishing IT due to the limit of finance, restriction of resources, deficiency of professionals, specialised staff and sensitivity to external tension. However, small size companies do not respond to the competition between the intensive volume of data and the market when using IT in the firms.

Additionally, the effect of IT is studied with “organisation competitive priorities”, the adjustment of strategic goals (Kearns and Lederer, 2003), the application of IT and the success of particular IT functions (Subramani, 2004). Generally, the support of technology

has benefited a corporation's performance by bolstering a greater degree of a business's integration (Vickery et al., 2003). Lim et al. (2004) and Sriram and Stump (2004) showed that there is evidence of productivity paradox as technology affects directly on the company's performance which led to inconsistent consequence. Several researchers have studied this identical phenomenon under many forms as Dos Santos and Sussman (2000) demonstrated the failure of management "to leverage the full potential" of technology or Stratopoulos and Dehning (2000) presented "ineffective implementation", the existence of a time lag in the IT investment process (Deveraj and Kohli, 2000).

Given the assertion that E-business and e-commerce have altered management theory as well as the organisational structure, E-business is treated as the core operator in transforming an entity's structure. Regrettably, only a few businesses have yet established the information-centric business layout that is used for addressing concerns arising from economic changes and IT. Altering the stream of information necessitates the amendment of not only the product mix but also the business environment, where organisations compete. In the 80s, IBM and Digital Equipment Corporation dominated the PC world until there was a rapid growth from other technologies and the rise of manufacturing companies like Dell, Compaq and Gateway. The reason was IBM and Digital Equipment Corporation did not pay enough attention to market changes. In the 1990s, the Digital Equipment Corporation's line showed that "PCs represented a niche market with only limited growth potential." (Kalakota and Robinson, 2001). Unfortunately, due to the company's obstinacy and delay in changing the concentration from midrange computers to PCs, the IT company dived into a black hole with no way to escape. Additionally, the company was hesitant in endorsing the Internet which was a huge mistake and resulted in its acquisition by Compaq. It is well-proven that economic changes are harsh on organisations that do not change. Another example of a successful

firm failed was the case of CompuServe and Prodigy. CompuServe and Prodigy, a joint venture of Sears and IBM, were both founded in the 20<sup>th</sup> century; CompuServe presented numerous exclusive content ranges to its subscribers such as the most up-to-date news and information, valuable resources, and databases. Prodigy owned innovative products and services and once had 2 million followers. Both were expected to stand steadily and take advantage of the digital Web. Nevertheless, success came to an end when both companies met an issue in management. During that time, AOL bombarded the American market with floppy disks and soon became an influential brand and “outexecuted” their rival. In consequence, Prodigy was sold by Sears and IBM, and a similar ending befell CompuServe, as it was purchased by AOL in 1998 (Kalakota and Robinson, 2001).

## **4. Structural Transformation of Organisation**

### **4.1. E-grocery: Click and mortar**

The advent of E-commerce has changed many business models as well as created a number of new business models. Traditional commercial enterprises or traditional activities also deploy online activities, one of which is grocery shopping. Concurrent, E-commerce is gradually changing consumer shopping grocery habits. Instead of going to a store or supermarket, consumers are able to buy food, ingredients or household goods from any suppliers with just a click.

Following Rappa (2003), E-grocery is classified as merchant model of E-business that relates to retailers or wholesalers of goods and services selling online. Merchant model started at the early of 2000s when United Kingdom (UK) was recorded as the first country presented E-grocery by traditional supermarkets (Linder and Rennhak, 2012). It is recorded that British set the foundation of E-grocery since 1990s, however, it is officially

become effective and efficient after nearly 20 years (Kaur, 2018). Tesco and Ocado were the first two companies recognised the importance of the Internet that could use for not only retailing but also for advancing main business scope. Tesco and Ocado are representing for two forms of E-grocery businesses which is brick-and-mortar supermarket exploring new channel of sales and new business specialising in deliver groceries to door. Tesco is considered as a leader in E-grocery industry for its competitive prices that reach most of UK population. In 2006, E-grocery sales of Tesco grew nearly 30 percent since they began to enter into the market (IGD, 2006). Nonetheless, Tesco met difficulty with its competitor, Ocado, whose owner are John Lewis and Waitrose. Ocado provides better quality range of goods since their products have “Waitrose” quality which helps the company to boost its sales in current competitive market. Observing the success of Tesco and Ocado, Sainsbury’s, ASDA or Amazon-fresh continue infiltrating into the competition and providing wide range of goods on the Internet and delivery it to customers’ doors. Beside UK, E-grocery also posed significant impact on America and European countries. In 1997, HomeGrocer.com was the first online grocery in the United State (US) that rapidly enhanced investment to create the infrastructure required to raise the business and its sales had reached over \$1 million a day (Saunders, no time). However, in the early 2000s the E-grocery industry of UK is considered to be “more successful” than in the US. In 2004, British consumers’ spending had been surprisingly expansive since the establishment of E-grocery in UK and it was calculated to grow more than 3 percent per year (Kornum and Bjerre, 2005). This growth has aided numerous goods and services in different categories combining electrical appliances, computing and online grocery. Furthermore, Reynolds and Arnold (2003) declared that because of the pricing mechanism and the range of choice in-store, customer dissatisfaction appeared compare to online shopping. As an illustration, during peak periods like

Christmas or pandemic like Covid19, customers feel more comfortable to shop online because of the poor accessibility in store. Moreover, the increase in sales in domestic website along with American E-businesses initially targeting UK markets indicates that British benefit from a double investment by virtual merchants (Kornum and Bjerre, 2005). Additionally, it is recorded that over 3.5 million British of 54 percent Internet users bought grocery online in 2006 and the E-grocery market is expected to grow nearly £2 billion (IDG, 2006).

A comparison of the forecast growth in grocery markets among general grocery and E-grocery between several countries from 2018 to 2023 signifies that the growth in market size of online and offline grocery is performing in a translational movement, however, it is not matched in proportions as well as its performance. Based on the table 1, South Korea, Australia and Spain are listed on the top 10 countries that can reach 227 billion USD by 2023 (IDG, 2018). Nevertheless, when combining E-grocery and offline grocery markets forecast in table 2, these countries are replaced with India, Brazil, Russia and Mexico (IDG, 2018). Moreover, figure shows in table 3 and 4 in 2018, only Wal-Mart of United States appeared in the top 10 online retailers, while others did not. Likewise, Wal-Mart Stores, Inc ranked in the first place of “Leading 50 retailers worldwide in 2018”, however, the E-grocers ranked the 5<sup>th</sup> place of top 10 global e-commerce retailers by digital commerce 360. This conflict apparently concerns with performance and achievement between E-grocery and offline grocery capacity, presence of distinctiveness and difficulties in E-grocery industry.

| Country     | Online grocery market size<br>\$bn |         | Value growth<br>\$bn | CAGR  | Online grocery channel share<br>% |       |
|-------------|------------------------------------|---------|----------------------|-------|-----------------------------------|-------|
|             | 2018                               | 2023    |                      |       | 2018                              | 2023  |
| China       | \$50.9                             | \$196.3 | +\$145.4             | 31.0% | 3.8%                              | 11.2% |
| US          | \$23.9                             | \$59.5  | +\$35.6              | 20.0% | 1.6%                              | 3.5%  |
| Japan       | \$31.9                             | \$46.5  | +\$14.6              | 7.8%  | 7.1%                              | 9.9%  |
| U.K.        | \$14.6                             | \$22.1  | +\$7.5               | 8.7%  | 6.0%                              | 7.9%  |
| South Korea | \$9.9                              | \$21.3  | +11.4                | 16.5% | 8.3%                              | 14.2% |
| France      | \$11.6                             | \$17.2  | +\$5.6               | 8.2%  | 4.5%                              | 6.0%  |
| Australia   | \$2.1                              | \$4.2   | +\$2.2               | 15.3% | 2.1%                              | 3.7%  |
| Germany     | \$1.3                              | \$3.8   | +\$2.5               | 23.2% | 0.5%                              | 1.2%  |
| Canada      | \$0.8                              | \$2.1   | +\$1.3               | 21.0% | 0.8%                              | 1.8%  |
| Spain       | \$0.9                              | \$2.0   | +\$1.1               | 17.9% | 0.7%                              | 1.4%  |
| TOTAL       | \$147.9                            | \$374.9 | \$227.0              | 20.4% |                                   |       |

Table 1. (IDG, 2018)

| Rank | Country        | 2018<br>US\$bn | 2023<br>US\$bn | Total change<br>2018-2023 | CAGR<br>2018-2023 |
|------|----------------|----------------|----------------|---------------------------|-------------------|
| 1    | China          | 1,395.7        | 1,822.9        | 30.6%                     | 5.5%              |
| 2    | USA            | 1,494.4        | 1,726.4        | 15.5%                     | 2.9%              |
| 3    | India          | 510.5          | 869.5          | 70.3%                     | 11.2%             |
| 4    | Japan          | 459.0          | 479.7          | 4.5%                      | 0.9%              |
| 5    | Brazil         | 328.4          | 469.7          | 43.0%                     | 7.4%              |
| 6    | Russia         | 297.7          | 362.7          | 21.8%                     | 4.0%              |
| 7    | Germany        | 296.0          | 341.1          | 15.2%                     | 2.9%              |
| 8    | France         | 275.6          | 307.6          | 11.6%                     | 2.2%              |
| 9    | United Kingdom | 264.1          | 303.3          | 14.8%                     | 2.8%              |
| 10   | Mexico         | 203.1          | 268.7          | 32.3%                     | 5.8%              |

Table 2. (IDG, 2018)

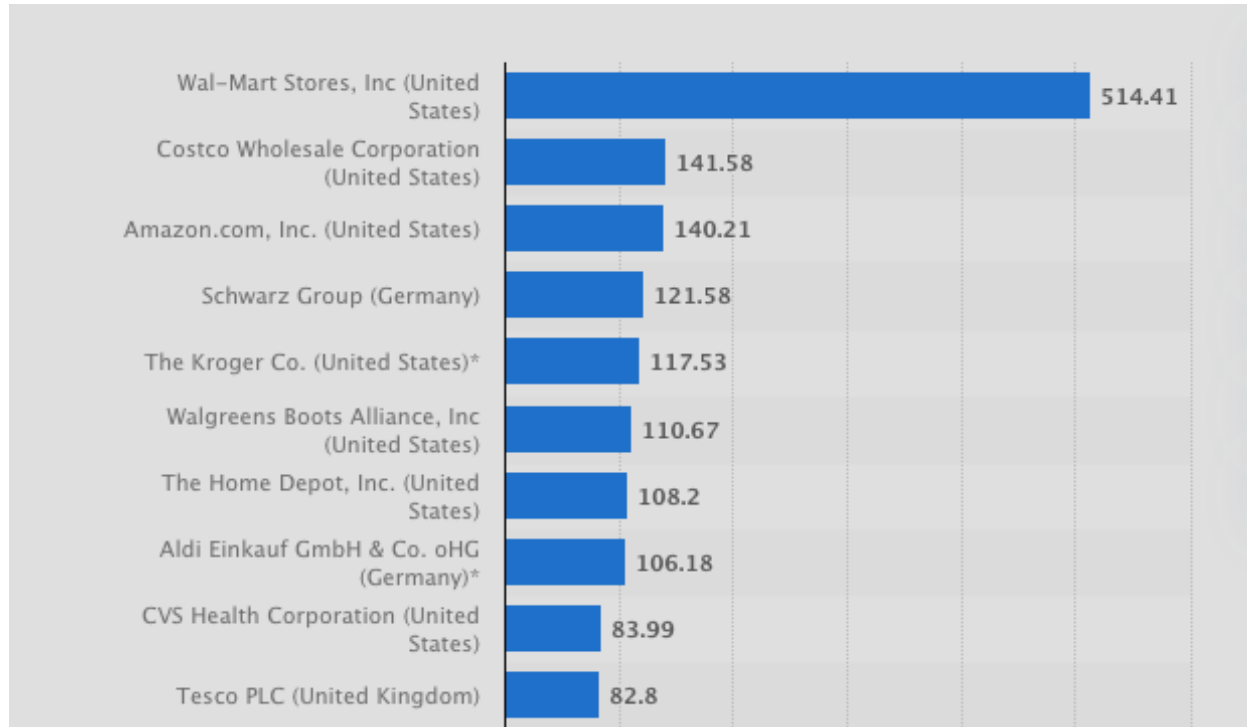


Table 3. (Statista, 2018)

### Top 10 global ecommerce retailers

Ranked by 2018 web sales

| Rank | Retailer                   | Country | Merchant Type               | Merchandise Category |
|------|----------------------------|---------|-----------------------------|----------------------|
| 1    | Amazon.com                 | U.S.    | Web Only                    | Mass Merchant        |
| 2    | JD.com                     | China   | Web Only                    | Mass Merchant        |
| 3    | Suning Commerce Group      | China   | Retail Chain                | Mass Merchant        |
| 4    | Apple                      | U.S.    | Consumer Brand Manufacturer | Consumer Electronics |
| 5    | Walmart                    | U.S.    | Retail Chain                | Mass Merchant        |
| 6    | Dell Technologies          | U.S.    | Consumer Brand Manufacturer | Consumer Electronics |
| 7    | Vipshop Holdings           | China   | Web Only                    | Mass Merchant        |
| 8    | Otto Group                 | Germany | Catalog/Call Center         | Mass Merchant        |
| 9    | Gome Electrical Appliances | China   | Retail Chain                | Mass Merchant        |
| 10   | Macy's                     | U.S.    | Retail Chain                | Apparel/Accessories  |

Table 4. (Digitalcommerce360, 2018)

Over the last two decades, E-grocery has proven its position among businesses and customers. In businesses' aspect, E-grocery delivers companies the opportunity to present various kinds of goods online and providing accessible approach to customers. It also helps businesses to have an insight look of its operation and to grow their share in the current market. In the customers' prospective, the establishment of E-grocery brought convenience to online customers as it saves time travelling and might offer better deals. From an economic view, E-grocery clearly presents vital role in UK's economy since online shopping occupies in total retail expenditure and the Britain Government comprises online shopping into calculation of Retail Price Index. Apparently, E-grocery is the biggest "Business-to-Consumer" segment that household products and food are essentials for consumers.

Moreover, E-grocery adopts the emergence and trend of omni-channel application creates a step forward with great impact on this industry. It is not only simply using a series of marketing channels such as websites, social networks, mobile applications, computers, advertising posters to attract consumers, omni-channel pays special attention to bringing to a seamless and unified experience for E-grocer's potential customers. It

constructs maximum convenience for the ordering process, helping customers feel interested and respected. Online grocery has become simpler than ever, and this has turned E-grocery into an increasingly popular way of buying and selling food and household essentials. Nevertheless, as a significant trend in the development of E-commerce, business is switching from omni-channel to unified commerce as a combination of traditional stores and online sales channels afterwards. Further, the growth of E-commerce and E-business 2.0 has also increased customer expectations. Consumer would like to have more options or more range of products to choose, speedily delivery, status quo of their orders along with appropriate refund procedures. These elements listed compel retailers, especially E-grocers to have excellent supply chain management in order to respond to modifications and innovations in particular sector with the aim to offer world class services.

With the aim to gain deeper understanding about E-commerce, especially E-grocery, there was a number of researchers analysed about the variation of E-business 2.0 utilisation across various demographic groups (Clarke et al., 2015; Weltevreden, 2007). Clarke et al. (2015) used Acxiom data to test about the geographical of E-grocery among UK supermarkets and regions. The group of researchers discovered that E-grocery is mostly influencing male consumers, who are aged between 25 to 44 years old and locate in the city centres. Nonetheless, E-grocery is not only become a phenomenon in big cities, but it has also created a rural trend. This was due to the geographical reason as rural area is called “food deserts” (Clarke et al., 2002). People, who are living far from supermarket or any grocery stores, have a tendency to shop grocery online. Indeed, rural residents are certainly facing issues of accessibility towards physical store. Moreover, according to the work from Kantar Worldpanel (2016), E-grocery is frequently used by wealthy households. People with annual earnings above £60,000 are spending one tenth

of their income for grocery. It is also proved that wealthy households are willing to spend ten times to patronize online compare to households with lower income. It is worth noticing that consumers are preferring to spend more while they shop online up to £19 per transaction (Birkin et al., 2019).

## **5. E-grocery Management**

Many businesses found technology adoption and E-grocery are tough nuts to crack in the era of technology advances continuously. Problems are related with making profit, managing the business and finding the appropriate strategy to obtain main goal. However, these problems are mostly concerned with supply chain management and customer relation management. Therefore, in this paragraph, the write of this paper would like to illustrate how E-commerce affects management style of E-grocery.

### **5.1. Supply Chain Management:**

In the current trend, the establishment of an appropriate supply chain is a vital matter for every business, particularly E-grocery as it cannot exist independently without an efficient supply chain management. It can be said that supply chain management is a complex area with large expenses, however, it is a major element that decides the profitability of industries in E-grocery. A perfect supply chain system, which is consistent with the procedures of E-commerce and meeting requirements of consumers, is an influential determinant in organisation success.

#### **5.1.1. Customer-oriented trend:**

It was claimed that for an E-grocery business to be successful, that business should have full ability in coping with price competition and maintain relationship with customers (Rafiq

and Fulford, 2005). The reason is loyal customers have the tendency to buy more and they might not be price sensitive; moreover, if a business gains customer loyalty, it would benefit by advertising through word-of-mouth. Therefore, in order to remain customer loyalty, businesses should obtain customer-oriented trends to upgrading its services.

Time is money. Fast service is possibly counted as core reason to be chosen by customers. Thus, it is necessary that E-grocery businesses must reduce the processing time of order entry and order fulfilment because delay would cause dissatisfaction and may result in loss of customers. Further, delay is certainly caused by inadequately designed processes and poorly technology adopted by the business. Take the case of Sainsbury's, it recorded the company's computer failures twice in 2017 which led to hours of delays in customers' E-grocery orders and "grappled" to get through Sainsbury's customer service line. This negatively affected nearly 200 superstores and complaints of customers were suffused on Twitters (Weinbren, 2017). In a nutshell, a business should consider the challenge of facing high demands, dealing with discontented consumers in a hostile market, low profit margins, price competition in order to arise an ideal business model. Currently, customers are reprimanding and refusing businesses breach time through delays or irrelevant orders. Hence, including distribution functions is one of the methods that shortens delivery times. Physical stores can be utilised as multi-functional place that is acting as collection points where customers come to collect online orders and as sales points that aiding home delivery. An American retail chain, Walmart, has put this scheme into use and it also administers staff to deliver orders on their way home (Bose, 2018). On the other hand, numerous supermarkets are claimed this method is hard to be undertaken because of lack of storage space and perceptibility of available stocks.

Administration of stocks or inventories has consistently been a paramount area of the supply chain, specifically in evolving multi-channel acquisitions. A decent inventory perceptibility will present the competency to prepare E-orders without having to own the products in stock. If E-grocery channels and order management are harmonized, the processing practice can be accomplished effortlessly: products will be inventoried and delivered from an adjacent distribution centre to ensure meeting customers' needs. Likewise, it is interesting that some businesses choose outsourcing to overcome this problem.

#### 5.1.2. Outsourcing business: Distribution Centre

In a modern market, organisation should be able to stay flexibility to exist. The indication is business should outsource particular processes to be more efficient. Outsourcing business means a company delegates its operation processes to an external organisation to develop performance. Utilising outsourcing business means business would save costs and time in its operation, and business can form new markets speedily with no up-front investment. Furthermore, this method offers "modular environment" where seasonal cycles and production needs control the scale of the environment (Kalakota and Robinson, 2001). These elements manage the endorsement of outsourcing combine the tension of boosting revenue and decreasing expenditure along with an intensified need to retain a competitive advantage. Moreover, outsourcing business typically concerns with IT, administration, accounting or logistics in the context of E-grocery. Business process outsourcing is used to be treated as a cost-control method, however, since E-commerce has entered into every industry, outsourcing is enhanced as a way to alter current operational culture and helping to gain advantages with virtual services. Additionally, business sees outsourcing as an opportunity to approach specialised and wise intellectual, advance technologies to grow at a world-class standard.

During the first time of operating E-grocery, operating online channel was expensive compared to brick-and-mortar grocery as business had to order picking and deliver orders to customer's doors. Further, the diversity and variation in consumer's demand created perplexity among businesses when managing the process of order picking and delivery. In the beginning, most supermarkets picked products from stores and delivered orders to customer. Nevertheless, this approach was claimed to be inefficient by the first movers. In E-grocery, first movers accepted revolutionary tactics applying technology as a demanding competitive plus to appeal market share and build entry barriers; however, most first movers failed with their business structure and some of them were bankrupted. Alternatively, late comers who came into the industry after those pioneer businesses are treated as smart movers as they are succeeded by overcoming first movers' issues. According to Davis (2002), Tesco gained 40 percent market share from first movers and it has been considered as a smart mover when the business learned from others' mistakes and become world class E-grocery business. The reasons create Tesco's success possibly because the E-grocer carefully operates and manages its assets such as warehouses and vehicles. In 2001, Tesco fulfilled customer's orders directly from its stores, which were used to called "dark stores" (Wufraat, 2014). In order to meet the delivery time, employees would start picking order from 4AM and walk through every aisle to pick goods and pack for delivery. Orders were loaded on delivery vans after prepared and appropriate routes were planned for drivers to possible meet delivery time of customer. This strategy was claimed to be inexpensive to operate and Tesco rapidly enlarged its scale to over 300 stores (Wufraat, 2014). Nonetheless, dark stores method was not a perfect method to operate business in the long run. The main reasons were it enforced limitations on product variety because not every store displays same ranges of products and difficulty in performing logistics application because lack of space. Tesco

changed its business model to boost the virtual channel by integrating “dark stores” and “dot-com” depots, where “dark stores” were used for serving remote regions of the country and other depots were for crowd downtown markets. However, depots were recognised to perform more effective compare to “dark stores” technique and it also saved cost to operate. Likewise, E-business 2.0 has changed E-grocers’ operation every day and Tesco has to face various challenges with when the number of depots increase, the company chose to automate its distribution centre for external organisation named NX Group (NX Group, no time). This way has helped Tesco on reducing difficulties on regional distribution as well as other supermarkets in UK (Lidl, Morrisons, Aldi) (Shaw, 2019; KamCity, 2020; Moore, 2018). Nevertheless, there were some failures in operating their businesses with distribution cost centre, although these businesses cut costs on delivery by utilising reception boxes along with automation in distribution centres. A well-known example is Webvan, an American E-grocery company, invested in setting automatic distribution centres with poor capacity usage that led to expensive costs not only in delivery cost, but also high costs in general overhead (Sandoval, 2000). Therefore, it is essential for corporations to deeply understand adopting technology would cause uncertainty.

In general, E-commerce has changed the organizational structure of businesses. The organizational structure of business tends to shrink because E-commerce has supported businesses solves problem of overlapping functions of business departments and eliminated unnecessary departments; at the same time, it encouraged and promoted all capabilities of employees.

### 5.1.3. Customization

Improving customer attention is matter. Most businesses are establishing and remaining customer relationships with an introduction of new technology and better sales. Following the concept of maximising customer loyalty, businesses comprehend that a “one-size-fits-all” philosophy does not apply for all customers (Kalakota and Thompson, 2001). This indicates sales and service needs to be customized for each consumer. In E-grocery, customization for consumer can be understood as time and date of delivery provided as consumer’s wish or the quantification of goods that customer would like to purchase. For example, instead of buying a fixed amount of beef, customers have the ability to adjust quantity relating to their desires. This idea is corresponding with “want-it-buy-it-and-use-it” of consumer which requires E-grocers studying and following consumer’s needs, lifestyles and applying this information to expand a precious proposition (Kalakota and Thompson, 2001). Take the case of Tesco, the supermarket provides loyalty card for each consumer to collect points and redeem it when they shop in-store or online. By providing this method, it is easier for Tesco to make predictions about certain goods and items through customer database. Moreover, it is also more convenient for online consumer when they re-purchase some items as Tesco is suggesting a list of frequently bought by that individual consumer. It would save time of searching for each item every time a customer shops grocery online. Apparently, the aim for applying this technology is not related solely to retention or purchase of consumer. It further concerns with obtaining sales through selling larger volume of products via cross-selling and up-selling, thanks to the record of consumer’s habitat and choice.

### 5.1.4. Integrated business applications: unified commerce solution and integrated logistics management

Before the present of E-business 2.0, most businesses operated its business separately, especially constructing specific departments such as manufacturing, distribution, IT, finance, human resource and customer service. This separated mechanism expresses that a specialised area has the ability to optimize functions in that specific segment and every segment connects as an entity are advanced would lead to the whole business operate optimally. Nevertheless, this mechanism has been challenged by researchers recently. Researchers indicate that a chain of movement is performing at a massive level, the singular business functions and operations backing the entity should be closely bind with other processes around them. This strategy is called “Integrated business applications” (Kalakota and Robinson, 2001). Integrated business applications expressed that every enterprise processes base on a well-integrated application are always optimized which conceives great retention among business managers. As mentioned earlier, E-grocers have shifted E-grocery industry to the unified commerce model, which gives businesses the opportunity to increase operational efficiency, improving customer experience as a whole and ultimately increase sales as a corollary. In a competitive retail context, E-commerce has changed the way consumers shop, forcing traditional stores to adapt to the way they attract consumers. As a consequence, grocers have implemented an omni-channel model for their customer base to provide a consistent experience across all sales platforms. The design and application of such channels that includes social media networks, mobile apps and websites enhance customer experience by engaging consumers on multiple platforms. In contrast, this omni-channel did not succeed in combing customer experience into a single platform – unified commerce solution. As consumer is the key to the unified commerce model, it integrates the omni-channel platform into a single system, thus, it provides grocers chance to maintain their operational efficiency and meet unique needs of consumer.

A unified commerce solution will integrate technology for all sales, marketing, business operations, locations and people operations and personalization of services and products according to particular consumer's needs. Withal, via unified commerce, grocers are able to bolster data analytics for clients to accomplish superior operational efficiency and upsurge profits. Applying a single data model lets grocers access to real-time purchaser records like item preferences and preceding purchases that enables them having more efficient consumer relations. This case is mentioned with Tesco issues club card for its consumer to collect points both online and offline.

Additionally, cloud-based resolutions linked on one platform bring advanced commodity availability and greater inventory veracity by delivering grocers whole variety of stocks at any given time. By systematically identifying which particular locations are available for specific products, it allows retailers the flexibility to deliver goods to customers' doors from various locations and limiting the damage of sales opportunities. Similarly, by taking advantage of real-time data analytics, grocers will have superior prediction of buyer need. Having a better understanding of buyer needs as well as commodity shelf life, which means the length of re-order cycle, is key for grocers to improve supply chain performance and maintain the optimal scale of stocks. Likewise, grocers can integrate exceptional point-of-sale technologies like self-checkout and applications on mobile to enrich consumer self-advocacy, reducing in-store labour expenses and improving stores' layout to increase consumer experience. These unified commerce resolutions have potentiality to rise business incomes by eliminating administration expenditures and rising inventory sales, diminishing the loss of sales. Therefore, this additional operational efficiency can lift sales growth, intensify key sales metrics, for example, conversion rate or average order price by forming extraordinary shopping experience on every sales channel. In a speedily developing grocery market, the unified commerce business model

will be the dominant grocery framework in the digital phase of E-commerce. Grocers that refuse to integrate into a unified commerce model have problem opposing with organisations implementing this resolution. Nonetheless, combining a unified commerce platform presents difficulties, particularly for long-standing retail corporations as well as traditional stores, relying greatly on hardware and software to boost sales. Operating unified commerce system will consume lots of time for grocers because the initial expenditure of installing new infrastructure would need capital. Expenditures in the long run of operating single data model will shrink as retail effectiveness increases together with nourishing development is attained from customer loyalty. Furthermore, in this era of E-business 2.0, consumers welcome the omni-channel shopping practice, thus, a unified commerce resolution that integrates experience of these channels by linking superstores with purchasers would create additional value through greater convenience.

Take the case of Tesco, the supermarket concentrates on constructing customer loyalty and satisfying the need of both online and offline consumer by undertaking the Integrated Logistics management. Following the work of Hillary and Jolly (2001), Integrated Logistics management has supported business in decreasing expenses and boosting performance of operation simultaneously. Additionally, they stated that this method of management is the best system that insures sustainable allocation of business's goods. As stated earlier, Tesco applied a primary distribution channel that deporting products from "dark stores" to supplier vehicles as its first strategy of supply chain management for E-grocery.

Generally, supply chain management activities have a great influence on the enterprise's capability of reaching out, the ability of dominate market and gaining trust from consumers. With an efficient supply chain management, corporations are not only be able to earn high returns, but also outstrip their rivals in the industry. The major drive of supply chain is to please consumer needs in the process of obtaining earnings. Thus, supply

chain management also impacts customer service quality by assuring timely and sufficient delivery of certain commodity and deploying to successfully satisfy consumers.

## 5. 2. Customer Relation Management (CRM)

During the 1970s, the concept of Customer Relationship Management arrived together with the first yearly scrutiny that was constructed to appraise customers' satisfaction. In the last decade of the 20<sup>th</sup> century, customer services and customer's satisfaction have been the major concerns of business, thus, customer relationship management (CRM) is one of the approaches to administer clients as it concentrates on enhancing and learning customers individually rather than assessing them as a group. Currently, products have been assembled based on the needs of customers which means the customer relation skills are the foundation of embellishing and accomplishing customer's gratification. Moreover, the act of protecting market shares and the endurance of the business in rivalry, would be problematic tasks, if customers were not interested. Understanding and devoting effort to customer's demands with creativity and modernisation, as well as responding to the market, are the methods that businesses should embrace to survive. The area of expertise of CRM covers all aspects of decision-making together with the aspects of marketing.

The ecosystem of E-grocery industry has reformed by the cause of changing administrative, organisational structure, the advancement of technology that decreases the barriers of entry and constructs a consolidated retail market. Due to these adjustments, supermarkets reformulate customer services and increase the value of services with the aid of technology. From the aspect of management, keeping connection of consumer and retailers has become more vital as the volume of opinions and complaints from customers are increasing. It is reported that nearly 70 percent of customers around the globe post reviews online monthly, nearly 60 percent consumers

do it weekly (Global data, 2018). In particular, more than 70 percent customers write reviews or post images about food and beverages monthly. Furthermore, approximately 50 percent E-grocers stated that E-shoppers are posting comments or reviews regularly about the quality and design of goods along with attached pictures (Global, 2018). With the aim to boost connection with customers, the quality of products and services is top concerns in electronic grocery since it is the basis to flourish and keeping relationships with customers.

Along with the presence of E-commerce and E-business 2.0, most businesses have changed the way managing corporations since most of their activities are involved with the Internet. Thus, remaining relationship with their customers is not solely through telephone or fax, it has expanded into email, the Internet, wireless and other advanced technology. Furthermore, the system display has also changed since it is more directed to user interface as well as increasingly interacting with user interface through data centres, data warehouse and the use of systems. The new method of managing customer relationship online is called electronic customer relationship management (E-CRM). This is the presentation of Internet-based technologies such as websites, forums, emails and other channels to obtain customer relationship management goals. This is a well-structured and synchronized CRM process that automates stages in marketing, sales and customer service. E-CRM escalates the efficiency of mechanism, promotes customer interplay and permits firms to “bespoke” merchandises and services to meet their individual desires. E-CRM produces an interactive pathway between merchants, patrons and workers through web-based tools. This process includes software, hardware, procedures and engagement of management towards strengthening operation-wide CRM business game plans. E-CRM is driven by easy Internet access through various platforms and devices. However, e-CRM is not solely concerned about software, it relates to web-

based technologies to communicate, comprehend and guarantee consumer satisfaction. An effective e-CRM scheme pursues customers' history via different channels, establishes and records interpretive databases and hones buyers contacts in three aspects: attract, extent and maintain. Typical e-CRM strategies include "amassing" buyers data, transaction history and merchandise information, the stream and content information. Afterwards, analysing customer traits to examine transactions and activities that combine customer records, transaction history, customer navigation, shopping carts, shopping samples and more. Moreover, applying e-CRM would save costs on system maintenance and modification compare to the pure customer relationship management. For e-CRM, deployment and preservation can take place at one location and on a server, whilst CRM consumes large amount of time involve and more expensive as the system exists in distinctive locations and on different servers.

Morrisons – UK supermarket group claimed that applying e-CRM called Salesforce, which was introduced by Capgemini corporation, enable the supermarket group to construct sturdier customer relationships. By having the opportunity enhancing customer's preferences and shopping habits, Morrisons can obtain its target range of consumer with compatible and special offers, generate new products and marketing programs. Salesforce is advertised as number 1 customer relationship management application that supplies e-consumer information precisely into the recently applied digital marketing and "analytic tools" (Capgemini, 2013). Additionally, as implementing new customer relationship management comprises various integrations among new digital applications, Morrisons let Capgemini to integrate its numerous current technology applications and being responsible for the exodus of numerous million consumer records.

In general, providing a regularly pleasant to E-consumers is a development of not only e-CRM but also CRM basis. Discovering main capability is a fundamental practice of

marketing principles expanded to E-business 2.0. Therefore, marketing foundations of delivery, implementation, goods and service are not only vital for traditional grocery, but also important for E-grocery as these features are predominant. Understanding consumers through their cookies and information mining are critical in E-grocery since there is lack of human interaction. Moreover, the design and layout of website content would decide the success of connecting E-grocers and its clients. Simple and clear is the best concept in order to encourage elder customers to try and utilise E-grocery in the long term. Withal, buyers may shop unexpectedly because they are attracted by the eye-catching ads of products of the website. Notably, there is one element that E-commerce is always missing is the physical feeling of products. Photos, audio and video are one thing, but holding a particular item with someone's own hands is a completely different thing. For some categories of items, this is not important, while for others, it could be a problem. However, customers always have the right to return or exchange unwanted items with the providers, but it would take time. Hence, returning orders is a concern that need to be scrutinized in E-grocery. Uncertainties can be confronted whilst shipment, associated inquiries and customers' demands for return and exchange require to be resolve if the corporation would like to maintain its position without losing its customers. Consequently, the purchase of logistics has grown into a facet that necessitates to be cautiously invest in order to gain optimal efficiency and serve customers with an exclusive service.

From the view of consumers, customer relationship management is observed as a tool delivering ease and handiness for consumers when searching or shopping for products online, making choices, transaction and post-consume experience. Not to mention, E-commerce allows E-grocers to personalize advertising activities for each specific object

and individual. This helps E-grocers build trust and loyalty customers by promoting relevant goods for each online customer.

## **6. Conclusion**

In conclusion, there are many similar ideas and opinions about the impact of technology, especially in E-business and e-commerce, presented in research studies and the news media. First (2016) claimed that “Technology changes, good management doesn’t”. First (2016) shares a same school of thought as Peter Drucker, who refused to define new methods in human management according to the advancement of technology. First has presented various examples of changing management in “the \$14 billion leadership industry”, (in a bestseller management book), due to lack of understanding of human nature. He believes there has been no fundamental change in the human nature and the methodology of the study of human management (First, 2016).

However, in this thesis, it is shown that technological advances “have rendered traditional models of organisational structure and theories of management” in the E-grocery industry. Since technology developed rapidly, virtual grocery has been taken advantage of its convenience and low operational costs. Nevertheless, in order to process products and services online smoothly, it is important to examine the status quo of the firm regularly, and the method of management should be changed when expanding traditional grocery into online grocery. The underlying reasons are stated above, as reforming a supermarket from tradition to a modern one corresponds with the organisational structure changed and changes in management. As operating virtual grocery, business would not require owning a store with prime location as well as the needs of employees. Therefore, Taylor’s theory and Weber’s theory are not applicable in this industry.

In the near future, grocery industry is hoping to process which combines the artificial intelligent (AI), robotics process automation, blockchain and internet of things for the whole industry. These would acquire complex technology; thus, supermarket should invest in the IT teams and leaders and managers should be fully aware of risks. Additionally, the robotics process automation would replace the use of human resource in the future, the organisational structure and management of a company would be affected, hence, managers should adopt changes to respond with the economic changes. Recently, Ocado has introduced an air-traffic-control systems and AI to integrate hundreds factory robots in its customer fulfilment centre (The Economist, 2020). The system is called “the hive” that co-ordinating robots to congregate orders for its customers which shortens the progress of preparing and it can process more than 65,000 orders per week. Ocado has successfully sold its technology to an US’s biggest retail chain named Kroger and other retail chain across Canada and Europe. Thanks to its intellectual, Ocado has lifted its share price up by 50 percent and its value to £5.7 billions (The Economist, 2020).

In general, the strong growth of E-commerce and E-business 2.0 is assisting to diversify business schemes and altering customer shopping habits, deliver profits to different businesses performing in any scale. Nonetheless, behind it is the necessity of applicable advanced technology applications, the productivity and elasticity of a complete supply chain to be able to adopt the promising but challenging electronics market wide-awake.

## 7. Reference and Appendix

1. Anesti, Despoina, "Internet banking history and strategies: a case study of U.S. and Greek banks" (2004). Capstone Projects and Theses. Paper 370. Available at: [https://digitalcommons.csumb.edu/cgi/viewcontent.cgi?article=1369&context=caps\\_thes](https://digitalcommons.csumb.edu/cgi/viewcontent.cgi?article=1369&context=caps_thes) (Accessed by: 11<sup>th</sup> March 2020)
2. Arnold, M. J., Reynolds, K. E. (2003) Hedonic Shopping Motivations, Journal of Retailing, 79, pp. 259-268. Doi:10.1016/S0022-4359(03)00007-1
3. Berger, A.N. (2003). The economic effects of technological progress: evidence from the banking industry, Journal of Money, Credit, and Banking, 35(2), 141-176.
4. Birkin, M., Kirby-Hawkins, E., Clarke, G. (2019) An investigation into the geography of corporate e-commerce sales in the UK grocery market. Environment and Planning B: Analytics and City Science, 46 (4), pp. 1148-1164. ISSN 2399-8083
5. Bose, N. (2018) Walmart stumbles with its 'last mile' package delivery plan, Reuters. Available at: <https://www.reuters.com/article/us-walmart-lastmile-workers-insight/walmart-stumbles-with-its-last-mile-package-delivery-plan-idUSKBN1KK0DD> (Accessed: 15<sup>th</sup> March, 2020).
6. Brynjolfsson, E. and Hitt, LM. (1996). "Productivity, Business Profitability, and Consumer Surplus: Three Different Measures of Information Technology Value." MIS Quarterly 20(2): 121-142.

7. Capgemini (2013) Morrisons strengthens customer focus with advanced CRM capability from Capgemini. Available at: <https://www.capgemini.com/gb-en/news/morrisons-strengthens-customer-focus-with-advanced-crm-capability-from-capgemini/> (Accessed: 15<sup>th</sup> March, 2020).
8. Chaffey, D. and Smith, P. (2008). *eMarketing eXcellence*. Amsterdam: Butterworth-Heinemann
9. Clarke, G. P., Eyre, H., Guy, C. (2002) Deriving indicators of access to food retail provision in British cities: Studies of Leeds. Bradford and Cardiff, Urban Studies, 11, pp. 2041–2060.
10. Clarke, G., Thompson, C. and Birkin, M. (2015) The emerging geography of e-commerce in British retailing, Regional Studies, Regional Science, 2:1, 371-391, DOI: 10.1080/21681376.2015.1054420. Available at: <https://rsa.tandfonline.com/doi/pdf/10.1080/21681376.2015.1054420> (Accessed: 15<sup>th</sup> March, 2020).
11. Clement, J. (2020) Global digital population as of January 2020. Available at: <https://www.statista.com/statistics/617136/digital-population-worldwide/> (Accessed: 15<sup>th</sup> March, 2020)
12. Davenport, T. H. (1993) Process innovation: Reengineering work through information technology, Boston, Mass: Harvard Business School Press.
13. Davis, G. (2002) Tesco Refuses to be Overtaken in Net Grocery Race, Retail Week, p. 14.
14. Delgado, J., Hernando, I., Nieto M. (2007) “Do European Primarily internet Banks Show Scale and Experience Efficiencies?” European Financial Management 13(4), p. 643-71.

15. Deveraj, S. and Kohli, R. (2000) Performance Impacts of Information Technology: Is Actual Usage the Missing Link?. Available at: [http://gkmc.utah.edu/7910F/papers/loadPDF\\_objectIDValue%3D12736.pdf](http://gkmc.utah.edu/7910F/papers/loadPDF_objectIDValue%3D12736.pdf) (Accessed by: 11<sup>th</sup> March 2020)
16. Digital commerce 360 (2018) Top 10 retailers: How the largest online retailers in the world fared in 2018. Available at: <https://www.digitalcommerce360.com/2019/03/14/top-10-online-retailers/> (Accessed: 15<sup>th</sup> March, 2020).
17. Dos Santos, B. and Sussman, L. (2000) Improving the Return on IT Investment. International Journal of Information Management, 20, pp.429-440. doi:10.1016/S0268-4012(00)00037-2.
18. Fayol, H. (1916) General and Industrial Management. Institute of Electrical and Electronics Engineering, Paris.
19. First, Z. (2016) Technology Changes, good management doesn't. Harvard Business Review. Available at: <https://hbr.org/2016/04/technology-changes-good-management-doesnt> (Accessed by: 11<sup>th</sup> March 2020)
20. Global Data (2018) Unique opportunities: The Rise of Grocery. Available at: [https://inside-packaging.nridigital.com/packaging\\_sep18/unique\\_opportunities\\_the\\_rise\\_of\\_e-groceries](https://inside-packaging.nridigital.com/packaging_sep18/unique_opportunities_the_rise_of_e-groceries) (Accessed: 15<sup>th</sup> March, 2020).
21. Gough, O. (2017) How technology is changing business. Available at: <https://smallbusiness.co.uk/technology-changing-business-2-2541220/> (Accessed by: 11<sup>th</sup> March 2020)
22. Grover, V., Goslar, M. D. (1993) The Initiation, Adoption and Implementation of Telecommunication Technologies in U.S. Organizations, Journal of Management Information Systems (10:1), pp. 141-163.

23. Hackbarth, G., Kettinger W.J. (2000) Building an e-business strategy. Information Systems Management 17(3), 78-94.
24. Hillary, R., Jolly, A. (2001) The CBI Environmental Management Handbook: Challenges for Business: Earthscan, p.87-89
25. IDG (2018) Global grocery markets forecast to create \$1.9 trillion opportunity by 2023. Available at: <https://www.igd.com/articles/article-viewer/t/global-grocery-markets-forecast-to-create-19-trillion-opportunity-by-2023/i/20842> (Accessed: 15<sup>th</sup> March, 2020).
26. IDG (2018) Leading global online grocery markets to create a \$227bn growth opportunity by 2023. Available at: <https://www.igd.com/articles/article-viewer/t/leading-global-online-grocery-markets-to-create-a-227bn-growth-opportunity-by-2023/i/20396> (Accessed: 15<sup>th</sup> March, 2020).
27. IGD (2006) Grocery Futures: The Future of UK Grocery Retail, The Waste & Resources Action Programme. Available at: <http://www.wrap.org.uk/sites/files/wrap/WRAP%20Grocery%20Futures%20-%20Summary%20Report.pdf> (Accessed by: 15<sup>th</sup> March 2020).
28. Internet World Stats News (2009) The Internet Hits 1.5 Billion. Available at: <https://www.internetworldstats.com/pr/edi038.htm> (Accessed by: 11<sup>th</sup> March 2020)
29. Kalakota, R., Robinson, M. (2001) E-Business 2.0: roadmap for success. Addison-Wesley Longman Publishing Co., Inc., USA.
30. KamCity (2020) Aldi opens its largest UK distribution centre. Available at: <https://www.kamcity.com/namnews/uk-and-ireland/discounters/aldi-opens-its-largest-uk-distribution-centre/> (Accessed: 15<sup>th</sup> March, 2020).

31. Kantar Worldpanel (2016). Grocery Market Share (12 weeks ending). Available at: <http://www.kantarworldpanel.com/en/grocery-market-share/great-britain> (Accessed by: 15th March 2020).
32. Kao, D., Decou, J. (2003). A strategy-based model for e-commerce planning. *Industrial Management & Data Systems*, 103(4), 238-252.
33. Kaur M (2018) Customer Relationship Management in Online Grocery Stores. *J Bus Fin Aff* 7: 339. DOI: 10.4172/2167-0234.1000339
34. Kearns, G. S., Lederer, A. L. (2003) A Resource-Based View of Strategic IT Alignment: How Knowledge Sharing Creates Competitive Advantage. *Decision Sciences*. 34. 1 - 29. 10.1111/1540-5915.02289.
35. Kornum, N., Bjerre, M. (2005) *Grocery E-Commerce: Consumer Behaviour and Business Strategies*, Edward Elgar Publishing Limited, Cheltenham, UK.
36. Lewin, K. (1947) Lewin's change management model. Understanding the three stages of change Available at: <http://www.mindtools.com/pages/article/newPPM94.htm>. (Accessed by: 11th March 2020)
37. Lim, J. H., Richardson, V. J. and Roberts, T. L. (2004) Information technology investment and firm performance: a meta-analysis, 37th Annual Hawaii International Conference on System Sciences. Proceedings of the, Big Island, HI pp. 10 pp.-. doi: 10.1109/HICSS.2004.1265512
38. Linder, M., Rennhak, C. (2012) *Lebensmittel-Onlinehandel in Deutschland*. Reutlingen Working Papers on Marketing & Management.
39. Mintzberg, H. (1973) *The Nature of Managerial Work*. New York: Harper & Row.

40. Moore, R. (2018) A shed the size of a town: what Britain's giant distribution centres tell us about modern life. Available at: <https://www.theguardian.com/artanddesign/2018/apr/15/shed-the-size-of-town-what-britains-giant-distribution-centres-tell-us-about-modern-life> (Accessed: 15<sup>th</sup> March, 2020).
41. NX Group (no time) Tesco Distribution Centre. Available at: <https://www.thenxgroup.com/2017/01/24/tesco-distribution-centres/> (Accessed: 15<sup>th</sup> March, 2020).
42. Ojera, P., Chweya, L., Ochieng, I. and Riwo-Abudho, M. (2014) Knowledge management practices and its effect on firm performance: A case of Commercial Banks' performance in Kisumu City, Kenya.
43. Phan, D. D. (2003) E-business development for competitive advantages: a case study. Information & Management, Vol 40, pp. 581 -590
44. Rafiq, M. and Fulford, H. (2005) Loyalty transfer from offline to online stores in the UK grocery industry, International Journal of Retail & Distribution Management, 33(6), pp. 444-460.
45. Rappa, M. (2003) Business models on the web. Available online at: <http://digitalenterprise.org/models/models.html> (Accessed: 15<sup>th</sup> March 2020)
46. Robinson, D. (2005) Thinkers for the 21<sup>st</sup> century?. Training Journal, pp. 30 – 38.
47. Roser, M., Ritchie, H., Ortiz-Ospina, E. (2020) Internet. Available at: <https://ourworldindata.org/internet> (Accessed: 15<sup>th</sup> March 2020).

48. Sandoval, G. (2000) Webvan defends business model despite woes, CNET News.com.  
Available at: <http://news.cnet.com/news/0+1007+202+3662541.html>. (Accessed: 15<sup>th</sup> March 2020).
49. Saunders, N. (No time) Online Grocery: Lessons from History, One Space.  
Available at: <https://www.onespace.com/blog/2018/10/online-grocery-lessons-history/> (Accessed by: 15<sup>th</sup> March 2020).
50. Semler, R. (2001) Maverick! The success story behind the world's most unusual workplace. London: Arrow.
51. Senge, P. M. (1990) The fifth discipline : the art and practice of the learning organization. New York :Doubleday/Currency.
52. Shaw, N. (2019) Lidl opens new £70 million distribution centre, largest in UK up to date, Business Live. Available at: <https://www.business-live.co.uk/retail-consumer/lidl-opens-new-70million-distribution-17061032> (Accessed: 15<sup>th</sup> March, 2020).
53. Sriram, V. and Stump, R. (2004) Information technology investments in purchasing: an empirical investigation of communications, relationship and performance outcomes, Omega, Elsevier, vol. 32(1), pp. 41-55.
54. Stratopoulos, T. C. and Dehning, B. (200) Does Successful Investment in Information Technology Solve the Productivity Paradox?. Information & Management, Vol. 38 (2), pp. 103-117. Available at: <https://ssrn.com/abstract=1306196> (Accessed by: 11<sup>th</sup> March 2020)
55. Subramani, Mani. (2004) How Do Suppliers Benefit From Information Technology Use in Supply Chain Relationships?. MIS Quarterly. 28. 45-73. 10.2307/25148624.
56. Taylor, F. W. (1911) The principles of scientific management. New York, Harper & Brothers.

57. The economist (2020) Ocado, the tech start-up you thought was a supermarket. Available at: [https://www.economist.com/britain/2018/05/24/ocado-the-tech-startup-you-thought-was-a-supermarket?utm\\_source=Facebook&utm\\_medium=Economist\\_Films&utm\\_campaign=Link\\_Description&utm\\_term=&utm\\_content=&linkId=100000011200292&fbclid=IwAR3heK4WgRf79H6ImjTTOvSdTKl0PetWeKr5tSFUbPy2YQk-noheobsO\\_88](https://www.economist.com/britain/2018/05/24/ocado-the-tech-startup-you-thought-was-a-supermarket?utm_source=Facebook&utm_medium=Economist_Films&utm_campaign=Link_Description&utm_term=&utm_content=&linkId=100000011200292&fbclid=IwAR3heK4WgRf79H6ImjTTOvSdTKl0PetWeKr5tSFUbPy2YQk-noheobsO_88)(Accessed: 15<sup>th</sup> March, 2020).
58. Thong, J. Y. L., Yap, C. S. (1995) CEO Characteristics, Organizational Characteristics and Information Technology Adoption in Small Businesses, Omega, Vol. 23 (4), pp. 429-442. doi:10.1016/0305-0483(95)00017-I
59. Vickery, S. K., Jayaram, J., Droge, C., Calantone, R. (2003) The effects of an integrative supply chain strategy on customer service and financial performance: Analysis of direct versus indirect relationships, Journal of Operations Management, Vol.21(5), pp.523-539.
60. Weber, M., Henderson, A. M., In Parsons, T. (1947) The theory of social and economic organization. New York: Oxford University Press.
61. Weinbren, E. (2017) Sainsbury's computer failures cause online grocery delays, The grocers. Available at: <https://www.thegrocer.co.uk/online/sainsburys-computer-failures-cause-online-grocery-delays/553953.article> (Accessed: 15<sup>th</sup> March, 2020).
62. Weltevreden, J. W. J. (2007) Substitution or complementarity? How the Internet changes city centre shopping Journal of Retailing and Consumer Services, 14, pp. 192–207.
63. Wulfraat, M. (2014) Case study: Tesco's dot-com U.K. business model and lessons learned. Available at: <http://www.canadiangrocer.com/blog/e-grocery-test-study-tesco%E2%80%99s-dot-com-u-k-business-model-and-lessons-learned-45135> (Accessed: 15<sup>th</sup> March, 2020).

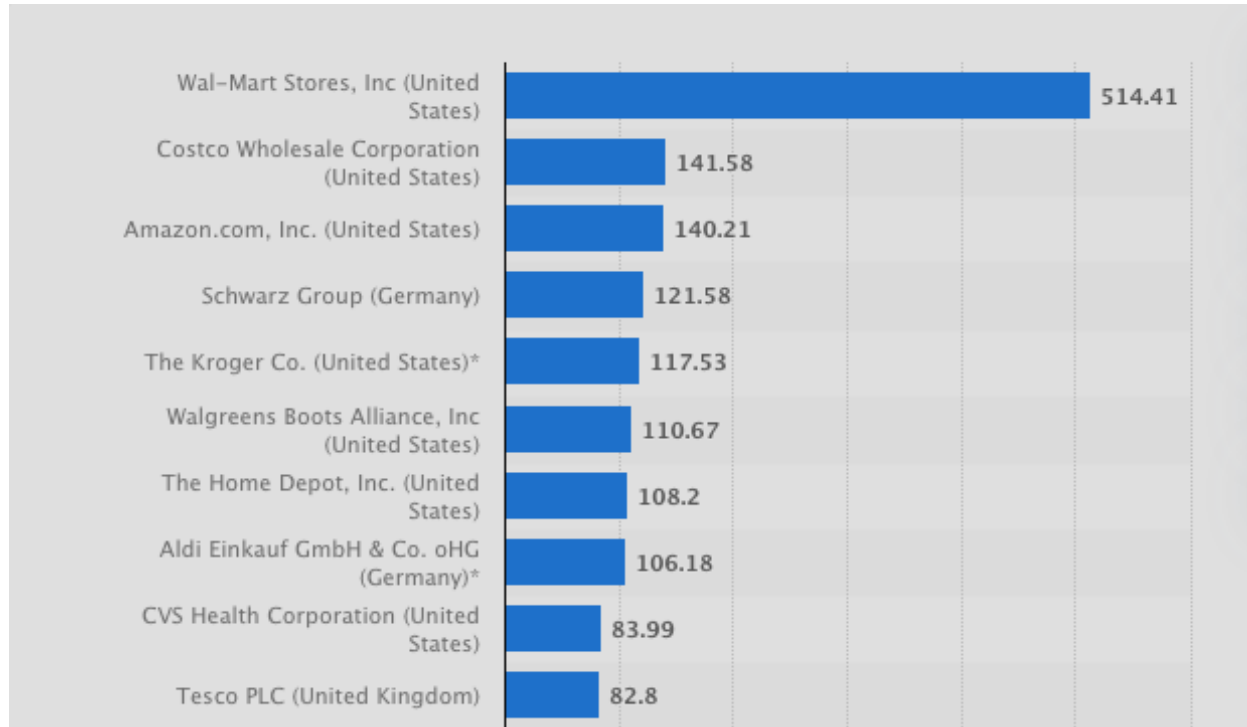
64. Xue, C. T. S. (2017) A Literature Review on Knowledge Management in Organisations. Research in Business and Management, Vol 4, No. 1 [Online] Available at: <http://dx.doi.org/10.5296/rbm.v4i1.10786> (Accessed by: 11<sup>th</sup> April 2019)

| Country     | Online grocery market size<br>\$bn |         | Value growth<br>\$bn | CAGR  | Online grocery channel share<br>% |       |
|-------------|------------------------------------|---------|----------------------|-------|-----------------------------------|-------|
|             | 2018                               | 2023    |                      |       | 2018                              | 2023  |
| China       | \$50.9                             | \$196.3 | +\$145.4             | 31.0% | 3.8%                              | 11.2% |
| US          | \$23.9                             | \$59.5  | +\$35.6              | 20.0% | 1.6%                              | 3.5%  |
| Japan       | \$31.9                             | \$46.5  | +\$14.6              | 7.8%  | 7.1%                              | 9.9%  |
| U.K.        | \$14.6                             | \$22.1  | +\$7.5               | 8.7%  | 6.0%                              | 7.9%  |
| South Korea | \$9.9                              | \$21.3  | +11.4                | 16.5% | 8.3%                              | 14.2% |
| France      | \$11.6                             | \$17.2  | +\$5.6               | 8.2%  | 4.5%                              | 6.0%  |
| Australia   | \$2.1                              | \$4.2   | +\$2.2               | 15.3% | 2.1%                              | 3.7%  |
| Germany     | \$1.3                              | \$3.8   | +\$2.5               | 23.2% | 0.5%                              | 1.2%  |
| Canada      | \$0.8                              | \$2.1   | +\$1.3               | 21.0% | 0.8%                              | 1.8%  |
| Spain       | \$0.9                              | \$2.0   | +\$1.1               | 17.9% | 0.7%                              | 1.4%  |
| TOTAL       | \$147.9                            | \$374.9 | \$227.0              | 20.4% |                                   |       |

Table 1. (IDG, 2018).

| Rank | Country        | 2018<br>US\$bn | 2023<br>US\$bn | Total change<br>2018-2023 | CAGR<br>2018-2023 |
|------|----------------|----------------|----------------|---------------------------|-------------------|
| 1    | China          | 1,395.7        | 1,822.9        | 30.6%                     | 5.5%              |
| 2    | USA            | 1,494.4        | 1,726.4        | 15.5%                     | 2.9%              |
| 3    | India          | 510.5          | 869.5          | 70.3%                     | 11.2%             |
| 4    | Japan          | 459.0          | 479.7          | 4.5%                      | 0.9%              |
| 5    | Brazil         | 328.4          | 469.7          | 43.0%                     | 7.4%              |
| 6    | Russia         | 297.7          | 362.7          | 21.8%                     | 4.0%              |
| 7    | Germany        | 296.0          | 341.1          | 15.2%                     | 2.9%              |
| 8    | France         | 275.6          | 307.6          | 11.6%                     | 2.2%              |
| 9    | United Kingdom | 264.1          | 303.3          | 14.8%                     | 2.8%              |
| 10   | Mexico         | 203.1          | 268.7          | 32.3%                     | 5.8%              |

Table 2. (IDG, 2018).



(Statista, 2018)

## Top 10 global ecommerce retailers

Ranked by 2018 web sales

| Rank | Retailer                   | Country | Merchant Type               | Merchandise Category |
|------|----------------------------|---------|-----------------------------|----------------------|
| 1    | Amazon.com                 | U.S.    | Web Only                    | Mass Merchant        |
| 2    | JD.com                     | China   | Web Only                    | Mass Merchant        |
| 3    | Suning Commerce Group      | China   | Retail Chain                | Mass Merchant        |
| 4    | Apple                      | U.S.    | Consumer Brand Manufacturer | Consumer Electronics |
| 5    | Walmart                    | U.S.    | Retail Chain                | Mass Merchant        |
| 6    | Dell Technologies          | U.S.    | Consumer Brand Manufacturer | Consumer Electronics |
| 7    | Vipshop Holdings           | China   | Web Only                    | Mass Merchant        |
| 8    | Otto Group                 | Germany | Catalog/Call Center         | Mass Merchant        |
| 9    | Gome Electrical Appliances | China   | Retail Chain                | Mass Merchant        |
| 10   | Macy's                     | U.S.    | Retail Chain                | Apparel/Accessories  |

Table 4. (Digitalcommerce360, 2018).