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Comparative Analysis of e-Commerce Between China and Uzbekistan.

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Abstract

This research work is devoted for the purpose of showing the diverse opportunities and unravel the growing trends of e-Commerce in terms of trade between China and Uzbekistan. On-line customer research has been carried out mainly for American and European markets by academics and marketers. While e-Commerce is developing more rapidly in China with big companies raking in billions, it is somehow slow in Uzbekistan; a profound understanding of necessitating modalities is a fundamental drive into promoting further growth. This work investigates this intriguing concept in context of e-Commerce involved in inquiring about e-Business and corresponding e-Payment systems in China and Uzbekistan respectively. The article features theoretical segments through which statistical models and correlations were interpolated. The main aim being to establish segmental information and identify influential factors of e-Shopping using e-Payment models developed in the respective countries. The key findings include the geographical influence, demographic statistical analysis and internet technologies being used in the two countries.

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1. Introduction

E-Commerce started way back in the 1960s when organizations began to use Electronic Data Interchange (EDI) to transfer documents for their business back and forth and keeps growing at a tremendous exponential rate [1]. The 1990s saw the emergence of online shopping businesses, which have culminated into quite a phenomenon at present. It has become so convenient and easy, that anyone can shop for anything right from the comfort of their living rooms. This has evolved more with the emergence of smart devices, where now, you can shop from anywhere and anytime, with a wireless device connected to the internet. It is now entirely possible to search for almost any product or service online, without having to go anywhere physically in addition to consumers' on-line behavior which is different in nature from traditional consumer behaviors due to the unique characteristics and interaction of technologies and cultures [2-4].

E-Commerce, also known as e-Business (Electronic Business), is simply the sale and purchase of services and goods over an electronic medium, like the internet [5, 6]. E-Commerce literally refers

to all commercial transactions carried out online. This means, whenever one buy or sell something on the internet, they are involved in e-Commerce. It also involves electronically transferring data and funds between two or more parties. Simply put, it is online shopping as we commonly know it.

In this paper we investigate the relationship between China and Uzbekistan along e-commerce marketing according to steady growth patterns recorded from previous years. We carried out a survey probing influential trends in the e-Business models. A key factor influencing the successful growth of e-Commerce, identified by major corporations such as the Better Business Bureau and the Federal Administration, is people's trust in Internet vendors. Better Business Bureau went on to say, there is a necessity of "promoting trust and confidence on the Internet". The Better Business Bureau further claims that the main reason why people do not buy online is their worry with regards to online payments security, reliability of companies and the deficiency of a privacy policy. The issues regarding privacy pose a need for innovative financial solutions for e-Commerce tailor made for the customers. In addition, Luhmann's theory of trust claims that familiarity is a precondition for trust, and trust is a prerequisite of social behavior, especially with regard to crucial decisions [1, 7, 8].

1.1. Literature in brief

Business and the economics of the day are now interconnected with the development and implementation of new technologies. This has become the drive for many governments to develop and implement innovative ways for financial inclusion and also ways to penetrate and benefit from the global market. According to an article by Sherzod Aktamov and Khavokhon Rakhimova most economists they show of any modern economy is now driven by innovation and implementation of new technologies of them [9]. The correlation between the growth of an economy and its corresponding technology has been proposed through the Solow-Swan model (1956) and different other findings from reputable scientist among them Kondratieff, Schumpeter (1961), Mensch, Porter (1990), Romer (1994) [10-12]. The growth of e-Commerce is expected to drive the revolution of the structures and functions of economies at various levels and direct impact experienced at macro economy. With the magnanimous rise of e-Commerce, many researches are being conducted to essentially investigate the growth trend and the driving forces around this intriguing research field. Studies were carried out by Morrison and Siegel (1997) and Helpman (1998) on attributes of e-Commerce and evidence suggests e-commerce has great impact on the productivity and the economic performance of a country [13]. There is vital need to invest in research and development so as to fully utilize the great opportunity in the e-commerce sector. E-Commerce poses as inevitable benefit to the technical and skilled workforce by pushing their wages higher, as purported by the findings from Bartel, Lach and Sicherman (2009) and Berman (2012). There is also a spontaneous benefit on marginalized sectors of economy which encompasses creating more opportunities for women. Empirical data to show that internet usage brings an open trade zone, and results indicating internet users in developing countries are more open to trade, have been provided by Wallsten (2003) and Balamoune (2002).

2. Methodology

This paper contains a research conducted through qualitative analysis. The collected information was

processed through highlighting the most important points, which could have a crucial role showing the potential of e-Commerce in China and Uzbekistan trade [9, 14-18]. Modelling and correlation of statistical data was used to project future trends in e-Commerce between the two countries. Based on collected narrative data, documents, logical conclusions and comprehensive recommendations were generated.

2.1. Different Types of e-Commerce Websites

Different e-Commerce websites are labeled or referred to differently, based on their functionality.

- **Business-to-Business (B2B):** Electronic transactions of goods and services between companies.
- **Business-to-Consumer (B2C):** Electronic transactions of goods and services between companies and consumers.
- **Consumer-to-Consumer (C2C):** Electronic transactions of goods and services between consumers, mostly through a third party.
- **Consumer-to-Business (C2B):** Electronic transactions of goods and services where individuals offer products or services to companies.
- **Business-to-Administration (B2A):** Electronic transactions of goods and services between companies and public administrations.
- **Consumer-to-Administration (C2A):** Electronic transactions of goods and services between individuals and public administrations.

3. Research Findings

3.1. Great Chinese Online Market places for e-Commerce

Over the years Chinese has seen growth its economy it being the 2nd fastest growing economy the advent of e-Commerce market knew a lot of transformation that offers tremendous opportunities for business. Three important facts are favoring this transformation: the rise of upper-middle-class, as the drivers of consumption growth; a new generation of free-spending, sophisticated consumers; and the increasingly powerful role of internet. Chinese social e-Commerce enterprises have been growing at a compound annual growth rate of 100.6%. Their penetration rate escalated to 11.9% by June 2019 (CIW, 2019), and 80% of internet shoppers use social and mobile e-Commerce channels. The penetration rate of group shopping consumers reached the highest at 57% by midyear 2019 and is expected to grow further.

3.1.1. China e-Commerce Overview

E-Commerce sales in China are on way to surpass expectations as they already reached US\$1.53 trillion in 2018. However, China's e-Commerce does exist, though a bit a world away from the smooth and real-time transactions practiced in Internet advanced nations [19, 20]. In 2017, e-Commerce sales outpaced estimates by \$44.41 billion, driven largely by sales from leader Alibaba's Taobao and Tmall. In addition, Alibaba has reported fiscal year revenue growth of 51% as well a strong user growth and engagement. If we exclude impacts of consolidating acquired businesses, revenue would have gone up by 39% yearly, according to Maggie Wu, CEO of Alibaba Group. The two will still have a total of 58.2% by 2019, but Alibaba's share is slightly shrinking as the market diversifies with the emergence of retailers and newcomer

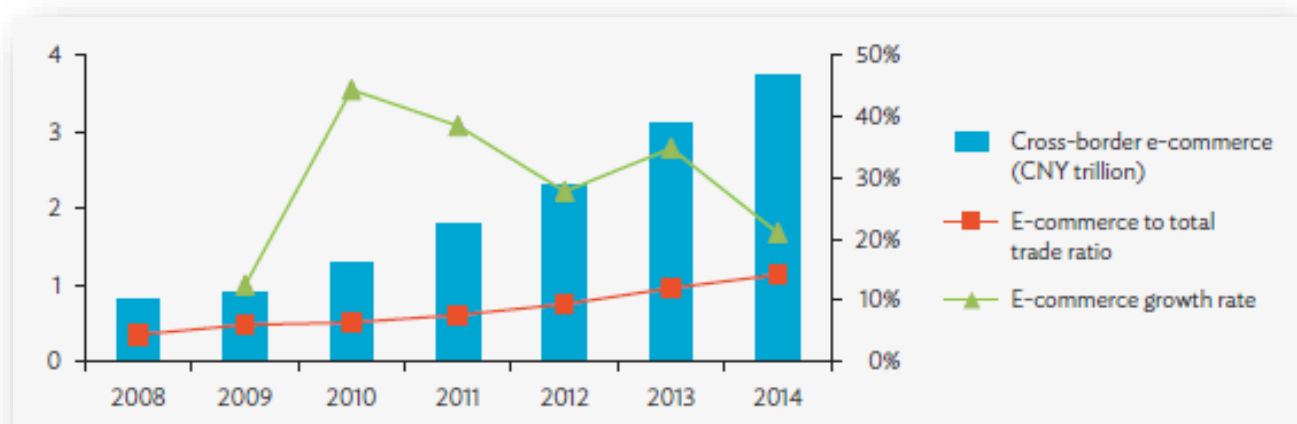
Pinduoduo's recent success. Many Chinese consumers generally view most users of Pinduoduo as housewives, middle-aged, or elderly people who reside in third-tier or fourth-tier cities. They are highly sensitivity to low price and consistent with use of Kuaishou and are more willing to ask bargaining help in WeChat groups so as to save a few money (CIW, 2019).

From 2015 to 2018, Alibaba's share of e-Commerce sales in China fell from 77.6% to 53.5%. Alibaba's e-Commerce sales are now growing slower than the overall e-commerce growth rate 34.3% with Alibaba's sales forecast to increase just 22.8%. Consumption among upper-middle-class is still growing so fast, over 17% per year and, by 2020, will account for US\$1.5 trillion in urban China. That compares with a 5% growth rate among emerging-middle-class and middle-class consumers.

As of December 2018, the internet and mobile internet have a user base of 829 million and 817 million, respectively, according to the 43rd statistical report from China Internet Network Information Center (CNNIC, 2019). They both saw a net increase of 56.53 million and 64.33 million users, respectively, from 2018 to 2019.

Households will continue to make up a market because they will enter the lower rungs of the middle class over the next five years, these segments will still account for roughly half of the urban households. The emerging middle class and middle class will remain the biggest consumers in many categories, particularly such fast-moving consumer goods as personal-care products and detergents. There is also a healthy across the border trading which shows a great growth sprout as seen in Fig. 1.

Fig. 1. Cross-border e-Commerce to total cross-border trade ratio (2008–2014)



3.1.2. Mobile e-Commerce, Popular Mobile Platforms, and Social Media

Actually, online wallets are the top payment method, nearly 33% of Chinese shoppers use the technology to complete transactions. Roughly half of all China's e-Commerce sales are made on mobile devices. There are dozens of mobile e-Commerce platforms, but in 2017 Taobao had the most monthly active users at 253.2 million. Other platforms like Meituan, JingDong, WeiPin, Tmall, eLeMe, Baidu NuoMi, and DianPing all play an active role in the market, but none are nearly as popular as Taobao in terms of active monthly users.

Understanding how to utilize the advantages of social media can raise your company or product's profile and accelerate your company's ability to sell online. The three biggest social media players are Tencent (WeChat), microblog Weibo, and social network QQ Zone. WeChat allows retailers to feature

online stores and has a convenient third-party payment function. Tencent's total revenues in first quarter of 2019 were CY85, 465 million (USD12, 693 million), an increase of 16% over the first quarter of 2018 according to Tencent's announced financial results (CIW, 2019). Social media account for 32.8% of users' daily internet time on mobile devices. WeChat (85.7%), QQ (68.7%), Sogou Input (57.8%), Alipay (55.3%), Mobile Taobao (53.1%), and Tencent Video (47.6%) are among the most widely used ones currently (CIW, 2019). Tencent and Alibaba each had two places in the top 5 rankings. Tencent's WeChat (85.7%) and QQ (68.7%) took the first two spots of the top 20 ranking in 2018.

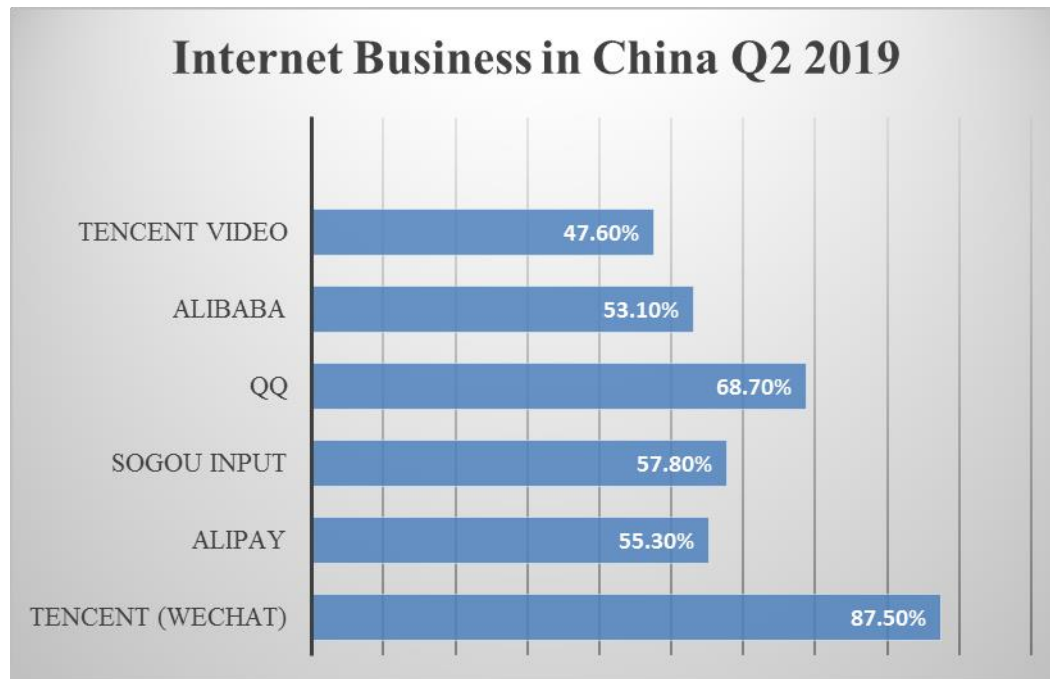


Fig. 2. E-Commerce trend for the 2nd quarter in China (2019).

It also features push messages to introduce new product lines or deliver promotions. U.S. companies interested in exploring social media avenues and working with these sorts of social media players should seek to work with a local marketing partner to develop a strategy and support execution.

3.1.3. China e-Commerce Statistics 2018-2019

Chinese consumers moved more of their shopping online in 2018, sending e-Retail sales past US\$1 trillion for the first time in the world's leading e-Commerce market. Retail web sales totaled 7.18 trillion yuan (US\$1.149 trillion) in 2018, an increase of 35% from 5.43 billion yuan (US\$869 billion) in 2017, according to China's Ministry of Commerce. E-Commerce growth accelerated past the 30% mark in 2017, after slumping to 26% in 2016 from 33% in 2015. China far outpaces the United States, the second-largest e-Retail market in the world, in both sales and growth. While the U.S. Department of Commerce will not release its 2018 estimate of online retail sales until later this month, Internet Retailer estimates U.S. e-Commerce growth of about 15% in 2018 to approximately US\$455 billion.

China forecasts internet advertising market to exceed over US\$90 billion by year end 2019 out of which over 80% is from mobile advertising. The US\$36.02 billion indigenous advertisement market accounted for nearly 50% of the total in 2018 (CIW, 2019). Advertising has consolidated its position as an

important source of revenue for internet businesses. This market is expected to generate 627.34 billion Yuan (US\$93.38 billion) in revenues by 2019, an increase of 27.7% year-on-year

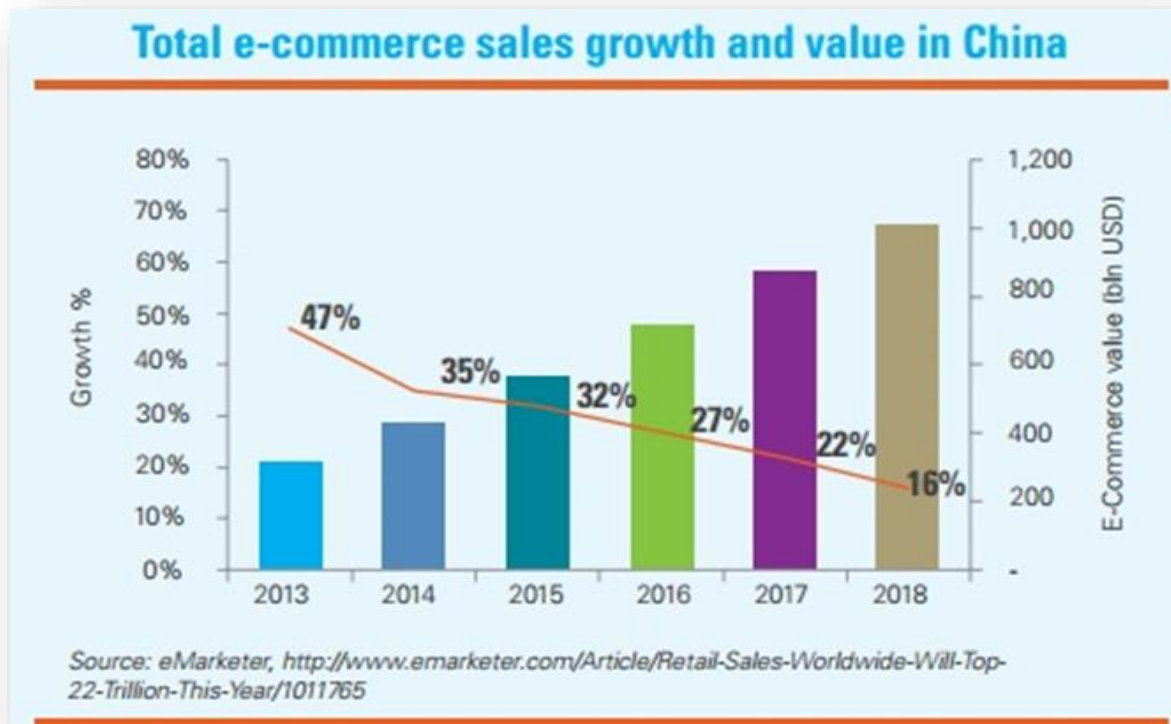


Fig. 3. Total e-Commerce sales growth in China for the year ended 2018.

China's e-Commerce exports rose 14.5 percent year on year to 6.3 trillion Yuan (1 trillion U.S. dollars) in 2018, according to a report released by the e-Commerce Research Center (ECRC). In the same year, the value of business-to-business (B2B) exports rose 13.3 percent to 5.1 trillion Yuan. Online retail sales of e-Commerce exports came in at 1.2 trillion Yuan, up 21.2% year on year.

3.2. Uzbekistan

Officially known as the republic of Uzbekistan, it is a country located in Central Asia roughly to the west of China. Indigenous Uzbeks constitute about four-fifths of the country's total population, followed by others among them the Tajiks, Kazakhs, Tatars, Russians, and Karakalpaks. Uzbeks are the least Russified of the Turkic population previously under the Soviet Union rule, and all of them virtually still claim Uzbek as their elementary language.

3.2.1. Uzbekistan economy

Uzbekistan is a dry doubly landlocked country where 10% of it is of intensely cultivated, irrigated river valleys with more than 60% of its population, live in the rural areas. The total population of the country is 33.063 million (World Population Review 2019). The country is rich in natural resources such as natural gas, petroleum, coal, gold, uranium, silver, copper, lead and zinc, tungsten, molybdenum. Uzbekistan is now the world's third largest cotton exporter, a major regional producer of gold and natural

gas, and a regionally significant producer of chemicals and machinery. The economy dominated mainly by the state. The Gross domestic product GDP ranged around 48.72 billion USD in 2017 with the real growth rate at 5.5%. GDP per capita was 1,504.23 USD (2017). Fig. 4 below summarizes GDP per sector.

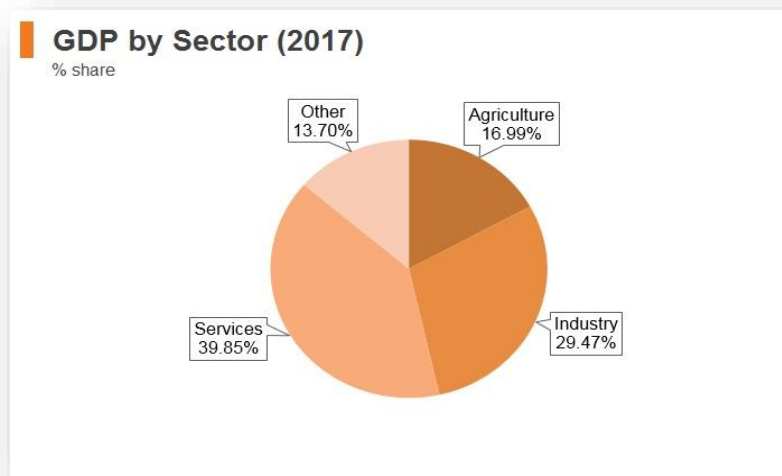


Fig. 4. GDP by sector 2017.

3.2.2. Key Economic Indicators of Uzbekistan

Table 1. Economic indicators

Year	2017	2018
Nominal GDP (billion USD)	47.9	49.5
Consumer price inflation (percent)	12.5	17.5
Foreign Direct Investment (billion USD)	2.4	1.5
Current-account balance (billion USD)	0.95	-5.3
Exports FOB (billion USD)	13.95	14.26
Imports CIF (billion USD)	13.00	19.56

(Source: Data by country authorities and IMF estimates as of 04/22/2019)

3.2.3. Imports

In 2017 Uzbekistan imported goods and services worth US\$11.2 billion, making it the 85th largest importer in the world. During the last five years the imports of Uzbekistan have increased at an annualized rate of 1.7%, from \$10.3 billion in 2012 to \$11.2 billion in 2017. The most recent imports are led by vehicle parts which represent 5.12% of the total imports of Uzbekistan, followed by Packaged Medicaments, which account for 4.18%.

3.2.4. Exports

In 2017 Uzbekistan exported goods and services worth US\$8.38 billion, making it the 89th largest exporter in the world. During the last five years the exports of Uzbekistan have increased growth at an annualized rate of 9.5%, from US\$4.78 billion in 2012 to US\$8.38 billion in 2017. The most recent exports are led by Gold which represent 43.8% of the total exports of Uzbekistan, followed by petroleum gas,

which accounts for 8.26%.

3.2.5. E-Commerce and the Digital Economy in Uzbekistan

The number of Internet service providers has grown in Uzbekistan, but penetration remains low and government regulation are strict. Tashkent, with 90 percent of the country's Internet users, is the only viable e-Commerce market in Uzbekistan. Although the Parliament approved the "Law on Electronic Digital Signature" in 2005, providing a basis for legal Internet transactions. The main barriers to the development of e-Commerce are insufficient electronic banking services and undeveloped trade regulations. Basic Internet service are fairly adequate and Uzbekistan has extensive fiber optic networks. The number of Internet users exceeds 13 million. Increased Internet service delivery by mobile phone operators contributes to the potential for e-Commerce, and there are approximately 23 million cell phone users in the country currently.

Table 2. IT indicators in Uzbekistan

<i>Item</i>	<i>Number of users</i>	<i>Total population %</i>	<i>Expected growth %</i>
<i>Internet users</i>	15,45 million	48%	8%
<i>Social media usage</i>	1.30 million	2%	8%
<i>Mobile device internet usage</i>	9.51 million	30%	1%
<i>Number of mobile phones connections</i>	22.65 million	70%	3%

3.3 Current Market Trends

A law on e-Commerce was adopted in 2004 and further amended in 2015. In April 2017, the Central Bank of Uzbekistan amended the decree "Regulations on the procedure for the use of bank cards by individual entrepreneurs in national currency". According to the new regulations, an individual entrepreneur has the right to transfer his bank card to other people for use. An individual entrepreneur can also use a bank card to pay for production costs as well as goods and services. Domestic e-Commerce is gaining momentum as domestic trading platforms develop. However, cross-border e-Commerce is still hampered by customs regulations and the fact that billing systems of major international e-Commerce platforms (such as e-bay.com and amazon.com) have not been extended to Uzbekistan.

3.3.1. Domestic e-Commerce (B2C)

One of the key factors in the development of domestic e-Commerce in Uzbekistan is the improvement of mobile payment services. Smart phones can now be linked to bank cards for sales purchases. This method of payment for both the seller and the buyer is more convenient than a plastic bank card [21].

3.3.2. Cross-Border e-Commerce

Chinese and Turkish products are popular with the local population. Most popular online purchases are health and beauty products, electronics, clothing and shoes. As a relative newcomer to e-Commerce sales, Uzbekistan's market is not saturated and open to new products and ideas. Customs regulations and poor integration with international billing systems are factors currently inhibiting e-Commerce sales and there is need to develop it.

3.3.4. Online Payment

Mobile e-Commerce is still developing and not widespread in Uzbekistan. Mobile applications are used for both advertising and information purposes as well as payment, although the majority of transactions are still done by cash. Online payment is done through the use of bank cards and smartphones.

3.4. Uzbekistan-China Bilateral Relations on enhanced economic engagements

Uzbekistan and China recently celebrated 25th anniversary over establishment of mutual diplomatic relations. In recent years, the two countries have developed strong bilateral ties marked by a high degree of economic engagements. China has been Uzbekistan's second largest trading partner and the biggest source of investment for three years in a row.

Uzbekistan and China plan to increase the volume of trade turnover up to US\$10 billion beyond 2020, and the figures are expected to rise more than twice in future. China directed about US\$8 billion of investments to the economy of Uzbekistan and the trade turnover between Uzbekistan and China added up US\$4.2 billion in 2016.

3.4.1. Uzbekistan, China vow to strengthen cooperation

In the last two decades, a number of international transport and energy projects have been implemented. It should be noted that Uzbekistan was among the first to express its support for China's calls for the global Silk Road initiative popularly known as "Belt and Road." China and Uzbekistan have already implemented several connectivity projects, including China-Kyrgyzstan-Uzbekistan highway.

Against this background, it should be no surprise that the new railway project connecting Angren in the Tashkent region and Pap in the Namangan region is regarded as very important to Uzbekistan's national strategies of both internal and international connectivity. The Angren-Pap line is only 123 kilometers long, but it crosses high mountainous areas, including areas with an elevation above 2000 meters, and is thus quite expensive.

The cost of the Angren-Pap project was over US\$1.6 billion, and its construction has been made possible through a variety of sources. This includes more than US\$1 billion from Uzbekistan Temir Yollari (Uzbekistan Railways) and Uzbekistan's National Reconstruction and Development Fund. An additional loan of US\$350 million was secured from China's EximBank, while the World Bank provided \$195 million. Construction started in June 2013, and by 2016 more than ten new bridges and seven railway stations had been constructed as well as a 19.1 kilometer long tunnel, under the Kamchik pass built by the China Railway Tunnel Group. According to Uzbekistan Temir Yollari, about 600,000 passengers and up to 6

million tons of goods could be delivered annually. While this railway will go a long way toward improving transportation inside Uzbekistan's borders, it is not entirely sufficient. There is considerable collective need for the whole of the Ferghana Valley in terms of railroads and highways.

Moreover, the valley is significant for the development of trade and communication links between China and Central Asia.

The development of strong transport corridors between China and Uzbekistan and China and Central Asia, including highways and potentially railroads, are part and parcel of the development of new routes linking the region to the whole of Asia and ultimately Europe. The connection with the existing and developing projects are potentially significant e.g, the improvement of connections between Central Asia and Afghanistan would contribute towards the future economic recovery of the latter. Moreover, the development of transport communications between Central Asia and South to East Asia also are linked to this. A well-developed regional transport network functionary in Central Asia would increase the potential for regional interconnectivity while providing a great opportunity to develop international networks and trade, including cultural and tourism [9, 14, 22].

3.5. Statistical Correlation

The regression statistical method used was the correlation internet use. We employed the linear and multivariate regression technique as a statistical tool for evaluating the connections among level data over several years. To determine whether Internet use correlates to exports and or imports, we used the country-level data to estimate relationships.

3.5.1. Linear regression

$$(a) \text{ Exports } ij = \alpha + \beta \text{ Internet Use } i + \gamma \text{ Control Variables} + \varepsilon_{ij} \quad (9)$$

The dependent variable is exports from China i to Uzbekistan j .

Regression Equation $(y) = a + mx$

$$\text{Slope } (m) = (N \times \sum XY - (\sum X_m)(\sum Y_m)) / (N \times \sum X^2 - (\sum X)^2)$$

$$\text{Intercept } (a) = (\sum Y_m - b(\sum X_m))$$

Where, x and y are the variables, m = slope of the regression line, a = intercept point of the regression line and the y axis, N = number of values or elements, X = First Data Set, Y = Second Data Set. $\sum XY$ = Sum of the Product of First and Second Data Set, $\sum X_m$ = Mean of First (X) Data Set, $\sum Y_m$ = Sum of Second (Y) Data Set, $\sum X^2$ = Sum of Square of First (X) Data Set Values

Table 3. Export trade data between China and Uzbekistan in millions of USD.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1,009,712.04	914,728.84	1,250,001.37	1,528,929.44	1,559,311.42	1,650,989.46	1,647,737.74	1,442,963.00	1,383,863.49	1,659,495.16	1,871,830.51

From the data above, we then used the above regression equation to estimate the connection among the variables.

Regression Equation $(y) = a + mx$

$$y = -137774362.017 + 69161.249x$$

$$\text{Slope } (m) = (N \times \sum XY - (\sum X_m)(\sum Y_m)) / (N \times \sum X^2 - (\sum X)^2)$$

$$m = 69\,161.24936$$

$$\text{Intercept (a)} = (\sum Y_m - b(\sum X_m))$$

$$a = -137\,774\,362.01725$$

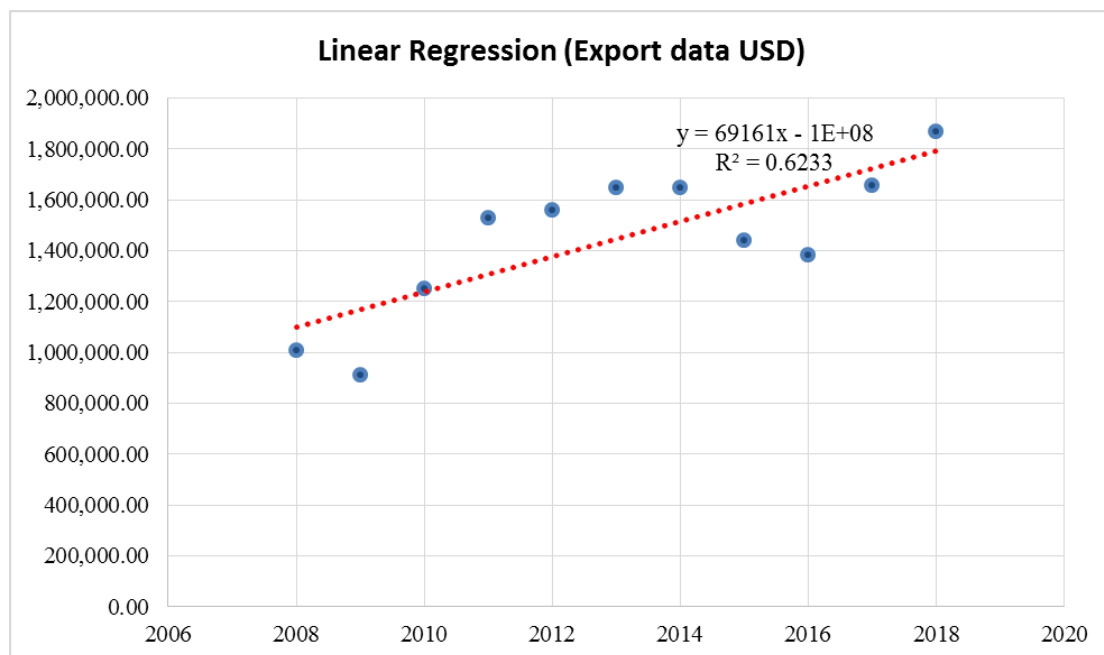


Fig. 5. Linear regression plot for export data (USD) trend over a period of years.

$$(b) \text{ Imports } ij = \alpha + \beta \text{ Internet Use } i + \gamma \text{ Control Variables} + \varepsilon_{ij} \quad (1) \quad (10)$$

Similarly, to determine whether Internet use correlates to imports, we used country-level data for estimation;

Table 4. Import trade data between China and Uzbekistan in millions of USD.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1,674,792.99	1,421,707.91	1,809,526.75	2,062,487.43	2,153,039.18	2,236,498.68	2,373,264.39	2,312,511.80	2,246,734.81	2,436,328.61	2,631,912.70

From the data above, we then used the above regression equation to estimate the connection among the variables.

$$\text{Regression Equation}(y) = a + mx$$

$$y = -196906896.734 + 98872.541x$$

$$\text{Slope (m)} = (N \times \sum XY - (\sum X_m)(\sum Y_m)) / (N \times \sum X^2 - (\sum X)^2)$$

$$m = 98872.54073$$

$$\text{Intercept (a)} = (\sum Y_m - b(\sum X_m))$$

$$a = -196906896.73415$$

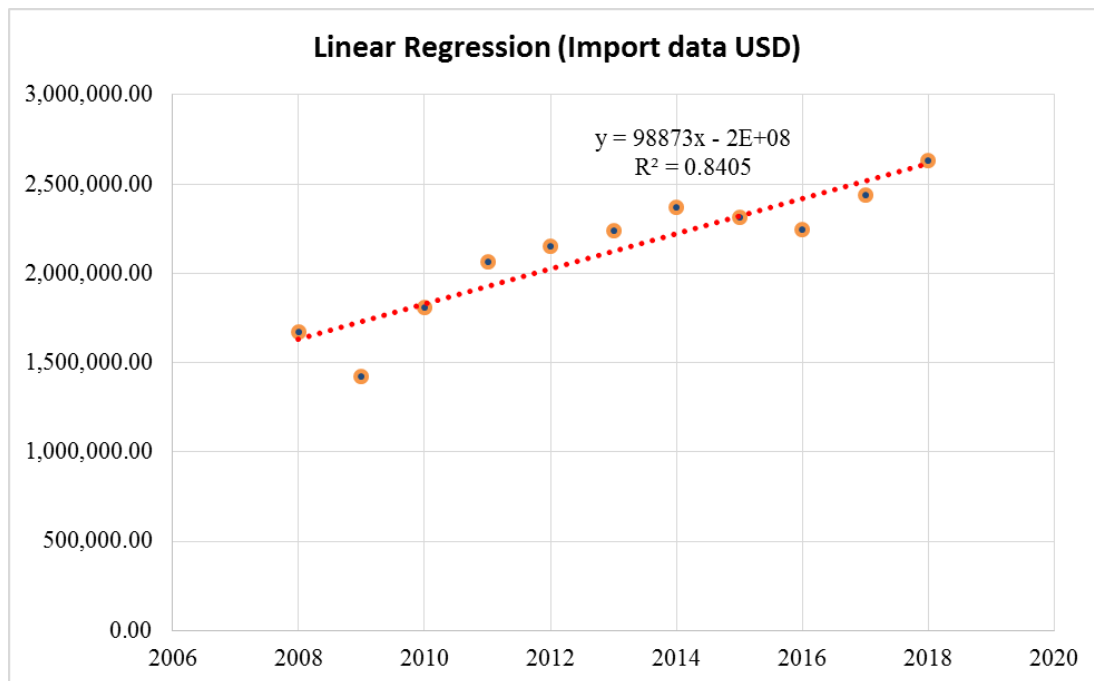


Fig. 6. Linear regression plot for import data (USD) trend over a period of years.

3.5.2. Multivariate regression model

We used the multiple regression tool to predict the value of a variable based on the value of two or more other variables. The technique provides a simultaneous combination of multiple factors to help us to assess how and to what extent they affect a certain outcome. Fig. 7 below, the Correlation Coefficient (Multiple R) which measures the strength of a linear relationship between two variables is at 0.94 meaning there is a strong positive relationship between import and export e-Commerce data. The model has a small standard error (1.25) as goodness-of-fit measure, which shows the near-precise of our regression analysis; the smaller the number, the more certain we can be about our regression equation. Interestingly our regression statistics passed the ANOVA part by assuming a significance (F) value less than 0.05 (5%) meaning the model is acceptable. The ANOVA test gives an idea of how reliable (statistically significant) the results can be.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.941056296
R Square	0.885586952
Adjusted R Square	0.85698369
Standard Error	1.254264491
Observations	11

ANOVA

	<i>df</i>	SS	MS	F	Significance F
Regression	2	97.4145647	48.70728235	30.96104738	0.000171357
Residual	8	12.5854353	1.573179413		
Total	10	110			

Fig. 7. A multiple linear regression summary of import-export data between China and Uzbekistan over 11 observations.

3.5.3. Future trends

From Fig. 8 below, we observe a continuous parallel trend of e-Commerce trade data with a crystal clear unlikelihood of crosslinks in the near future. However, though parallel, there is relative growth of e-Commerce trade observed from 2008 to 2018 with a sharp increase mainly from 2016 to 2018. This was possibly because of enhanced trade relations between the two countries mainly implemented during this period, as already elaborated in previous sections. The general projection is that the growth trend will continue even more it is crystal clear that with more technology e-Commerce will be made the basis of trade.

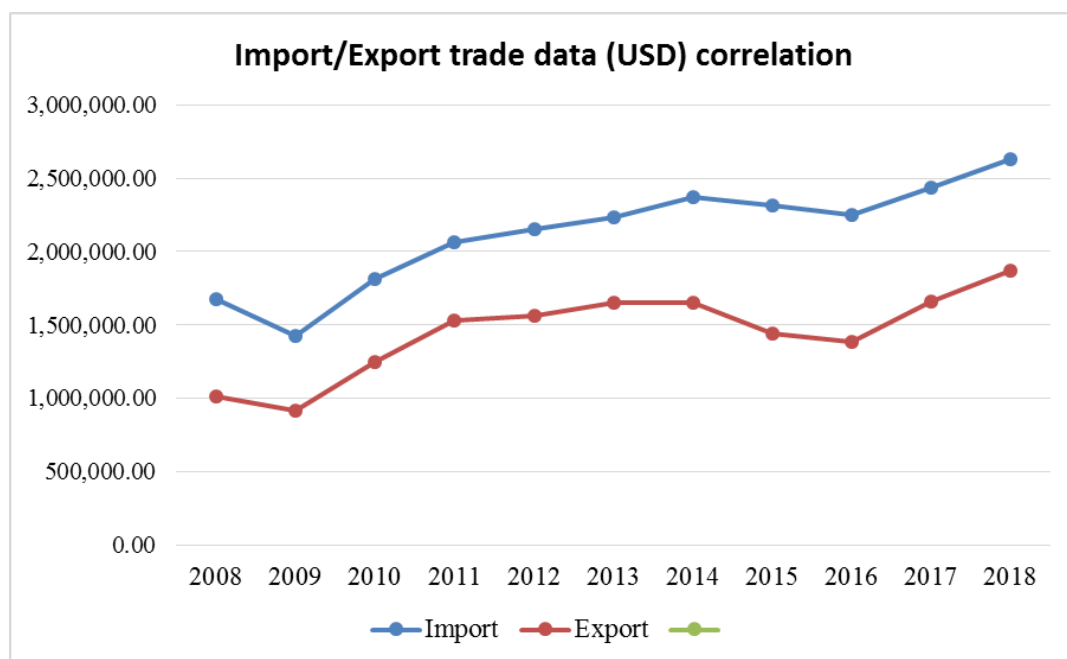


Fig. 8. Trend in Import and Export trade data between China and Uzbekistan.

4. Conclusion

E-Commerce is still developing in Uzbekistan, and it is only now starting to become a priority. In May 2018, the Uzbek President signed a decree "On measures for the accelerated development of e-commerce", and approved the "Program for the Development of e-commerce in Uzbekistan for 2018-2021". In response, the market is expected to grow significantly in the coming years as shown in our statistical studies. The main barriers to the development of e-Commerce in Uzbekistan includes insufficient electronic banking services, conversion limitations and underdeveloped trade and customs regulations. The capital, Tashkent, is currently the only viable e-Commerce market in the country, as it is home to 90% of Uzbek internet users. On the other hand, the increasing number of mobile internet access contributes to the potential for e-Commerce growth, and moderate to strong growth is expected in mobile broadband use over the next five years. However, at the moment mobile e-Commerce is not widespread in Uzbekistan and is still

developing. On the other hand China has developed faster internet services making it one of the global giants. Online payment is done through the use of bank cards linked to smartphones, although the majority of transactions are still done by cash.

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Conflicts of interests

The authors do not have any conflicts to report.

References

- [1] D. Gefen, E-Commerce: The role of familiarity and trust, *Omega*, 28 (2000) 725-737.
- [2] L. Li, D. Buhalis, E-Commerce in China: The case of travel, *International Journal of Information Management*, 26 (2006) 153-166.
- [3] P.Y.K. Chau, M. Cole, A.P. Massey, M. Montoya-Weiss, R.M. O'Keefe, Cultural differences in the online behavior of consumers, *Communications of the ACM*, 45 (2002) 138-143.
- [4] E. Christou, P. Kassianidis, Consumer's Perceptions and Adoption of Online Buying for Travel Products, *Journal of Travel & Tourism Marketing*, 12 (2002) 93-107.
- [5] S. Fatonah, A. Yulandari, F.W. Wibowo, A Review of E-Payment System in E-Commerce, *Journal of Physics: Conference Series*, 1140 (2018) 012033.
- [6] F. Liébana-Cabanillas, F. Muñoz-Leiva, J. Sánchez-Fernández, A global approach to the analysis of user behavior in mobile payment systems in the new electronic environment, *Service Business*, 12 (2017) 25-64.
- [7] S. Gordon, The Role Of Interpersonal Trust And Vigilance In The Process Of Entrepreneurial Opportunity Recognition Using Social Networks, *Regional Frontiers of Entrepreneurship Research*, (2006) 42-61.
- [8] R. Kramer, Trust and Distrust: Its Psychological and Social Dimensions, *Motivation and Emotion*, 18 (1994).
- [9] S. Aktamov, K. Rakhimova, Analyzes Of E-Commerce Development In Uzbekistan: Current Trends, Problems And Perspectives, *Asian Journal of Management Sciences & Education*, 5 (2016) 42-49.
- [10] R.M. Solow, A Contribution to the Theory of Economic Growth, , *Quarterly Journal of Economics*, 70 (1956) 65-94.
- [11] J. Schumpeter, *Theory of Economic Development* Harvard University Press, (1961).
- [12] P.M. Romer, The Origins of Endogenous Growth, *The Journal of Economic Perspectives*, 8 (1994) 3-22.
- [13] E. Helpman, The Size of Regions. In D.Pines , E. Sadka and I. Zilcha, eds, *Topics in public economics, theoretical and empirical analysis.*, Cambridge University Press, (1998) 33-54.

- [14] T.W. Bank, Doing Business 2009: Country Profile for Uzbekistan, The International Bank for Reconstruction and Development 46031 (2008).
- [15] Y. Cen, J. Zhang, G. Wang, Y. Qian, C. Meng, Z. Dai, H. Yang, J. Tang, Trust Relationship Prediction in Alibaba E-Commerce Platform, IEEE Transactions on Knowledge and Data Engineering, (2019) 1-1.
- [16] W. Chung, L. Chen, Group-Buying E-Commerce in China, IEEE Coputer Society, (2012).
- [17] N. Kshetri, Rural e-Commerce in Developing Countries, IEEE Coputer Society, (2018).
- [18] S. Wenjing, W. Hong, J. Zhimin, Virtual Money as a Small Payment System in E-commerce in China:an Economic Analysis, IEEE Transactions on Knowledge and Data Engineering, (2008).
- [19] M.G. Martinsons, Electronic commerce in China: emerging success stories, Information & Management 39 (2002) 571-579.
- [20] E. Turban, J. Outland, D. King, J.K. Lee, T.-P. Liang, D.C. Turban, Marketing and Advertising in E-Commerce, (2018) 361-401.
- [21] S. Heng, E-Commerce settles for established payment systems limited market., Duetesche Bank Research, (2007).
- [22] A.D. Rillo, V. Cruz, The Development Dimension of E-Commerce in Asia: Opportunities and Challenges, Policy Brief, 2 (2016).

<https://www.chinainternetwatch.com/28198/mobile-internet-2019/> (accessed 24/06/2019)

<https://www.chinainternetwatch.com/29394/social-ecommerce-apr-2019/> (accessed 24/06/2019)

<https://www.chinainternetwatch.com/29384/pinduoduo-top-tier-cities/> (accessed 24/06/2019)

<https://www.chinainternetwatch.com/28204/chinas-top-mobile-apps-in-2018-social-media-accounts-for-almost-1-3-of-users-time-spent/> (accessed 24/06/2019)

<https://www.chinainternetwatch.com/29317/tencent-q1-2019/> (accessed 24/06/2019)

<https://www.oec.world/en/profile/country/uzb/> (accessed 8/22/2019)

<http://www.china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/Uzbekistan-Market-Profile/obor/en/1/1X000000/1X0A3HWP.htm> (accessed 8/22/2019)

<https://www.britannica.com/place/Uzbekistan/People> (accessed 8/29/19)