

# The Impact Of E-Commerce On Express Delivery Services In China: An Employment Prospect For Ghana

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**Abstract:** E-Commerce and express delivery have proven to have a synergetic relation. This relation has led to the expansion of logistics in developed countries like China and USA. In Ghana however, express delivery is in a decline and e-commerce is also not developing at the expected rate due to low synergy between the two, technological deficiencies and other challenges. This study gave an overview of express delivery and e-commerce in China, which has the largest market for both sectors. It further examined the challenges facing e-commerce and express delivery in Ghana through secondary data and made recommendations on measures needed to revamp both sectors in order to expand the economy and create jobs for the mass unemployed youth.

**Keywords:** E-commerce, Express Delivery Services, Employment Prospects, Challenges and Recommendations

## 1 INTRODUCTION

The contributions of e-commerce and express delivery services to developed economies such as China and the United States of America cannot be overemphasized. E-commerce transactions are defined as the sale of products and services over the internet [1]. According to the US Census Bureau [2], e-commerce has almost tripled its share of retail spending in the United States. It has constituted about 10 percent of the overall retailing and 50 percent in several major categories in the last 10 years [3]. China's online shopping market totaled 6.1 trillion yuan (US\$953 billion) in 2017. It increased by 29.6 percent from 2016 and picked-up in growth, according to the latest data from iResearch. China's business-to-consumer (B2C) market accounted for 60 percent of the overall online shopping market. It totaled 3.6 trillion yuan in 2017, showing an increase of 4.8 percent compared to 2015 [4]. The expansion of E-Commerce vis-à-vis the outsourcing of the express delivery services by most online marketing companies has created many jobs in the developed countries. China is expected to handle 50 billion express parcels annually by 2020 and the postal sector will provide more than 1 million jobs in the next five years [5]. E-Commerce and express delivery services in Ghana are still underdeveloped. According to the Director of Licensing and Regulations, Postal and Courier Services Regulatory Commission of Ghana, the PCSRC had progressively expanded the postal market for the socio-economic development of Ghana from 8 operators in 2006 to 130 in 2018 [6]. The minister of communications also observed that the postal and courier services sector had lost its viability and appeared to be ending due to lack of various technologies [6]. The poor interoperability of the two, albeit the other challenges associated with other sectors of the economy could however be solved if some measures are put in place.

A rapid development of both sectors will certainly help to reduce the high unemployment rate projected at approximately 9 percent by the end of 2018 and ultimately build a better economy. This paper sought to use observations from e-commerce in China and the direct impact it has had in creating more jobs and expanding the Express Delivery Industry, to make recommendations on scientific and practical measures needed to improve the e-commerce and express delivery sectors of the Ghanaian economy.

## 2 OVERVIEW OF E-COMMERCE IN CHINA

According to the Chinese Ministry of Commerce, in 2016 China's e-commerce market expanded 19.8 percent year on year to 26.1 trillion yuan (\$3.82 trillion), accounting for 39.2 percent of the world's total [7]. The ever increasing e-commerce market in China can be attributed to the increasing access to internet at a continuously low cost amidst an increase in the usage of mobile phones and computers and also a progressive increase in the taste for online buying and selling. E-commerce had over the past years also hinged on improved banking services. With online payment platforms such as 'Wechat pay' and 'Alipay' online transactions are made easier, faster and more secured. Wechat pay is a sub-component of a social media platform called Wechat which has a banking interoperability. Alipay is also a payment platform that has banking features just like Wechat pay, but has extra services such as access to flight ticket, purchase markets other services such as hotel reservations and parcel orders. These payment platforms are all linked to the online markets which make payments and receipts very convenient. Some of the main giants of the online market in China are Taobao.com which is a C2B e-commerce platform, T-mall.com which is a B2C platform, Alibaba.com and Jingdong (jd.com).

## 3 OVERVIEW OF EXPRESS DELIVERY IN CHINA

Express Delivery, popularly called "KUADI" in China is undoubtedly advanced and one of the major macro-economic contributors to the country's Annual Revenue. It has also created many jobs in the Chinese Economy just like other advanced countries like the United States of America (USA) in particular. The Cargo Forwarder [8] in its 2018 publication stated that China's express delivery firms dispatched about 40 billion parcels in 2017, up 28% compared to 2016. Simultaneously, the global parcel market reached almost

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US\$350 billion in 2017. It should be noted that the express delivery market in China is linked directly to e-commerce as most of the parcels delivered by the companies are usually ordered by customers online through the online markets discussed earlier. According to the China Federation of Logistics and Purchasing, China has the world's largest express delivery market in the world, accounting for more than 40 percent of the world's total delivery volume. Growth of express delivery services has created jobs, with the number of employees in the sector up 130 percent by November 2017 from January 2014 [9]. Some of the major delivery firms are SF Express, EMS, ZTO Express, YTO Express, Yunda Express, STO Express, ZJS Express, Best Express, TTK Express AND UC Express. In China, the number of employees in the express delivery industry as at the year 2016 was over 2 million people. It is also important to note the number of employees that single companies have contributed to this quantum figure. SF Express currently has over 340 thousand employees whilst STO express also has over 150 thousand employees. As of Sept. 30, 2017, ZTO had over 300,000 employees and 9,400 network partners. ZTO's delivery network spans over 28,900 pickup/delivery outlets and 79 sorting hubs that cover more than 97.69% of the cities and counties and 81.5% of the towns in China.

#### 4 THE KEY STRUCTURAL ELEMENTS SUPPORTING EXPRESS DELIVERY AND E-COMMERCE IN CHINA

The success of e-commerce and express delivery in China can be attributed to the development of other key supporting structures which are **Transportation, Telecommunication, Electronic Banking, Trade, Information Communication and Technology (ICT) and effective Regulatory Framework**. The inter-play of these elements is presented in a typical online transaction as shown below in fig.1;



Fig.1. A typical online transaction in China

From fig.1., the online transaction is made possible, first of all by the high access and low cost of internet in China as a result of good telecommunication. The payment is made via Alipay for an Order to be complete. Alipay has a banking interoperability made possible through the highly developed ICT and e-banking. The Express Delivery firms rely on good transport networks to deliver the products to the purchaser within the agreed time. Telecommunication then plays the final role in terms of feedbacks between the purchaser and the seller or retailer. The regulatory bodies of commerce and postal service in China also cooperate with Trade Associations to ensure that transactions are effectively monitored.

#### 5 GENERAL OVERVIEW OF EXPRESS DELIVERY AND E-COMMERCE IN GHANA

This part of the Paper presents the current state of e-commerce and express delivery in Ghana, the existing legal framework and the notable challenges impeding the growth of both sectors and their prospects to employ large number of people.

##### 5.1 Companies in the Industry

In total, there are 130 licensed courier companies in Ghana, regulated by the Postal and Courier Services Regulatory Commission (PCSRC). This comprises companies licensed as International Operators which offer international and domestic delivery services and Domestic Operators which offer delivery services within the borders of Ghana. The online shopping platforms are also increasing in number but currently have no regulator.

##### 5.2 Regulation of the Industry

The PCSRC has the oversight responsibility on the express delivery industry in the country. The PCSRC Act, 2003 (Act 649) section 2 [10] enumerated the objects of the Commission as;

1. Promote and encourage the expansion of postal services for the social and economic development of the country;
2. Promote an efficient system for the delivery of mails nationwide in a manner responsive to the needs of mail users;
3. Promote fair competition among persons engaged in the provision of postal services;
4. Protect licensees and consumers from unfair conduct of other licensees with regard to quality of postal services;
5. Protect generally the interest of consumers; and
6. Promote the advancement of technology related to the provision of postal services.

In order to complete the regulatory reform of the postal market, PCSRC has developed a supplementary postal regulation, the Postal and Courier Services Regulations, L.I 2205. The Postal and Courier Services Regulations, L.I 2205, provides vital information in the following areas relating to the postal market; universal service standards (access, speed, tariffs); quality of service monitoring; licensing procedures; tariff-setting processes; consumer representation; interconnection amongst operators (public and private) based on actual costs; infractions of postal regulations and application of sanctions; and overall monitoring of postal market development.

##### 5.3 Findings on the Challenges facing Express Delivery in Ghana

Express delivery service in Ghana, aside its technological deficiency has some other notable challenges according to the secondary data. They are explained below as follows;

###### 1. Low synergy with E-Commerce

Generally there is a low synergy between express delivery and e-commerce which has affected the performance of both sectors. This is as a result of low access to internet and a high cost of internet; low security of online transactions; low application of third party logistics (3PL) and low technological development. E-commerce has been defined as "sharing of business information, maintaining business relationships, and conducting business transactions by means of

telecommunications networks" [11]. From this definition, a robust (ICT) system and telecommunication are seen as essential elements in developing e-commerce. Using China as an example, the success of the nations' e-commerce can clearly be seen as a beneficiary of its easy access to internet, mobile phones and computers and technological innovations in telecommunication.

## 2. Deficient Transportation infrastructure

In Ghana, the water, railway and air transport remain underdeveloped ultimately putting excessive burden on road transportation. This clear deficit in transport infrastructure is a major setback to the development of express delivery.

## 3. Underdeveloped Electronic Banking Services

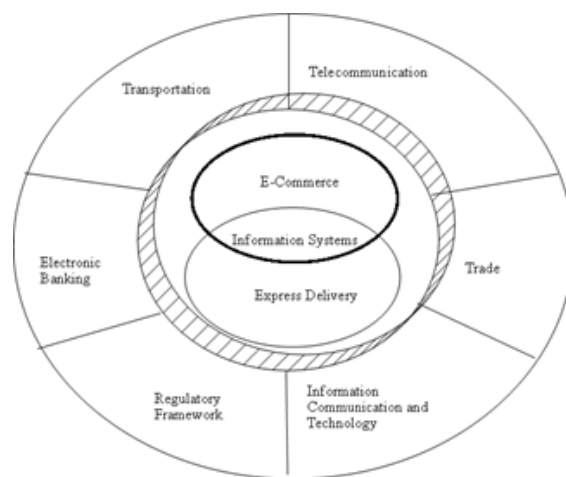
Online payment in Ghana, popularly known as 'gh-link e-commerce' was launched in 2015 by the Ghana Interbank Payment and Settlement Systems Limited (GhIPSS) to make online transactions easier and faster. The Executive Officer of GhIPSS said the 'gh-link e-commerce' would provide the platform for local businesses both in commerce and the service industry, government agencies among others to receive payments and donations online from domestic ATM cards [12]. There is a need for all financial sector institutions to push more for usage of e-banking services in the Ghanaian economy. For this to happen, the Bank of Ghana, as the regulator, must impose and regulate international standards of e-banking on the financial sector in addition to their (BoG's) Guidelines for Branchless Banking. Most importantly, all and sundry in the sector must invest in the utilisation of e-banking to improve on clients' banking experiences [13]. The implementation of the 'gh-link e-commerce' has seen an improvement in online transactions. However, more interoperability is needed between the online shops and the banks to ensure more security and trust in the system as well as education of customers on the services it offer.

## 4. Low Financial Investment

Development of ICT, trade and express delivery, undoubtedly requires capital investments. Development of websites, telecommunication networking, business networking and banking require huge capital investments. In China and other developed countries, private airlines and large fleets of vehicles are procured by companies to deliver parcels. The Ghanaian e-commerce and express delivery market is however not very resourced with the requisite technology and logistics due to a perceived high risk ultimately resulting in low financial investment.

## 6 RECOMMENDATIONS

The Writers have recommended the following measures to improve e-commerce, the express delivery market and ultimately create many jobs in Ghana. The recommendation is in a form of a concentric figure which is subsequently explained.



**Fig.2.** Recommended measures for Ghana's E-commerce and Express Delivery Market

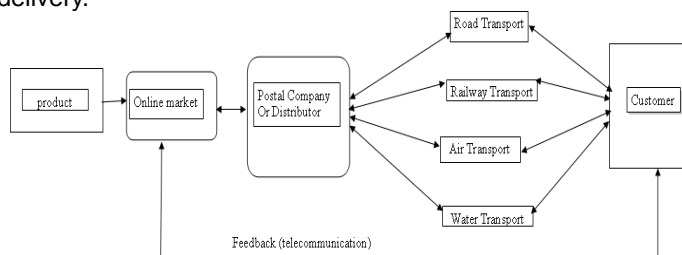
The recommendations are premised on the fact that e-commerce and express delivery overlap and are not mutually exclusive. The two sectors rely on each other to thrive through efficient information systems collaboration between the online markets and the postal firms. As was enumerated earlier, the six key elements identified to be supporting the Chinese system ie. **Transportation, Telecommunication, Electronic Banking, Trade, ICT and effective Regulatory Framework** are important in the development of the industry in Ghana to ultimately meet the goal of employment creation. The concentric nature of the figure is also premised on the proposition that all those six components of the economy have equal importance and are linked to each other for effective commerce to take place. Information systems such as; the business networking tools, information transmitters and telecommunication tools, shared feedback between customers and service providers have taken the central-most position of the model because they are the pivots around which e-commerce, express delivery service and their various components thrive. According to Karcz et al [14] "The dynamic development of the courier companies is mainly caused by the implemented technological solutions which increase the effectiveness and efficiency of the activities of courier companies. The use of technological advancements is an important factor in the development of the courier service industry. Providing services of high technological quality is and will be essential for competitive activities and creating modern business solutions." Henrik et al [15] also identified that; "Information gaps cause electronic shoppers and electronic retailers to base their decisions on imperfect information. This can lead to dissatisfaction and to strategies where the e-retailers and e-shoppers minimize the information need, e.g. by using the same delivery operator instead of examining what other delivery operators can offer. As a consequence, e-retailers and e-shoppers may not buy the services that best fit their needs or they may experience disappointments due to misperceptions about what delivery services they have bought. Hence, improving information about delivery is one of the keys to increase e-commerce." From the two observations above, it can be deduced that e-commerce and express delivery, in the modern market rely heavily on each other irrespective of the e-commerce type whether business-to-business, business-to-consumer, consumer-to-consumer or



consumer-to-business. To improve e-commerce and express delivery market in Ghana, Transportation, Telecommunication, Electronic Banking, Trade, ICT and effective Regulatory Framework must be improved. These are explained as follows;

### 6.1 Transportation

The railway network must be rehabilitated together with a construction of new lines to link the various cities. There must also be reduction in taxes for the aviation industry to attract more investors towards its expansion. Transportation is indispensable to economic growth and development of human settlement [16]. The developments of most developed economies are built around the transportation industry. It indeed forms a very central role in the development; this is because nothing can be done without transportation [17]. Fig.3. shows the importance of transportation in express delivery.



**Fig.3.** Importance of Transportation in express delivery

The speed and efficiency in express delivery hinges on a good transport system. There is the need for a rapid expansion of transport infrastructure for road, railway, air and water. Online commerce will be more attractive if purchasers are sure the purchased items will get to them just-in-time and without damages. A good transport system will therefore affect both express delivery and e-commerce.

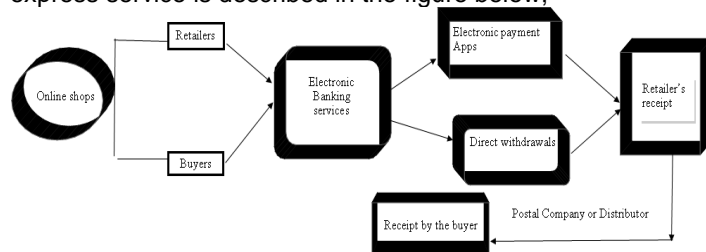
### 6.2 Telecommunication

There must be an urgent collaboration between the government and the telecommunication companies albeit strict regulations to ensure that internet cost is reduced and internet accessibility is enhanced. The internet has three main roles in commerce which are a medium for publishing corporate information, conducting business and business transformation. The telecommunication companies in Ghana have in recent years diversified their services from the normal data, voice and Internet Protocol (IP) providers to include supply of fiber optic, satellite and international carrier services to mobile network operators, Internet Access and Service Providers (ISPs) and businesses of different sizes. If businesses can get cheaper and accessible internet to conduct transactions, there will certainly be more employment avenues. Postal firms for instance, can easily send information to clients and get feedbacks which will grow trust in the industry.

### 6.3 Electronic Banking

The Bank of Ghana, which regulates banking in Ghana, must ensure that all banks improve on their e-banking services especially electronic transfers and electronic payments. The 'gh-link e-commerce' must be linked to all banks to make transactions easier together with more regulations to ensure safety in transactions. With a robust e-banking, postal firms and online shops can integrate non-cash payments to make e-commerce more attractive. This will provide employment

opportunities through recruitment of postal staff and also creation of online markets for the manufacturing and retailing sectors. The role of electronic banking in e-commerce and express service is described in the figure below;



**Fig.4.** Role of E-banking in E-commerce and Express Delivery

From fig.4., e-banking is seen as a central part of e-commerce linking the retailers to the purchasers with effective demand. In China for instance, online shops such as *Taobao.com* and *Tmall.com* use Alipay which is an e-payment platform developed by Alibaba Group Holding to receive payments on purchases from buyers. The express delivery companies then act as franchise to deliver the purchased items to the buyer at a specified address. With an effective e-banking albeit a robust security of shopping, Ghana can equally expand its e-commerce and express delivery services.

### 6.4 Trade

The government and the trade unions must develop a stronger partnership to improve and monitor commerce, to ensure that buyer-seller interactions are done in a fair and secured environment. Express delivery companies and online retailing must have better trade relations which must be monitored.

### 6.5 Information Communication and Technology (ICT)

There must be an extensive ICT training for the youth and government support for inventors which can start a technological revolution in business within the country ultimately leading to new business ideas and technological inventions as well as applications. ICT undoubtedly is a major stakeholder in business networking and electronic commerce. There is therefore the need to intensify ICT training and usage in order to make e-commerce appealing to consumers. With a high premium on science and technology, the appropriate technological synergy will be created between e-commerce and express delivery to expand the economy.

### 6.6 Regulatory Framework

There is the need for the PCSRC to thoroughly examine the business modules of the 130 existing licensed firms and offer support where necessary. They must also collaborate with government to provide financial and technological support to the sector to enable the companies compete with the foreign courier firms operating in the country. Third party insurance must also be created for online transactions under properly agreed terms. Online shops and e-retailers must be regulated to provide a shield for the purchasers and also create confidence. Proper regulations will also ensure that the appropriate taxes are paid to the government.

## 7. CONCLUSION

In conclusion, the recommended measures enumerated by the Writers are all equally important and if implemented, will lead to a massive expansion of e-commerce and express delivery

in Ghana and ultimately expand the economy especially with the creation of jobs.

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