

**Indo-Kazakhstan Trade: Trends and Prospects in the
post Cold War era**

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BY

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DECLARATION

I declare that the dissertation entitled “**Indo-Kazakhstan Trade: Trends and Prospects in the post Cold War era**” has been prepared by me under the Administrative Supervision of Prof. Paramjit Singh Ramana, Dean, School of Global Relations and guidance of Dr. Sandeep Kaur Bhatia, Assistant Professor, Centre for South and Central Asian Studies, Central University of Punjab. No part of this dissertation has formed the basis for the award of any degree or fellowship previously.

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ABSTRACT

“Indo-Kazakhstan Trade: Trends and Prospects in the post Cold War era”

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Though economic relations between India and Kazakhstan have been strengthening; still the current size of trade and investment between the two countries is relatively less than potential. In this context, the present study is an endeavour to analyze the existing trends in bilateral trade and also to highlight the future prospects for India and Kazakhstan. It has been found that the increase in merchandise trade between the two countries is mainly because of the changing demand structure and comparative advantages of both the economies in complementary sectors in recent years. The trade specialization indices (RCA and Michaely) emphasize that while Kazakhstan has been specializing in a few energy products; India's exports have been more diversified. Also, both the countries have comparative advantages in different products in the same industry, revealing the opportunity for higher intra-industry trade (IIT) in future, which would reduce cost and enhance the benefits for both the countries. However, it has been revealed that India's trade with Kazakhstan is much below than the rest of the world. Thus, there are enormous complementarities in bilateral trade that need to be tapped. It is mandatory to overcome the geographical, political and other hurdles to increase two way flow of goods. Just before fully utilizing India's potential to contribute in transition of Kazakhstan and Kazakhstan's ability to provide the energy resources to India, it is required that the process of bilateral cooperation gets a boost.

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This thesis is dedicated to my Baby Jashan.

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CHAPTER 1

Introduction

The end of Cold War and disintegration of Soviet Union in December 1991 led to the emergence of the sovereign republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan in the middle of Asian continent. Since their independence, these five former Soviet republics (together termed as Central Asia or Middle Asia) have been the focus of the World attention due to their geopolitical and economic importance, their natural and human resources, their transit potential for transcontinental trade and transport, and their unsettled political situation (Linn, et. al. 2005). The region has been located at a great distance from major markets like the United States, which is roughly 12,000 kilometers (km) away and Europe, which is 6,000 km away (Agarwal, 2006). Also, it is surrounded by some high-growth-large-economies like Russia on the North, China on the East, India on the South and Iran on the West.

The collapse of Soviet Union has offered an option to Central Asian Republics (CARs) to look for new partners and allies. The US, Turkey, Iran, India, Pakistan, China and Russia itself were hurried to establish relations with the new republics. It may be due to region's huge amount of natural resources, many of which were underexploited or unexploited. Central Asia and the Caucasus are considered by many to be the next oil and gas frontier (Jaffe, 1998). With the raise in energy prices, international interest in the region is also raised. As a result, the US and China both are doing their best to expand their presence in the region. According to the estimates of geologists, the oil deposits of CARs are of excellent quality and able to be a significant alternative of the deposits of Alaska and the North Sea which are expected to be exhausted by the year 2015 (Arvanitopoulos, 2002).

Since late 1990s, Central Asia has been emerged as one of the world's fastest growing regions and has shown notable development potential (Dowling and Wignaraja, 2006). The growth came about due to high commodity prices, rebound in investment activity and growth in domestic consumption and pickup in remittances (Sachdeva, 2008). Among five republics Turkmenistan has highest GDP growth rate

(9.2 percent) followed by Uzbekistan (8.5 percent) and Kazakhstan (7.3 percent), in 2010. However, Kazakhstan has the highest per capita GDP of region (Table-1.1). Kazakhstan as the most stable and growing economy in Central Asia is the economic leader of the region.

Table 1.1: Performance of Central Asian Republics (2010)

Country	GDP growth (annual %)	GDP per capita (in US\$)	Population (in millions)	Exports (% of GDP)	Major exports
Kazakhstan	7.3	9136	16.32	44	Oil and oil products, metals, chemicals, machinery, grain, wool, meat, coal.
Kyrgyz Republic	-1.4	860	5.37	58	Gold, cotton, wool, garments, meat, tobacco, mercury, uranium, hydropower.
Tajikistan	3.8	820	6.88	15	Aluminum, cotton, electricity, fruits, vegetable oils, textile.
Turkmenistan	9.2	3967	5.04	52	Gas, crude oil, petrochemicals, textiles, cotton fiber.
Uzbekistan	8.5	1384	28.16	31	Energy products, cotton, gold, mineral fertilizers, metals, textiles, food products, machinery, automobiles.

Source: World Development Indicators 2012, World Bank.

Table 1.1 reveals that CARs have high export/GDP ratios except for Tajikistan. It is probably safe to say that countries with a high ratio (Kyrgyz and Turkmenistan) are more economically sensitive to the fluctuations in international market than countries with a low ratio (such as Tajikistan). The CARs are open but less integrated into the global economy. Kazakhstan, for example, has the most complex relations to globalization in the region, but its fear of losing autonomy has limited the degree of globalization of the Kazakhstani economy (Pomfret, 2009). Though Central Asia has a modest incorporation with world, yet its relevance is not so minuscule.

As depicted in Table 1.1, CARs have a wealth of natural resources such as oil, gas and metals, as well as commodities like cotton, grain, and cereals. Kyrgyzstan is an agrarian economy. Cotton, wool, meat and tobacco are major export commodities. Country has substantial deposits of coal, gold, uranium, antimony and other valuable metals but has negligible petroleum and natural gas reserves. On the other hand, aluminum and cotton are among the major sources of income in Tajikistan. Country

has also great hydropower potential, can be exploited for internal use and electricity exports. Other energy resources include sizable coal deposits and smaller reserves of natural gas and petroleum.

Among these five republics, two republics namely Kazakhstan and Turkmenistan are oil and gas exporters thus richer than others. While Uzbekistan has small oil reserves and significant natural gas reserves but it does not export. It has an abundant of gold, copper and uranium.

Table 1.2: Oil, Gas and Coal Reserves of Central Asia (at the end of 2010)

Countries	Oil (thousand million barrel)		Gas (trillion cubic meters)		Coal (million tonnes)	
	At the end of 2010	Share	At the end of 2010	Share	At the end of 2010	Share
Kazakhstan	39.8	2.9%	1.8	1.0%	33600	3.9%
Turkmenistan	0.6	-	8.0	4.3%	n/a	-
Uzbekistan	0.6	-	1.6	0.8%	n/a	-

Note: 1. n/a indicates no reserves.

2. Share indicates percentage share of world's total reserves.

3. – indicates data is not available.

Source: British Petroleum (B.P.) Statistical review of World Energy, June 2011.

Table 1.2 depicts the oil, gas and coal reserves of Central Asia, at the end of 2010. Table reveals that Kazakhstan has the largest oil and coal reserves in the region. With 3 percent of world's proven oil reserves, it is the eleventh largest oil reserves in the world and probably has the greatest capacity for production growth of any non-OPEC member. The republic has four oil fields namely, the Tengiz field, the Karachaganak field, the Kashagan field and the Kurmangazy (ICG, 2007). Also, Kazakhstan is the only Central Asian republic with huge reserves of coal which accounted for about 4 percent of total world coal reserves. After Turkmenistan, it has larger reserves of natural gas in region.

Kazakhstan has a top position in oil and gas production in Central Asia region and it has an expanding mining sector. Table 1.3 shows that in 2000, Kazakhstan has produced 35.3 million tons of oil (700,000 barrels per day) which increased to 81.6

million tons (more than 160, 0000 barrels per day) in 2010. In 2010, it has produced 2.1 percent of total world oil production. Oil sector value added accounted for 11.5 percent of GDP in 2010, while oil exports represented nearly 57 percent of total exports of goods and services (Martin and Kronstadt, 2007). Kazakhstan has the potential to be a world-class oil exporter. Natural gas production has increased from 10.4 billion cubic meters in 2000 to 33.6 billion cubic meters in 2010.

Table 1.3: Oil and Gas Production in Central Asia

Countries	Oil (million tonnes)				Natural Gas (billion cubic meters)			
	2000	2005	2010	Share	2000	2005	2010	Share
Kazakhstan	35.3	62.6	81.6	2.1	10.4	22.6	33.6	1.1
Turkmenistan	7.2	9.5	10.7	0.3	42.5	57.0	42.4	1.3
Uzbekistan	7.5	5.4	3.7	0.1	51.1	54.0	59.1	1.8

Note: Share indicates percentage share in world's total production.

Source: B. P. Statistical Review of World Energy, June 2011.

Though Kazakhstan's economic future is linked to oil and gas development; It has also the World's second largest uranium, chromium, lead and zinc reserves, the third largest manganese reserves and the fifth largest copper reserves(ICG, 2007). In 2009 Kazakhstan became the world's leading uranium producer with almost 28 percent of world production then 33 percent in 2010 and about 35 percent in 2011 (WNA, 2012). The government is committed to increase uranium exports and is considering future options for nuclear power. It has the largest silver, zinc and nickel markets in West Asia. The republic also exports iron and diamonds.

Owing to above mentioned natural wealth; Kazakhstan is a centre of world attraction. It also has enormous agricultural potential with its vast grassland. The republic is the 6th largest global producer of cereals and has self-sufficiency in food production (Jadrallyev, 2010). During the Soviet period Kazakhstan was an agrarian economy with a major role of military industry. After independence in 1991, it has been transformed from a socialist state to a democratic republic with a market economy. Since 2000, Kazakhstan has been enjoying an impressive economic growth maintained by increasing prices of oil, metals and grain in global market.

Country's business tie-up with Russia, China and with Commonwealth of Independent States (CIS) nations has helped to boost up the economy.

According to the World Energy Outlook (2010-11), the global energy consumption would be increased by 50 percent from 2005 to 2030. It has been predicted that emerging economies are going to account for much of this projected growth. Among the developing economies, the highest demand was expected to occur in Asia, particularly in India and China. Today in world scenario, energy plays an important role in the formation of a country's foreign and security policy. India is also looking for the nuclear energy option and sources beyond the Middle East. As a current example is, Indo-U.S. nuclear agreement, as well as consistent engagements with the countries of Eurasia, Africa and Latin America, should be seen in this perspective (Sachdeva, 2008). Due to the valuable oil, gas and hydrocarbon resources of CARs, India wants to establish energy cooperation with region because it may be very cheapest for India (Peyrous, 2007).

India is a rising economic superpower and would play a major role in the global economy in 21st century. The country would leave behind France and Italy by 2020, Germany, UK and Russia by 2025 and Japan by 2035, making it the third largest economy of the world, behind the US and China (Wilson & Purushothaman, 2003). With rapidly growing economy, India has been emerged as a major importer of energy and diversification of energy supplies is a key component of India's energy security policy. According to International Energy Outlook 2010-11, India's energy consumption in 1990 was 7.9 quadrillion british thermal unit (btu) which increased to 19.4 quadrillion btu in 2010. On account of growing demand of energy, India's dependence on import has also increased. In 2010, according to Petroleum Ministry of India, the country was the world's fifth largest net importer of oil, importing total 163.59 million tonnes of crude oil. More than 63 percent (104 million tonnes) of that imported crude oil was from the OPEC countries such as Saudi Arabia, Oman, Kuwait and United Arab Emirates (UAE). It is projected to be growing this oil imports to 91.6 percent by the year 2020. Thus, India will have to find more alternative source of oil.

CARs (Kazakhstan particularly) are best option due to good cultural, historical and geo- political relations with India.

Further, natural gas demand is also expected to grow considerably, largely driven by demand in the country's power sector. The power and fertilizer sectors account for nearly three-quarters of natural gas consumption in India. According to estimates of the Energy Information Administration (EIA) of US, India produced approximately 1.8 tcf of natural gas in 2010, and it is 63 percent increase over 2008 production levels. Despite this steady increase in natural gas production, demand exceeds supply. Thus, the country has been a net importer of natural gas since 2004. According to Petroleum Ministry, country's net imports of natural gas have reached an estimated 429 billion cubic feet (bcf) in 2010. Hence, as Agarwal (2006) observed, 'an improved access to Central Asia's energy resources could play an important role in meeting India's energy needs, particularly in the prosperous northern India which is far from the sources of energy in India and could be the entry point for energy imports from Central Asia by land.'

Country's uranium deposits are, also, not sufficient and it has to depend on France and Russia to meet its civil nuclear energy requirement. But the amount imported is not sufficient. India is working towards the development of its civilian nuclear energy industry, which may be a good alternative to satisfy its huge energy needs. Australia, Canada and Kazakhstan are three biggest producers of uranium in world. Australia sells Uranium only to a country with Nuclear Non-Proliferation Treaty. On the other hand, Canada keens to sell uranium to India, but there are some legal obstacles that could or could not be solved in near future. Therefore, India has to increase trade with Kazakhstan, the only remaining best alternative.

Kazakhstan's industrial sector depends mainly on the extraction and processing of the natural resources and also on heavy industry specializing in construction equipment, tractors, agricultural machinery and military products. The manufacturing activities are limited to textile, chemical products and fertilizers. The former Soviet republic is in transitional phase. Also, it has rapidly growing middle class and signs that the hydrocarbon prosperity is being felt widely (ICG, 2007). Thus,

there have been required huge imports in pharmaceuticals, tea, food processing, machinery and equipments, paper and paperboards, consumer durables and services. On the other hand, India has a proficiency to provide these requirements. Thus, it has two-fold significance for India.

India and Kazakhstan (as a part of Central Asia) had been a historical trade tie since Silk Road period. This interaction reached its heights during the Kushans (first to the third century A.D.) when there was extensive exchange of goods, men, ideas and culture between the two regions (Agarwal, 2006). However, these exchanges had almost been frozen when Central Asia got incorporated into socialism under USSR. In the post Soviet Socialist era when capitalism assumed a completely universal character India is also reinforcing its relations with republic keeping in view its economic and strategic interests. More recently, India is moving closer to CARs with India's inclusion in the Shanghai Cooperation Organization (SCO) in 2005 as an 'observer' (Pahariya, 2009).

Table 1.4: Direction of India's Trade with Central Asian Countries (2010)

Country	Exports (US\$ millions)	Imports (US\$ millions)	Total Trade (US\$ millions)	Percentage Share of India's Trade with Central Asia	Percentage Share of India's Global Trade
World	220408.50	350029.39	570437.88	-	-
Kazakhstan	146.21	157.50	303.71	61.96	0.05
Kyrgyzstan	24.32	1.03	25.36	5.17	0.00
Tajikistan	16.35	22.41	38.76	7.91	0.01
Turkmenistan	28.85	12.78	41.63	8.49	0.01
Uzbekistan	56.59	24.09	80.68	16.46	0.01
Central Asia	272.33	217.81	490.14	100.00	0.09

Source: UN Comtrade.

Table 1.4 shows the direction of India's trade with Central Asian countries during 2010. It reveals that during 2010 India's total exports to world have a value of US\$ 220408.50 million whereas total imports have worth of US\$ 350029.39 million. However India's exports to these five countries combined had a volume of US\$ 272.33 million, which was just 0.12 percent of India's total global exports. India's

imports to these five republics have stood at US\$217.81million, which was a meager 0.06 percent of India's total imports for the same year. It has been found that during 2010, nearly 80 percent of India's total trade (exports and imports combined) with Central Asia is captured by two countries, viz. Kazakhstan and Uzbekistan. Kazakhstan, the largest trade partner of India in region, alone makes up more than half (62 percent) of country's total trade with the region.

Though, Central Asia is a very weak trade partner of India but there is huge potential for increasing trade. As Agarwal (2006) and Pahariya, (2009) argued, "Both India and Central Asia have economic complementarity in terms of resources, manpower and markets. Indian products like tea, drugs, pharmaceuticals and fine chemicals have already established a foothold in the Central Asian market. However, the region with over 55 million consumers has huge potential in many other areas that are yet to be tapped." The major potential areas for increasing bilateral trade might be energy and mining, power generation, telecommunication equipment, healthcare and medical industry, agri-business, tourism, IT sector, food processing and packaging, housing and construction, banking and financial services.

Today, in world scenario, Central Asia has been emerging as a hub for energy seeking powers. Russia, China and USA are already engaged in the region. Thus, India needs to promote and preserve its interest. Feasible and smooth economic and trade relations with energy exporting CARs (i.e. Kazakhstan and Turkmenistan) would be helpful for India to reduce its dependence on West Asia, which today provides most energy requirements to India. But as Pomfret (2007) argued, "with its much higher income levels and accumulated reserves Kazakhstan is the Central Asian country best-placed to tighten belts. Turkmenistan has been less exposed to global energy market developments because gas prices are less volatile than oil prices". Hence, Kazakhstan has always remained first preference of India in Central Asia region.

Prime Minister Manmohan Singh's recent visit to Kazakhstan, in April 2011, reflects the importance of this former Soviet republic for India. During this visit India and Kazakhstan signed seven pacts, including a framework agreement in civil nuclear

field and a stake-sharing accord in oil sector. The two sides also decided to work for pushing the bilateral trade through engagement of governments and business communities and diversifying to non-oil sectors like pharmaceuticals, agriculture and IT. Kazakhstan already committed for supplying 2,100 tons of uranium to India by 2014. To sum up- the strategic significance of Kazakhstan and its increasing role in the region and beyond makes it an important country for India in the Eurasian region to forge long term engagement with (Roy, 2011).

Keeping in view the importance of Kazakhstan as an energy exporter and the largest trade partner of India in Central Asia region, the present study has been structured to analyze the trends and prospects of Indo-Kazakhstan trade in post Cold War era. **The main objectives of present study are:**

- To study the growth, trends and composition of Indo- Kazakhstan bilateral trade in post Cold War era.
- To study the competitiveness and intensity of Indo- Kazakhstan bilateral trade in post Cold War era.
- To examine the barriers to trade between the two countries.
- To study the future prospects of Indo- Kazakhstan bilateral trade relations.

The primary question addressed here is, “During the study period (1995-2010) whether Indo-Kazakhstan bilateral trade has a greater intensity and competitiveness or not?” The intensity and competitiveness of any bilateral trade can be well understood through quantitative assessment of those specific trade relations. Thus, study concentrates on the subject with quantitative base. Various trade indices are used to find out the trade specialization, intra-industry trade, trade intensity and terms of trade between India and Kazakhstan.

The study has been planned into six chapters including the present one. Second chapter (Chapter-2) reviews the literature related to the theme of the study. The studies reviewed are aimed to highlight the importance and future potential of Indo- Central Asia as well as Indo-Kazakhstan economic and trade relations in Post Cold War era. Chapter3 explains the data base and methodology. The chapter discusses the various sources of data used in the study. The different trade indices

used to assess the Indo-Kazakhstan bilateral trade trends and prospect has also been described. Chapter 4 analyzes the trends and pattern of bilateral trade between India and Kazakhstan. The results obtained from various trade indices are discussed in this chapter. Chapter 5 tries to highlight the potential areas for enhancing two way flow of trade. Some trade barriers, restricting that potential have also been examined. Further there are outlined some future prospects that may be speed-up the bilateral commercial relations. To end with, Chapter 6 is an attempt to summarize the findings of the study. It also includes some possible suggestions for policy building to convalesce the Indo-Kazakhstan trade ties.

The present study will serve as a base to elaborate the work toward India's trade relations with whole Central Asia region.

CHAPTER 2

Literature Review

The present chapter reviews the studies relating to India's relations (economic relation specially) with Central Asia as well as with Kazakhstan individually. The studies reviewed are aimed to highlight the importance of bilateral trade in Indo- Central Asia and Indo-Kazakhstan relations in post Cold War era.

The post Cold War era witnessed the collapse of USSR and emergence of the five sovereign Central Asian Republics (CARs) republics of Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan and Uzbekistan. The CARs after their independence emerged as the centre of power politics due to its location; minerals; natural resources and destabilized political system (Attri, 2010).The region has huge reserves of natural resources that need to be tapped; exploited and converted into value-added products (Movlonov, 2006). These resources can provide India with a reliable alternative source of energy thus can be helpful for India to reduce its dependence on West Asia for oil and gas (Roy, 2001; Hate, 2007 and Sarma 2010).

As a result of; nowadays Central Asian Countries are getting more attention in India's search for energy cooperation (especially in hydrocarbon and oil). India is searching for energy because it has emerged as one of the most critical inputs for overall economic growth. Laxmi (2007) argued that India is one such rapidly growing country; for whom energy security may be the biggest security challenge in the coming future. Laxmi (2007), Sarma (2010) and Attri (2010) analyzed the future demand and consumption of oil and natural gas and pointed out that India's import dependency would continue to rise markedly in the coming decade and beyond. As India's oil import levels rise to levels above 100 million tons over the next couple of years, it will be increasingly difficult for it to meet its energy import requirements without concluding large, long-term contracts for the supply of oil. Thus, diversification of energy resources is one of the top priorities of the government of India (Laxmi, 2007).

The same priority explains India's interest in Central Asian countries; especially oil rich Kazakhstan and gas rich Turkmenistan. The country had its eye on Central Asia's energy resources for a long time and the region is looked as an alternative of Iran to fulfill India's energy needs (Hate, 2007 and Laxmi, 2007). Though there are unreliable estimates about oil deposits of Central Asian countries yet the importance of the region for meeting the energy requirements of India in the near future cannot be denied (Laxmi, 2007). Therefore; India's interest in Central Asia is dominated by economic diplomacy, where oil and gas are the key factors of India's foreign policy (Hate, 2007; Laxmi, 2007 and Attri 2010). On the other hand, as Roy (2001), Agarwal (2006) and Hate (2007) pointed out, Central Asia also has a huge consumer market hungry for a range of goods and services; which India can provide. Although India's primary interest is in energy resources but it also wants to minimize the role of Pakistan in Central Asia (Hate, 2007). Economic cooperation is regarded as the best way to counter Pakistan's influence in Central Asia who is developing trade ties with the region (Singh, 1995).

Sharma (2009), Sarma (2010) and Kaur (2011) discussed that the region had vibrant trade relations with Indian subcontinent in ancient silk route days but today their commercial ties are far from satisfactory. However, India and Central Asia have economic complementarily in terms of resources; manpower and market (Attri, 2010). Thus, India is trying to promote bilateral economic and trade relations with these Central Asian states. It has extended lines of credit to Tajikistan, Uzbekistan and has supplied 30 percent of Kazakhstan's pharmaceutical needs (Attri, 2010 and Hate, 2007).

There are some studies those describe the Indo-Central Asia trade relations in brief. Kaur (2011) divided the trends and prospects of this bilateral trade into three different phases for the period of 1993-2009. After dissolution of USSR in 90s, the first phase (1991-1994) of Indo-Central Asia trade relations started. High import demand for western consumer goods had been observed in that period. During the second phase (1995-98), Central Asia has made efforts to enlarge trade tie beyond its traditional partner and there had been found reasonable trade relations between

India and the region. In third face (1998-2009) there was a steady increase in region's share in Indian trade basket.

India generally maintains positive trade balance with these republics (except Uzbekistan) (EXIM Bank, 2005; Sinate & Tiwari, 2007 and Kaur, 2011). Indian exports as well as imports from Central Asia are highly concentrated around few commodities. Coffee, tea, drugs, pharmaceuticals & fine chemicals are the largest export items to the region. However zinc, cotton, iron and steel & salt have emerged as the largest import items from the Central Asia to India (Agarwal, 2006; Sinate & Tiwari, 2007 and Kaur, 2011).

Out of the five republics of Central Asia, Kazakhstan is major trade partner of India since 1992 (EXIM Bank, 2005; Sinate & Tiwari, 2007; Stobdan, 2009; Attri, 2010; Sachdeva, 2010 and Kaur, 2011). According to Singh (1995) and Roy (2001) Kazakhstan, the sole nuclear power in Central Asia has much significance. It is a key producer and exporter of energy and strategic products like oil, gas, phosphorus, copper, coal and iron. Thus, it can be a future source of energy for India. The republic is ready to supply uranium for India's existing and future civil nuclear power plants and unlike Australia and Japan, it did not insist on India sticking to its nuclear test suspension. Thus, Kazakhstan could become a good partner for India in the area of energy security (Hussain 2009 and Stobdan 2009). Also, it is among the world's five largest grain exporters and can import wheat and other agriculture products from this country at favorable rates, if needed (Bhatia 2009 and Stobdan 2009). Thus, it could also play an important role in diversifying Indian imports (Sachdeva 2011).

Sachdeva (2010) outlined the importance of the Central Asia for Indian trade in a broader sense. India's inland trade with Europe and the CIS (Commonwealth of Independent States) plus Iran etc. can be enlarged by linking India with Europe via Central Asia.

Agarwal (2006), Hussain (2009), Sarma (2010) and Kaur (2011) observed that despite an improvement in bilateral trade, Central Asia is still a very weak trade partner of India as its annual average shares of exports, imports and total trade in India's global exports, imports and total trade were still negligible. But there was

considerable potential for increasing this trade. Prabir (2009) by using the augmented gravity model estimated that during 1995-2007, Kazakhstan was one of India's trading partners with a high unexplored trade potential (86.19 percent). In fact, the corresponding figures are very high for other prominent CIS countries – Uzbekistan (81.95 percent), Tajikistan (94.39 percent), Armenia (82.47 percent) and Kyrgyzstan (93.34 percent), in same period. Agarwal (2006) illustrated these possibilities with reference to five areas; energy, IT sector, tourism, petrochemical complexes, transport and construction. India needs energy whereas CARs need investment in another four. According to EXIM Bank (2005) and Sinate & Tiwari (2007) the potential export items to Kazakhstan would include machinery, transport equipment, chemicals, iron and steel, food products, ores and minerals, petroleum products, etc. while India could import mineral fuels, inorganic chemicals, electrical machinery and natural or cultured pearls from the same. India and CARs are also collaborating in the area of oil and gas sector. Thus there is a great potential for expansion of bilateral trade and investment and to benefit from this potential, Indian industry would have to adopt medium and long-term strategies. There is need for concerted and focused efforts to ensure that all Indian and South Asian organizations act cohesively in tapping the opportunities offered by this region (Movlonov 2006).

Hate (2007) remarked that Central Asia is important not only for India but for whole South Asia. Indian economy with a rapid growing GDP is ready to play an important role in building a developed Asia (Movlonov 2006 and Sachdeva 2010). This economic power along with diplomacy, energy project, transport communications and improved modern technology capabilities is considered as India's main instruments for promoting inter-regional cooperation between Central Asia and South Asia (Movlonov 2006). This inter-regional cooperation will be helpful in improving India's energy security and can also fundamentally change India's sea-based continental trade (Sachdeva 2010 & 2011).

Agarwal (2006) concluded that it is in the mutual interest of both CARs and India to discover the possibilities for more intensive regional economic co-operation. But in reality trade and investment relations between India and CARs remain

unsatisfactory in spite of immense scope for a mutually beneficial relationship. This is due to the rather discouraging environment prevailing in this region like the non-availability of hard currency, lack of conversion facility service, problematic communication links etc (Roy, 2001). Hate (2007) and Hussain (2009) considered that poor transport links is the main difficulties lies in connecting Central Asia to the Indian market. According to Sharma (2009), Sarma (2010), Attri (2011) and Kaur (2011); the major hurdles in Indo-Central Asia cooperation are lack of direct transport links, poor infrastructure, inadequate banking facilities and tax structure and the presence of the major external players (like Russia, China, USA etc.) in the region.

Central Asia cannot be a replacement for India's old Soviet market because these hurdles hampered the Indian traders (Singh, 1995). Thus, there are suggested so many suggestions and policies to remove these hurdles. Roy (2001) insisted that economic diplomacy should remain India's basic policy thrust towards the region. India needs no clash but a compatibility of interests with the new states. EXIM Bank (2005) and Sinate & Tiwari (2007) provided some strategy and recommendations like separation of knowledge, building closer institutional linkages, opening branches/ representative offices, speedy implementation of transport corridor etc. to enhance two-way flow of trade and investment between India and Central Asia. Agarwal (2006) rejected the old approach of forming FTAs and suggested a Comprehensive Economic Co-operation Agreement (CECA), as initiated between India and Singapore. Sharma (2009) insisted that India should make a clear-cut policy for the region that may include strategic interests as well as other areas such as greater people-to-people contact, promoting tourism, cooperating on environmental protection etc. Such policy can provide a boost to the Indian presence in Central Asia.

Stobdan (2009) emphasized that India as an emerging power, should take Kazakhstan's potential more seriously and both countries should share complementary objectives. For this both should work out a framework that suits the common objectives of both countries. But the methods to cooperate, to fulfill the common objectives, are out of the limit of the study. Pahariya (2009) argued the

huge potential for bilateral trade that can be exploited through FTA only. The duty-free imports of energy resources would also help Indian industry to reduce its cost of production thereby enhancing its international competitive advantage. Thus, India should make efforts to do FTA with Kazakhstan and thus, rewrite the history of economic cultural cooperation between the two countries in order to facilitate future cooperation between India and Central Asia. Prabir (2009) concluded that tariff liberalization and trade facilitation, if taken together can be helpful in enhancing India's trade. Thus, it is suggested that the efforts to promote regional and global integration need to address policy reform across a number of areas, and should not be limited to traditional trade policy measures such as tariffs.

Sarma (2010) suggested that India should adopt a multi-dimensional and broad fronted policy through which it may be able to help the region to fulfill all its development needs. Kaur (2011) suggested to developing a sub regional agreement (much like FTA) between India, China and Central Asia. This way India can increase trade relations with Central Asia and also can play a multidimensional role in the development of these former Soviet Republics. According to Sachdeva (2010 & 2011) for a smooth regional integration with Central Asia, there is needed a smooth and viable economic and political relation between India and Pakistan. If it happen than SAFTA's extension to Central Asia and Iran may become a reality. Bandyopadhyay (2011) advised both India and Kazakhstan to proceed in a more prudent manner and ensure that the bilateral relation may become the foundation for the growth of regional interactions in the near future. Roy (2011) emphasized that to fully actualize India's potential to contribute for the development of Kazakhstan and Kazakhstan's capability to provide the much-needed hydrocarbon resources for India, the current momentum of bilateral cooperation needs to be sustained in future.

One step ahead all these Stobdan (2008) investigated the possibilities to explore a new inland trade route between India and Kazakhstan via China. While North-South Corridor through Iran has its own importance but success of this route is substantially effected by the instability in Afghanistan and Pakistan. Thus, there is

another option to restore the ancient Silk Route that traditionally linked India and Central Asia through China's Xinjiang province. It is a shortest route thus will cut down the transportation costs of bilateral trade. In addition, India would gain access to the trans-continental transport corridors Western Europe - Western China. But it may be possible only if China is willing to cooperate. Study suggested to set up a trilateral (India, Kazakhstan, China) joint study group to study the feasibility of this route. Stobdan's view about reviving and restoring the legendary Silk Route is further supported by Hussain (2009). According to study the new route further improves the chances of increasing cooperation between South Asia, Central Asia and China, keeping India at the centre.

The serious efforts are made by India to strengthen the bilateral tie with Kazakhstan and other Central Asian countries. EXIM Bank (2005), Sinate & Tiwari (2007) and Bhatia (2009) discussed the 'Focus CIS' programme launched by Government of India in April 2003. The Programme was launched under the EXIM Policy (2003-04) and implemented through integrated efforts of the various agencies and Institutions including the Export- Import Bank of India. It tried to increase India's exports to the CIS region through mutual direct interactions among businessmen by identifying the areas of bilateral interest and investment.

Recently India has taken several trade initiatives with Kazakhstan. Hussain (2009) described the President Nazarbayev's visit to India in January 2009 which gave a fresh impetus to bilateral trade and commercial relations. India found Kazakhstan significant for three main reasons – its strategic location, its vast energy and mineral resources, and its secular and composite social structure. The nuclear agreement signed during this visit makes Kazakhstan the fourth country besides the US, France, and Russia that would supply uranium to India for civilian energy purposes.

To enhance the bilateral relations, Prime Minister Manmohan Singh paid an official visit to Kazakhstan in April, 2011. Bandyopadhyay (2011) and Roy (2011) viewed this visit in the context of regional developments in and around Central Asia, India's growing energy needs, and Kazakhstan's increasing role in the region and its immense hydrocarbon reserves. The seven agreements of economic cooperation

concluded between the two countries during this visit. Kazakhstan holds the world's second largest uranium reserves. New Delhi is eagerly seeking cooperation in the highly strategic field of nuclear fuel supply. However, the road ahead may not seem as smooth if regional dynamics are taken into account. According to Roy (2011) the most significant achievements of this visit were the signing of the "Joint Action Plan" and the agreement for cooperation in peaceful uses of atomic energy. The joint action plan provides a 'Road Map' for the period 2011-2014, which can take India-Kazakhstan relations to new heights in the coming years.

Stobdan (2009) observed that Kazakhstan is also a great supporter of India in all international interaction including the candidacy for the UN Security Council permanent membership. On the contrary, the Kazakhs want India to assistance in joining the World Trade Organization (WTO). Several bilateral co-operations including Kazakh-India Inter-Government Commission are already institutionalized, which should become a driving force for further enhancement of partnership.

Khatibi (2008) examined Kazakhstan's relative competitiveness and compare the structure of specialization in trade regarding world exports to the EU-27 and exports within the EU-27 member countries. The empirical analysis is based on Balassa's (1965) revealed comparative advantage (RCA) index calculated for the period 1990 to 2006. Results revealed that Kazakhstan is competitive in several sectors, mainly in energy and manufactured goods. But the competitiveness of Kazakhstan has decreased significantly over the past few years. This may be due to over-dependence on the energy sectors. The study suggested that either the country may turn their attention to other areas of the economy or put their energy into the continuing process of liberalization. This study has been limited to the EU and there is a scope for further investigation in order to shed light on just how successful the government's diversification strategy has been to date and where they should go from here.

The above mentioned studies revealed importance of India's economic and trade linkages with Central Asia in general and with Kazakhstan in particular. As there is a lot of potential for trade with this region but a handful literature is available to understand the importance and future potential of India's trade relations with

Central Asia as well as Kazakhstan. For example, EXIM Bank (2005) and Sinate & Tiwari (2007) briefly examined the Indo-Central Asia trade and investment relations but ignored import potential. On the other hand, Kaur (2011) based on quantitative assessment of Indo-Central Asia trade trends is creating a ground for further empirical work on Indo-Central Asia trade relations (either country-wise or on whole region).

A quantitative assessment of bilateral trade is necessary to understand the intensity and competitiveness of a bilateral trade. Thus, there is need of a study which can find the competitiveness and intensity of India's trade with this region. The present study is a little step towards this direction. It is a detailed study on India's trade relations with Kazakhstan, the largest trade partner of India in Central Asia region, with a scope to elaborate the work toward whole Central Asia region.

Summary of Literature Review

S. No.	Author	Year	Objectives	Conclusion and Suggestion
1	Singh	1995	Examined India's changing relationships with disintegrated Russia and the five Central Asian republics.	Economic cooperation as the best way to counter Pakistan's influence in Central Asia.
2	Roy	2001	Identified India's growing economic and energy interests in Central Asia	Kazakhstan can be a future source of energy for India thus the economic policy should remain India's basic policy thrust towards the region.
3	EXIM Bank	2005	Analyzed India's trade and investment relations with all five Central Asian Republics (CARs) along with Afghanistan and Pakistan, during the period for 1997 to 2003.	Some strategy and recommendations provided to enhance two-way flow of trade.
5	Agarwal	2006	Presented some suggestions on how CARs and India can co-operate more effectively.	It rejected the old approach of forming FTAs and suggested a Comprehensive Economic Co-operation Agreement (CECA), as initiated between India and Singapore.
6	Movlono	2006	Pointed out the importance of Central Asia for India and whole South Asia.	There is need for concerted and focused efforts to ensure that all Indian and South Asian organizations act cohesively in tapping the opportunities offered by this region.
7	Hate	2007	Discussed the emerging importance of Central Asian republics for India and other	There is much more potential for an expanded Indian role in Central Asia that would

S. No.	Author	Year	Objectives	Conclusion and Suggestion
			world powers like Russia, USA and China	increase the economic and political options for Central Asians.
8	Laxmi	2007	Emphasized on India's search for energy cooperation (especially in hydrocarbon and oil) with Central Asian Countries	India's interest in Central Asia is dominated by economic diplomacy, where oil and gas are the key factors of India's foreign policy.
9	Sinate & Tiwari	2007	Analyzed trade and investment flows, trends, structure and future potential of India's trade and investment relations with the CIS region during the period of 2001-2005	Recommended a closer economic and trade Integration with CIS countries.
10	Prabir	2009	Estimated India's trade potential in the pre- and post-crisis period (1995 to 2007), by using gravity model.	Kazakhstan is one of India's trading partners with a high unexplored trade potential.
11	Sharma	2009	Identified India's strategic and economic interest in Central Asia and suggested some possible steps to strengthen these relations and to harness the uncultivated potential of the region	There may be a policy, which protect strategic and economic interests.
12	Attri	2010	Briefly discussed the strategic, political and economic aspects of Indo- CARs relations.	India and Central Asia have economic complementarily in terms of resources, manpower and market.
13	Sachdev	2010 and 2011	Examined the economic progress and trade development, in India and in	Due to growing energy requirements India needed a regional integration with

S. No.	Author	Year	Objectives	Conclusion and Suggestion
			Greater Central Asia (Central Asia including Afghanistan) after 1990.	Greater Central Asia.
14	Sarma	2010	Tried to redefine India's energy and trade relations with Central Asian Republics (CARs).	India should adopt a multi-dimensional and broad fronted policy, through which, it may be able to helps the region to fulfill all its development needs.
15	Kaur	2011	Examined the trends and prospects of Indo-Central Asia trade into three different phases during the period of 1993-2009.	Suggested to developing a sub regional agreement (much like FTA) which may include India, China and Central Asian republics.
17	Stobdan	2008	Investigated the possibilities to explore a new inland trade route between India and Kazakhstan via China.	Suggested to set up a trilateral (India, Kazakhstan, China) joint study group to study the feasibility of this route.
18	Stobdan	2009	Critically investigated the Indo-Kazakhstan relations and also pointed out the emerging potential.	India, as an emerging power, should take Kazakhstan's potential more seriously and both countries should share complementary objectives.
19	Bhatia	2009	Stressed on economic tie-up between India and Kazakhstan	Kazakhstan's rich natural resources and a big consumer market have significance for India.
20	Hussain	2009	Described the indo-Kazakhstan relations in the light of the visit of Kazakh President Nursultan Nazarbayev to India in January 2009.	There exists vast scope to expand and increase both the volume of trade as well as quantum of investment. It supported the Stobdan's view about exploring new routes

S. No.	Author	Year	Objectives	Conclusion and Suggestion
				between India and Kazakhstan.
21	Pahariya	2009	Argued that India should make efforts to do FTA with Kazakhstan and then with other Central Asian countries via Kazakhstan.	India should take the initiative to start negotiations for a FTA with Kazakhstan in order to facilitate future cooperation between India and Central Asia.
22	Bandyopadhyay	2011	Discussed about India-Kazakhstan Relations in the light of the Prime Minister Dr. Manmohan Singh's visit to Kazakhstan in April 2011.	Both countries should proceed to ensure that effective bilateral relations are becoming the foundation for the growth of regional interactions in the near future.
23	Roy	2011	Viewed the visit of Prime minister to Kazakhstan in the context of regional developments in and around Central Asia, India's growing energy needs, and Kazakhstan's increasing role in the region and its immense hydrocarbon reserves	To fully actualize the exiting potential the current momentum of bilateral cooperation needs to be sustained in future.
24	Khatibi	2008	Examined Kazakhstan's relative competitiveness for 1990- 2006 by using the Balassa's RCA index and compare it regarding world exports to the EU-27.	Kazakhstan has a declining competitiveness in energy and manufactured goods. Either the country may turn their attention to other areas of the economy or put their energy into the continuing process of liberalization.

CHAPTER 3

Data Base and Methodology

This chapter deals with different sources of data and methodology used in the study for analyzing India-Kazakhstan bilateral trade relations.

DATA BASE

The study mainly covers the period of 15 years i.e. 1995 to 2010. Keeping in mind the nature of study, secondary data has been taken from the following different sources:

- Data for India and Kazakhstan's trade performances have been collected from UN Comtrade database and Asian Development Banks for 1995-2010.
- Data for different indices like Revealed Symmetric Comparative Advantage (RSCA), Grubel–Lloyd (G-L) Index, and Trade Complementarity Index (TCI) have been collected from the UN Comtrade database at four points of years i.e. 1995, 2000, 2005 and 2010.
- Data for Terms of Trade calculations have been obtained from Export-Import Data Bank of Department of Commerce, Government of India for 1997-2010.

Moreover the study has also accessed the data for various issues from World Development Indicators of World Bank, World Trade Organization, Reserve Bank of India, Official websites of various ministries of Indian Government and Kazakhstan Government both.

METHODOLOGY

Various trade indices have been calculated to assess India and Kazakhstan's trade performance in world market and then in each other's market. The trade indices calculations are computed from 2-digit HS (Harmonized System) level of exports and imports.

1. Trade Intensity (TI):

Brown (1949) and Kojima (1962) defined the trade intensity as a simplest formula for observing trade flows and patterns. It describes the bilateral trade between two countries regarding the total value of world trade and its share to the world. Yamazawa (1971) applied the TI formula and further analyzed trade between country pairs. His work also assessed trade changes and factors affecting them (Castro, 2012).

Study has measured the intensity of trade between the two countries to identify trade potential. The trade intensity index is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade. It is defined as a ratio of the share of one country's trade with another country to the other country's share of the world trade. It is calculated as,

$$T_{ij} = (x_{ij}/X_{it}) / (x_w/X_{wt})$$

Where,

T_{ij} = Trade Intensity Index for country i and country j

x_{ij} - Country i's exports to country j

x_w - World exports to country j

X_{it} - Country i's total exports

X_{wt} - Total world exports

Trade intensity index, multiplied by 100, ranges from 0 to 100. Zero indicates no trade, and if it is more (or less) than 100, it implies that India (I) is trading more (or less) with Kazakhstan (K) than might be expected from India's share in total world trade.

In this study, Asian Development Bank's indicators are directly used to find out the trade intensity between India and Kazakhstan.

2. Trade Specialization:

The degree of trade specialization of India and Kazakhstan is calculated by using the Balassa's Revealed Comparative Advantage (RCA) (1965) at four points of time i.e. 1995, 2000, 2005 and 2010; for all manufactured goods.

Balassa (1965) proposed the revealed comparative advantage (RCA) index which is calculated at commodity level. A variation of his formula was further interpreted by Donges & Riedel (1977); Kunimoto (1977); Bowen (1983) and Vollrath (1991). It is also more critically reviewed by Lapadre (2001). RCA in present study is defined as the share of a commodity in the total exports of a given country, divided by the share of the same commodity in total world exports, i.e.

$$RCA_{ij} = (x_{ij}/X_{it}) / (x_{wj}/X_{wt})$$

Where,

RCA_{ij} - Revealed Comparative Advantage for country i's exports of commodity j

x_{ij} - Value of country i's exports of commodity j

x_{wj} - Value of world's exports of commodity j

X_{it} - Country i's total exports

X_{wt} - World's total exports

It takes a value between 0 and $+\infty$. A country is said to have a revealed comparative advantage if the value exceeds one. If other things remain the same, the higher the ratio of RCA above one, the stronger is that economy's comparative advantage in a particular commodity. Likewise, the lower the RCA below one, the weaker is that economy's comparative advantage in that commodity. When RCA equals one, the country's specialization in a commodity is identical with the world specialization in that commodity.

In present study, four RCAs have been calculated for the comparative advantage of Indian and Kazakhstan exports in the world market; International

Revealed Comparative Advantage (IRCA) for both India and Kazakhstan has been calculated by using above formula. Secondly, the study has also calculated bilateral comparative advantage between two countries (RCA). It is a modified form of RCA used by Sahoo et.al (2009). This index will reflect the competitiveness of both countries in each other's market in comparison to the rest of the world. The RCA of India and Kazakhstan in each other's market can be calculated as follows:

$$RCA_{ijk} = (x_{ijk}/X_{itk}) / (x_{wjk}/X_{wtk})$$

$$RCA_{kji} = (x_{kji}/X_{kti}) / (x_{wji}/X_{wti})$$

Where,

RCA_{ijk} - India's RCA in Kazakhstan

RCA_{kji} - Kazakhstan's RCA in India

x_{ijk} - India's exports of commodity j to Kazakhstan.

X_{itk} - Total exports of India to Kazakhstan

x_{wjk} - World's exports of commodity j to Kazakhstan

X_{wtk} - Total exports of world to Kazakhstan.

X_{kji} - Kazakhstan's exports of commodity j to India

X_{kti} - Total exports of Kazakhstan to India

x_{wji} - World's exports of commodity j to India

X_{wti} - Total exports of world to India.

RCA suffers from the problem of asymmetry as the 'pure' RCA is basically not comparable on both sides of unity. A country is said to be under-specialized in a given sector if the value of index ranges from zero to one; while the value of the index ranges from one to infinity, if country is specialized in that particular sector. Dalum et al. (1998) suggested a methodology to make the index symmetric and the new index is called 'revealed symmetric comparative advantage' (RSCA). Mathematically, it is;

$$RSCA = (RCA-1) / (RCA+1)$$

This measure varies between -1 and +1. A commodity is said to have comparative advantage in its exports if the corresponding RSCA value is positive and vice versa. In the present study, the RSCA is used to find India and Kazakhstan's comparative advantage in World Market and then each others' markets.

3. Intra-Industry Trade (IIT) :

Intra-industry trade (IIT) arises if a country, in same period of time, imports and exports similar types of goods or services. Similarity means goods or services taken from the same sector/industry. IIT allows a country to take advantage of larger markets. Most commonly used index to measure the IIT is Grubel- Lloyd (G-L) index. G-L Index computes the ratio of net exports in a commodity category to its total trade i.e.;

$$GL_j = 1 - \{| X_j - M_j | / (X_j + M_j)\}$$

Where,

GL_j- G-L Index for industry j.

X_j- exports of commodities from industry j.

M_j- imports of commodities from industry j.

The Grubel–Lloyd index varies between zero (perfect *inter*-industry trade) and one (perfect *intra*-industry trade). It ranges between 0 and 100 if multiplied by 100. Zero value of the G-L index means there are no exports or imports of a particular commodity group, i.e. no IIT in that particular commodity category. On the other hand, the G-L index value equals 100 if exports exactly equals to the imports, both being positive.

IIT is driven by economies of scale and commodity gains. By being engaged in IIT, a country can reduce the number of similar commodities it produces and benefit

from scale economies and specialization. A higher IIT value suggests that these sources of gains are being exploited. It also indicates that the adjustment cost would be lower when compared to inter-industry trade in the process of trade expansion (Sahoo, et.al. 2009).

Based on the Grubel-Lloyd (G-L) formula, G-L Index for bilateral trade is used to find out the intra-industry trade between India and Kazakhstan. It is a modified form used by Sahoo (2009). The formula is;

$$GL_{ik} = 1 - \{ | X_{jik} - M_{jik} | / (X_{jik} + M_{jik}) \}$$

Where,

GL_{ik} - G-L Index for Indo-Kazakhstan Bilateral Trade

X_{jik} - exports of commodities from industry j from India to Kazakhstan.

M_{jik} - imports of commodities from industry j to India from Kazakhstan.

4. Trade Complementarity (TCI):

Trade complementarity index (TCI) measures the compatibility of trade profiles. The first TCI was proposed by Kojima and perfected by Drysdale in 1967 (Castro, 2012). In simple words, TCI is defined as the sum of the absolute value of the difference between the import shares and the export shares of the countries under study, divided by two. In present study it is used to measure the competitiveness of the structures of India / Kazakhstan's exports with the structures of Kazakhstan/ India's imports. Following formula, given by UNESCAP, is used to measure India's trade complementarity with Kazakhstan:

$$TCI_{jk} = 100 - \sum (| M_{ik} - X_{ij} | / 2)$$

Where,

TCI_{jk} - Trade complementarity Index between Country j and k

M_{ik} -Share of good i in all imports of country k.

X_{ij} – share of good i in global exports of country j .

The value of index, converted to percentage form, ranges between 0 and 100. Zero means no overlap and 100 represent a perfect match between the imports and exports pattern.

Complementarity of trade between two countries means that the main exports of one country are identical with the major imports of its trading partner and the development of trade relations between both will help to maintain the existing production pattern. TCI measures the degree to which the export pattern of one country matches the import pattern of its trading partner. A high degree of complementarity indicates more favorable prospects for a successful trade arrangement. If trade complementarity index has a relatively small value, the development potential of bilateral trade will be limited.

TCI shows whether or not one country exports products another country imports. This index matches only the demand of partners and does not include others parameters (e.g. distance of partners) (Castro, 2012).

5. Terms of Trade (ToT):

The rate at which one country's goods exchange against those of another is referred to as the terms of trade. Terms of trade depends on the prices of commodities entering into foreign trade. Thus, it expresses the relation between export prices and import prices. It is said to be favorable to a country when the prices of its exports are high relatively to the prices of its imports. When a country's prices of imports are high relatively to its export prices, the terms of trade are unfavorable to that country. terms of trade (ToT) is used which is the ratio of a country's export price index to its import price index, multiplied by 100. The terms of trade measures the rate of exchange of one good or service for another when two countries trade with each other. To express

In the present study net barter this symbolically;

$$\text{ToT} = (P_x/P_m) * 100$$

Px stands for Export Price Index which is equal to $(P_{xc} \cdot Q_{xo}) / (P_{xo} \cdot Q_{xo})$. Also, Pm is Import Price Index which is equal to $(P_{mc} \cdot Q_{mo}) / (P_{mo} \cdot Q_{mo})$.

Where,

Pxc – Price of exports in current period

Pxo- Price of exports in base period

Qxc- Quantity of exports in current period

Qxo- Quantity of exports in base period

Pmc – Price of imports in current period

Pmo- Price of imports in base period

Qmc- Quantity of imports in current period

Qmo- Quantity of imports in base period

The concept of net barter terms of trade has come to be widely accepted as a useful device for measuring short-term changes in trading positions. Further, it serves as an important index expressing the purchasing power of exports in paying for imports.

In this study, trade data for ToT is taken at disaggregated level of 6 digits of HS classification. It is aggregated for HS classifications' 2 digit level before applying the above formula.

6. The Indicative Trade Potential (ITP):

The concept of indicative trade potential (ITP) based on trade flow analysis has been used broadly by the International Trade Centre in Geneva (division of the UN system and closely affiliated with UNCTAD and the WTO). ITP isolates total demand and total export capacity thereby providing a rough estimate of how much countries could 'theoretically' trade between them (Yusuf, 2006). It helps in identify the products for which there is the highest trade complementarity between the exports of a country and the imports of the target country.

ITP is defined as;

$$ITP_{ijk} = \min (X_{ik}, X_{jk}) - X_{ijk}$$

Where,

ITP_{ijk}- Indicative Trade Potential for Country i's exports to country j

X_{ik}= Country i's exports to world

X_{jk}= Country j's imports from world

X_{ijk}= Country i's exports to country j

A positive 'indicative trade potential' suggests that a trade opportunity exists. The trade potential indicator assumes that the importing country could in principle absorb perfectly all imports from the exporter. With such a strong underlying substitution assumption, the resulting figures are only indicative but can nevertheless be used in order to rank the products (Krakoff, 2003).

Unrealized Trade Potential would be the indicative trade potential less any existing exports to that market.

In present Study, ITP is used to find out India and Kazakhstan's export potential in each other's market by examining the trade flows between India and Kazakhstan for the year 2010. Examining the trade flow is essential in order to investigate whether the supply capacity of India matches the import demand of Kazakhstan and vice-versa. Here, export data is used as the alternative variable for the production of one country and import data can be observed as a substitute for demand in another country.

CHAPTER 4

Indo-Kazakhstan Trade: Growth and Performance

Trade relations between India and Kazakhstan are ancient and historical. Both the countries were an integral part of the famed maritime silk route contributing immensely to the development of art, culture, religion and commerce in the Indian Ocean region during the pre-modern era. In the modern age, the foundation of Kazakh-Indian relations was laid during the visit of President Nursultan Nazarbayev to India in February 1992 when several inter-governmental agreements were concluded (Bandyopadhyay, 2011). During that visit a five year 'Trade Protocol' envisaging trade with contracts, denomination, settlements and payments in freely convertible currencies was signed (MEA, 2012). Kazakhstan is of great importance to India due to its substantial natural reserves of oil, gas, uranium, coal etc. India, given the size of its population and sophistication of its industrial base, also offers Kazakhstan opportunities in developing intra-industry trade linkages and taking advantages from India's abundant highly-skilled professional work-force.

This chapter has two sections; section I will overview the trade performance of India and Kazakhstan with World and section II will give a brief introduction of the structure of India's trade relations with Kazakhstan. Various trade indices have been used in second section to assess the Indo-Kazakhstan bilateral trade relations in post Cold War era.

I

India and Kazakhstan's Trade with World:

According to International Trade Statistics (2011), India is currently the 9th largest trader of the world. In 2009, it was the 15th leading exporter and 8th leading importer in world merchandise trade. The country has a share of 1.8 percent in total world trade as of 2009. Before 1991, India adopted the policy of self-reliance to protect its economy. Foreign trade was subject to import tariffs, export taxes and quantitative restrictions. Due to absence of any appropriate trade policy, Indian exports were stagnant for the first 15 years after independence. However, imports in the same period, due to industrialization, concentrated largely on machinery, raw

materials and consumer goods. After the reforms of 1991, the value of country's international trade has increased sharply. Its total trade in goods and services has reached a share of 47.7 percent of GDP in 2009-10, up from 16 percent in 1990–91(RBI, 2010).

Table 4.1: India and Kazakhstan's Trade with World (US\$ million)

Year	India			Kazakhstan		
	Exports	Imports	Total Trade	Exports	Imports	Total Trade
1995	31698.57	36592.06	68290.63	5226.72	3805.12	9031.84
1996	33468.59	39112.81	72581.41	5896.83	4238.59	10135.42
1997	34793.75	41429.43	76223.18	6486.65	4298.61	10785.26
1998	33207.32	42424.95	75632.28	5206.92	4293.19	9500.11
1999	36919.98	50010.90	86930.88	5871.27	3639.17	9510.45
2000	42358.10	52940.25	95298.35	8652.48	4926.56	13579.04
2001	43878.49	50671.11	94549.59	8485.52	6280.20	14765.72
2002	50097.96	57453.47	107551.43	9642.68	6581.12	16223.81
2003	59345.38	72430.52	131775.91	12915.95	8402.00	21317.95
2004	75904.20	98981.13	174885.33	20079.04	12773.47	32852.52
2005	100352.64	140861.67	241214.30	27846.08	17333.16	45179.24
2006	121200.61	178212.44	299413.05	38244.42	23660.99	61905.42
2007	145898.05	218645.29	364543.35	47747.90	32686.61	80434.52
2008	181860.90	315712.11	497573.00	71171.96	37815.37	108987.33
2009	176765.03	266401.6	443166.59	43195.76	28408.68	71604.44
2010	220408.49	350029.4	570437.88	57244.06	24023.63	81267.69
Compound Growth Rate (%)	15.28	17.89	16.78	21.05	18.66	20.15

Source: UN Comtrade, 2011.

Table 4.1 depicts India and Kazakhstan's trade trends to World during 1995-2010. Table reveals that the total merchandise trade of India has been continuously increasing over the period from US\$ 68290.63 million in 1995 to US\$ 570437.88 million in 2010. Its exports to world have continuously increased (except 1998 and 2009) from US\$ 31698.57 million in 1995 to US\$ 220408.49 million in 2010 i.e. increased by 15.28 percent during the same period. Similar trends has occurred in case of country's global imports (except 2001 and 2009) which has increased from US\$ 36592.06 million in 1995 to US\$ 350029.4 in 2010 with a compound growth rate of 17.89 percent for same period. The value of Indian imports has been continuously rising due to periodic hike in crude oil prices (Ruddar Datt & Sundharam 2009). But

exports of country were not moved up in same ratio. On the whole, increase in total trade has found to be 16.78 percent during the study period.

On the other hand, Kazakhstan has a minuscule share (only 0.37 percent) in total world trade as of 2009. It has a rank of 33rd and 40th respectively in leading exporter and importer in world merchandise trade (International Trade Statistics, 2011). Its exports to world have been continuously increasing during the study period except 1998 and 2009. It has increased from US\$ 5226.72 million in 1995 to US\$ 57244.06 million in 2010 i.e. increased by 21.05 percent. While country's global imports has grown from US\$ 3805.12 million in 1995 to US\$ 24023.63 million in 2010 (except 2009) i.e. increased by 18.66 percent for same period. The total trade value (export plus import) in 1995 was US\$ 9031.84 million which reached to US\$ 81267.69 million in 2010. Kazakhstan's trade with world has a compound growth rate of 20.15 percent during 1995-2010. Kazakhstan's growth rate of export, import as well as trade with world was higher than India's growth rate of same with world, during the study period.

The structure of Indian exports has been changing continuously since reform period. The share of traditional exports i.e. agriculture and mineral wealth has declined and the share of manufactures has gone up. This may be due to Industrialization of economy and increasing domestic demand of food grains due to population explosion. On the other hand, Indian imports have been showing a steadily rising trends; which is the result of both internal as well as external factors. Mineral oil is the top most items in imports. It has a share of more than one third in total imports of the country. India has a scarcity of mineral products especially petroleum. The other products imported by India in bulk included pearls/stones, machinery and metals. On the other hand, since 1995, Kazakhstan is a net exporter of all these commodities. Thus, there is existence of huge complementarities in trade for both countries.

The composition of Kazakhstan's trade has remained almost unchanged during the study period (Appendix, Table 3 & 4). Since 1995, the republic has been a net exporter of fuel, energy and metals and a primary importer of machinery and

transport equipments. During 1995, its export of mineral fuels and oil were accounted for 24.99 percent of total global exports. After 2005, country's exports of same has increased on average by 11.4 percent each year and accounted for 71.68 percent of exported goods in 2010. Other major commodities for exports included iron & steel, inorganic chemicals, ores slag & ash, copper & articles thereof, pearls/ stones etc. Kazakhstan's imports are dominated by capital goods for oil sector development. In 2010, Kazakhstan imports are mostly composed of machinery and transport equipment and manufactured goods. Nuclear reactors and electrical machinery both accounted for 18 percent and 10.4 percent of imports, respectively. Mineral fuels, oil & waxes, articles of iron and steel, vehicles other than railway, pharmaceutical products etc are other major imports of Kazakhstan during the study period.

Table 4.2 and Table 4.3 examine the direction of India and Kazakhstan's trade in 2010. India has European Union (EU), China, United States of America (USA) and United Arab Emirates (UAE) as its major trading partners; while Russia and EU along with China has been the key trading partners for Kazakhstan. Table 4.2 reveals that in 2010, EU and UAE together comprised near to one third of India's total exports. However, the major importers of Indian goods are EU, China, UAE, Switzerland and Saudi Arab. Region-wise, India's major trade is with Asia (30.8 percent of total exports and 26.71 percent of total imports). The top 10 exporter countries together, accounted for approximately 67.2 percent of Indian exports while the share of top ten importers in India's total imports was 63.4 percent in 2010.

China is an important trading partner for both India and Kazakhstan. Before independence, 90 percent of Kazakhstan's trade was with Russia. After independence, direction of its trade has changed. The importance of Russia as a trading partner has continued to decline, especially as a destination for exports. On the other hand, importance of China, as an origin for imports, is rapidly growing. With its increasing role in the global economy, China also becomes the major destination (for exports) for energy producers of Central Asia i.e. Kazakhstan and Uzbekistan. Though role of Russia in Kazakhstan's external trade has been continuously declining yet it is one of the leading trade partners of the country. It is noteworthy that Kazakhstan's external trade almost depends on these top ten trade partner because

of their high stake. In 2010, the share of top 10 trading exporters in country's total exports is 82.6 per cent while the share of top ten importers in country's total imports was 93.5 percent (Table4.3).

Table 4.2: India's Major Trading Partners (2010) (Percent)

Top Ten Exporter Countries			Top Ten Importer Countries		
Rank	Country	Share*	Rank	Country	Share*
1	EU27	18.8	1	EU27	12.2
2	United Arab Emirates	13.4	2	China	11.9
3	U .S .A	10.7	3	United Arab Emirates	8.9
4	China	7.9	4	Switzerland	6.4
5	Hong Kong	4.3	5	Saudi Arab	5.9
6	Singapore	4.1	6	U S A	5.5
7	Japan	2.2	7	Australia	3.5
8	Indonesia	2.1	8	Iran	3.2
9	Saudi Arabia	2.0	9	Nigeria	3.0
10	South Africa	1.7	10	South Korea	2.9
	Total Share	67.2		Total Share	63.4

Note: *Percentage Share in total Exports/Imports of India.

Source: European Commission's DG Trade Statistics, 2012

Table 4.3: Kazakhstan's Major Trading Partners (2010) (Percent)

Top Ten Exporter Countries			Top Ten Importer Countries		
Rank	Country	Share*	Rank	Country	Share*
1	EU27	37.8	1	China	34.1
2	China	21.2	2	EU27	23.8
3	Russia	4.9	3	Russia	18.7
4	Turkey	4.7	4	Ukraine	4.8
5	Canada	4.6	5	Turkey	3
6	USA	3.7	6	USA	2.7
7	Switzerland	2.1	7	South Korea	2.2
8	Ukraine	1.5	8	Belarus	1.7
9	Japan	1.2	9	Uzbekistan	1.7
10	Uzbekistan	0.9	10	Japan	0.8
	Total Share	82.6		Total Share	93.5

Note: *Percentage Share in total Exports/Imports of Kazakhstan.

Source: European Commission's DG Trade Statistics, 2012

The economy of Kazakhstan is still sustained by its oil exports. In July 2010, the Russia-Belarus-Kazakhstan Customs Union was adopted which might be helpful to facilitate the diversification in economy (GTn, 2012). It is an active member of Economic Cooperation Organization (ECO), since 1992 and also a founder member of the Commonwealth of Independent States (CIS) (1991) and Shanghai Cooperation Organization (SCO) (2001). The Republic forms a cornerstone of Regional Trade Agreements (RTAs) like the Eurasian Economic Community (EAEC) in 1996 and the Common Economic Space (CES) in 2010. Besides these, Kazakhstan is a central and active member in a number of regional initiatives that aim for deeper trade integration. The country is waiting for its accession to the World Trade Organization (WTO) and hopes to join it by 2012. India has promised to facilitate Kazakhstan's accession to the WTO. It has also offered to provide training facilities to Kazakh officials to deal with WTO matters. On the other hand, Kazakhstan supports India's permanent membership to UN Security Council. Past examples indicate that India may benefit from Kazakhstan's global and regional presence (IDSA, 2009).

II

Indo-Kazakhstan Bilateral Trade

Among Central Asian Republics (CARs), Kazakhstan is the largest market for India's exports accounting for approximately more than 70 per cent of total trade between India and the CARs in 2009. As regards imports, after Uzbekistan and Turkmenistan, it is the third largest source for India from the same region (EXIM, 2005). But India may hold an insignificant place in Kazakhstan's external trade. Since 1995, both countries have a little share (nearly less than 1 percent) in each others' trade basket.

Table 4.4 depicts India's trade trends with Kazakhstan during 1995-2010. It depicts that India's exports to republic has been fluctuating during the study period with a tendency to increase from US\$ 8.55 million in 1995 to US\$ 146.21 million in 2010 i.e. increased by 21.60 percent. The average value of export has remained US\$ 66.29 million during the study period. The highest growth in exports has accounted in 1996-97 when it grew by 244.69 percent.

Table 4.4: India's Trade Trends with Kazakhstan (US\$ million)

Year	Exports	Imports	Trade	Trade Balance
1995	8.55	7.95	16.50	0.60
1996	4.39 (-48.65)	12.56 (57.99)	16.95 (2.73)	-8.17
1997	15.13 (244.69)	35.98 (186.48)	51.12 (201.56)	-20.85
1998	37.98 (150.97)	12.44 (-65.42)	50.42 (-1.36)	25.54
1999	27.36 (-27.98)	13.53 (8.74)	40.88 (-18.92)	13.83
2000	38.64 (41.25)	14.57 (7.72)	53.21 (30.16)	24.07
2001	54.45 (40.92)	11.15 (-23.46)	65.61 (23.29)	43.30
2002	45.60 (-16.25)	11.16 (0.09)	56.76 (-13.48)	34.44
2003	55.53 (21.77)	10.80 (-3.22)	66.33 (16.86)	44.72
2004	90.69 (63.33)	13.97 (29.25)	104.66 (57.78)	76.73
2005	90.26 (-0.48)	23.49 (68.20)	113.74 (8.69)	66.77
2006	86.62 (-4.04)	76.11 (224.02)	162.73 (43.06)	10.50
2007	93.7 (8.22)	70.50 (-7.37)	164.24 (0.93)	23.23
2008	131.59 (45.79)	142.99 (508.86)	274.58 (67.18)	-11.40
2009	133.93 (1.78)	146.66 (2.57)	280.59 (2.19)	-12.73
2010	146.21 (9.17)	157.50 (7.39)	303.71 (8.24)	-11.29
Average	66.29	47.58	113.88	18.71
Compound Growth Rate (%)	21.60	19.77	20.06	--

Note: Values in parentheses show percentage change.

Source: UN Comtrade, 2011.

However, India's imports from Kazakhstan have fluctuated with a propensity to increase. It reached to a level of US\$ 157.50 million in 2010 from US\$ 7.95 million in 1995, while its growth rate has remained lower than that of India's exports to Kazakhstan i.e. 19.77 percent. On an average, in last fifteen years India has imported commodities of US\$ 47.58 million from Kazakhstan. Table also reveals that the total trade between India and Kazakhstan has grown by 20.06 percent, from US\$ 16.50 million in 1995 to US\$ 303.71 million in 2010. The average trade during this period was of US\$ 113.88 million. During 2007-2008, imports grew more than 500 times. It may be due to the shot up in mineral and oil prices in international market. The Balance of trade during initial periods of study i.e. in 1996 and 1997 was in favor of Kazakhstan. After 1997 and prior to the financial crisis in 2008 India has a positive trade balance with republic. However, today India's trade balance with Kazakhstan is negative, over the last three years there is not much change in that volume (-11.40 in 2008 to -11.29 in 2010). On an average, for whole study period the balance of trade has remained in favor of India.

The percentage share of India in Kazakhstan's global exports, imports and total trade is negligible during the study period. But all shares have a tendency to increase. Table 4.5 reveals that in 1995 India has a share of only 0.18 percent in Kazakh's total trade which increased to a highest level of 0.53 percent in 1998. Since 1999 it continuously declined (except 2001) till 2007 (0.20 percent). However after 2007, India's share in republic's total trade has improved a little and reached to 0.37 percent in 2010. Share of country's exports to Kazakhstan has increased from 0.15 percent of total exports of later in 1995 to 0.28 percent in 2010; while, India's share in its total imports has been increasing from 0.22 percent in 1995 to 0.61 percent in 2010. However, the average shares of Indian exports, imports and total trade in Kazakhstan's global exports, imports and total trade (0.20 per cent, 0.54 per cent and 0.33 per cent respectively) are still less than one Table also depicts that the percentage share of Kazakhstan in India's global exports, imports and total trade is worse than the later's share in former's global exports, imports and total trade, during the study period. In 1995 Kazakhstan has a share of only 0.02 percent in India's total trade which increased slightly and reached to 0.07 percent firstly in 1997 and then

again in 2001. The share of Kazakhstan in India's global trade fluctuated between 0.05 and 0.06 percent during 2002- 2010. Share of Kazakh's exports increased from 0.03 percent of total exports of India in 1995 to 0.07 percent in 2010; while, its share in Indian imports increased slightly from only 0.02 percent in 1995 to only 0.06 percent in 2010. Even then Kazakhstan is still a very weak trade partner of India as its annual average share of exports, imports and total trade in India's global exports, imports and total trade is still negligible i.e. 0.08 per cent, 0.03 per cent and 0.05 per cent. On the other hand, India has somewhat better performance in Kazakhstan's trade data.

Table 4.5: India-Kazakhstan Bilateral Trade Share (Percent)

Year	India in Kazakhstan			Kazakhstan in India		
	Exports	Imports	Trade	Exports	Imports	Trade
1995	0.15	0.22	0.18	0.03	0.02	0.02
1996	0.21	0.10	0.17	0.01	0.03	0.02
1997	0.55	0.35	0.47	0.04	0.09	0.07
1998	0.24	0.88	0.53	0.11	0.03	0.07
1999	0.23	0.75	0.43	0.07	0.03	0.05
2000	0.17	0.78	0.39	0.09	0.03	0.06
2001	0.13	0.87	0.44	0.12	0.02	0.07
2002	0.12	0.69	0.35	0.09	0.02	0.05
2003	0.08	0.66	0.31	0.09	0.01	0.05
2004	0.07	0.71	0.32	0.12	0.01	0.06
2005	0.08	0.52	0.25	0.09	0.02	0.05
2006	0.20	0.37	0.26	0.07	0.04	0.05
2007	0.15	0.29	0.20	0.06	0.03	0.05
2008	0.20	0.35	0.25	0.07	0.05	0.06
2009	0.34	0.47	0.39	0.08	0.06	0.06
2010	0.28	0.61	0.37	0.07	0.04	0.05
Average Share	0.20	0.54	0.33	0.08	0.03	0.05

Source: UN Comtrade, 2011.

Trade Intensity Index:

The changing trends in Indo-Kazakhstan bilateral trade relations can also be depicted by measuring the trade intensity of India and Kazakhstan in each other's market. Trade intensity index highlights the importance of secular changes in bilateral trade flows. An index showing value above one indicates that the countries have

greater bilateral trade than would be expected on the basis of the partner's share in world trade; vice-versa is also true.

Table 4.6 highlights changing trends in the trade intensity of India and Kazakhstan in each other's market, during the study period. The value of India's trade intensity index has been remaining below one during the study period, and has much lower for last two years i.e. 2009 and 2010. The intensity has increased significantly for India's exports to Kazakhstan during the period 1995-1998 from (0.25 percent to 0.73 percent). But after that it continuously declined. During 2009-2010, it reached almost near to zero (0.004). The average trade intensity index is just below the half i.e. 0.33. This small value of export concentration toward Kazakhstan indicates that Indian exports to Kazakhstan have been much below India's potential.

Table 4.6: Indo-Kazakhstan Bilateral Trade Intensity Index

Year	India in Kazakhstan	Kazakhstan in India
1995	0.25	0.24
1996	0.23	0.26
1997	0.58	0.67
1998	0.73	0.67
1999	0.58	0.82
2000	0.53	0.71
2001	0.41	0.49
2002	0.38	0.48
2003	0.38	0.45
2004	0.31	0.32
2005	0.24	0.28
2006	0.24	0.23
2007	0.19	0.18
2008	0.20	0.18
2009	0.004	0.24
2010	0.004	0.22
Average	0.33	0.40

Source: Asian Development Bank, 2011.

On the other hand, the value of trade intensity index for Kazakhstan's exports to India has fluctuated more during 1995-2010. In 1995, there was 0.24 percent

intensity which increased to 0.71 percent in 2000. After that it declined continuously and reached to a level of 0.18 percent in 2008. During last two years there are some improvements in Kazakhstan's export intensity toward India (0.24 in 2009 and 0.22 in 2010); but it always remains below one. The average trade intensity index is 0.40, below the half. These displeased and declining values of trade intensity index for both countries shows low trade concentration among themselves.

It has been supposed that the slight trade trends between India and Kazakhstan might be due to India's late entry in Central Asia. In initial years of independence of the CARs, India's closer ties with Russia stopped it from developing closer relations with the region. More recently, India is moving closer to CARs with its inclusion in the Shanghai Cooperation Organization (SCO) in 2005 as an 'observer' (Pahariya, 2009). Thus India needs to be more active (in Central Asia) to improve connectivity and liberalize trade and investment regimes for greater exchange of goods, services and capital (Agarwal, 2005). Overall, during the recent years there registered a faster growth than earlier in Indo-Kazakhstan trade trends.

Composition of Trade:

Table 4.7 depicts the percentage share of India's top ten exports to Kazakhstan during the period 1995, 2000, 2005 and 2010. Since 1995, there has been observing much more changes in composition of India's exports to Kazakhstan. Five new commodities arrange their place in export basket, between 1995 and 2010. Also, the percentage share of top ten commodities in India's total exports to Kazakhstan is hovered between 92.93 per cent in 2010 and 100 per cent in 1995. However, the performance of top ten commodities remains quite fluctuating. Coffee, tea, mate & spices and pharmaceutical products have been the peak commodities in the Indian export basket to Kazakhstan, over the period. Coffees, tea, mate & spices' has a share of more than 77 percent in total exports to Kazakhstan in 1995. The other major commodities exported by India to Kazakhstan have included Pharmaceutical products (12.7 percent); tobacco & manufacture tobacco substitutes (7.4 percent) and nuclear reactors, boilers, machinery & mechanical appliances, computers (1.0 percent).

In 2000, there are some changes in India's export composition toward Kazakhstan. The share of coffee, tea, mate & spices has been declined from 77.2 percent in 1995 to 41.7 percent in that year. But it still ranked first in top ten commodity list. Other commodities were articles of leather saddler & harness, travel goods, hand bags, articles of gut (12.4 percent); pharmaceutical products (10.8 percent); articles of iron & steel (7.7 percent) and nuclear reactors, boilers, machinery & mechanical appliances, computers (5.5 percent). Three new commodities articles of iron & steel; articles of apparel & clothing accessories-not knitted or crocheted and iron & steel joined the export composition. In 2005, the major share was constituted by coffee, tea, mate & spices (27.9 percent) followed by pharmaceutical products (22.6); nuclear reactors, boilers, machinery & mechanical appliances, computers (12.9 percent); articles of leather, saddler & harness, travel goods, hand bags, articles of gut (7.7 percent) and articles of apparel & clothing accessories-knitted or crocheted fabrics (6.5 percent). Two new commodities electrical machinery & equipments and residues from food industries' animal feed came in composition.

Pharmaceutical products became the uppermost commodity in Indian export basket to Kazakhstan during 2010. It has been a continuously increasing share from 12.7 percent in 1995 to 32.04 percent in 2010. However, the share of coffee, tea, mate & spices has been declined to 29.3 percent in 2010. Other major exports has included articles of apparel & clothing accessories-knitted or crocheted fabrics (16.3 percent); articles of apparel & clothing accessories-not knitted or crocheted (4.9 percent); nuclear reactors, boilers, machinery & mechanical appliances, computers (3.5 percent); articles of leather, saddler & harness, travel goods, hand bags, articles of gut (1.9 percent); ceramic products (1.5 percent) etc. Thus table shows that coffee, tea, mate & spices; pharmaceutical products; textile products and machinery & equipments constituted major share in export commodities of India to Kazakhstan.

Table 4.8 presents the percentage share of top ten Indian imports from Kazakhstan market, during 1995, 2000, 2005 and 2010. Metals like zinc, Iron, copper, salt & sulphur, lead etc have been in top ten imports by India, since 1995. However, their ranks and shares has to be changed, e.g. in 1995 iron & steel was the top most import commodity with a share of 37.6 percent of total imports from Kazakhstan. After

that there were salt, zinc, lead and aluminum in list (all in descending order share wise). In 2000, the picture has changed. Pearls, stones, prec. metals, imitation jewelry, coins constituted major share (66.4 percent) followed by iron & steel (22.8 percent); salt, sulphur, earth & stone, lime & cement (5.7 percent) and zinc & articles (4.2 percent). In 2005, iron & steel experienced a rise-up with 58.3 percent share in total imports. Other major imports in that year included salt, sulphur, earth & stone, lime & cement (26.7 percent); pearls, stones, prec. metals, imitation jewelry, coins (7.8 percent); raw hides & skins & leather (5.2 percent) and nuclear reactors, boilers, machinery & mechanical appliances, computers (0.8 percent). In 2010, India's exports to Kazakhstan changed a spot with zinc & articles (31.9 percent) became the primary import. Pearls, stones, prec. metals, imitation jewelry, coins and salt, sulphur, earth & stone, lime & cement occupied 19.9 percent of total Indian imports from republic; while Iron& steel has been occupying fourth position in list (19.2 percent). Other chief imports in 2010, has included inorganic chem., org/inorg compounds of precious metals, isotopes (4.6 percent); lead & articles thereof (1.4 percent); lac, gums, resins, etc (1.2 percent); raw hides & skins & leather (0.99 percent); base metals nesoi, cermets, articles etc (0.3 percent); miscellaneous chemical products (0.2 percent).

Thus, it can be said that the Indian imports from Kazakhstan are highly concentrated around few commodities such as zinc & articles; Pearls, stones, prec. metals, imitation jewelry, coins; salt, sulphur, earth & stone, lime & cement; Iron& steel; lead & articles thereof etc. Overall, there are a handful sector specifically mineral products, stone/glass, chemicals & allied industries and metals, those dominated in bilateral trade between India and Kazakhstan during study period. Mineral products were ahead in both exports and imports. As Kazakhstan's traditional sectors both minerals and metals earn more than 88 percent of Kazakhstan's total earnings from trade with India. It indicates country's specialization in these two sectors. India's traditional sector of textile also has a good share in country's export basket to Kazakhstan whereas it also sold vegetable products to India in 2010.

Table 4.7: India's Top Ten Export Commodities to Kazakhstan

1995	2000	2005	2010
Coffee, tea, mate & spices (77.2)	Coffee, tea, mate & spices(41.7)	Coffee, tea, mate & spices (27.9)	Pharmaceutical products (32.04)
Pharmaceutical products (12.7)	Articles of leather, saddler & harness, travel goods, handbags etc.(12.4)	Pharmaceutical products (22.6)	Coffee, tea, mate & spices (29.3)
Tobacco & manuf. tobacco substitutes (7.4)	Pharmaceutical products (10.8)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (12.9)	Articles of apparel & clothing accessories-knitted or crocheted fabrics (16.3)
Nuclear reactors, boilers, machinery & mechanical appliances, computers (1.0)	Articles of iron or steel (7.7)	Articles of leather, saddler & harness, travel goods, handbags, articles of gut (7.7)	Articles of apparel & clothing accessories-not knitted or crocheted (4.9)
Oils & resinoids, perfumery, cosmetic or toilet preparations (0.8)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (5.5)	Articles of apparel & clothing accessories-knitted or crocheted (6.5)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (3.5)
Miscellaneous manufactured articles (0.3)	Articles of apparel & clothing accessories-knitted or crocheted fabrics (5.2)	Iron & steel (4.1)	Articles of leather, saddler & harness, travel goods, hand bags, articles of gut (1.9)
Preps of vegs, fruits, nuts, etc. (0.2)	Articles of apparel & clothing accessories- not knitted or crocheted fabrics (3.0)	Electrical machinery & equip. & parts, telecommunications equip., sound recorders etc. (2.8)	Ceramic products (1.5)
Optical, photographic, cine. measuring, checking, precision, medical /surgical instruments (0.2)	Iron or steel (1.7)	Articles of apparel & clothing accessories-not knitted or crocheted (2.4)	Rubbers & articles thereof (1.1)
Articles of apparel & clothing accessories-knitted or crocheted fabrics (0.2)	Optical, photographic, cine. measuring, checking, precision, medical or surgical instruments & accessories (1.6)	Articles of iron or steel (2.3)	Electrical machinery & equip. & parts, telecommunications equip., sound recorders (1.1)
Plastics & articles thereof (0.07)	Plastics & articles thereof (1.5)	Residues from food industries, animal feed (1.2)	Oils & resinoids, perfumery, cosmetic or toilet preparations (0.9)

Note: Figures in parentheses show percentage share of India's exports to Kazakhstan.

Source: UN Comtrade, 2011.

Table 4.8: India's Top Ten Import Commodities from Kazakhstan

1995	2000	2005	2010
Iron & steel (37.6)	Pearls, stones, prec. Metals, imitation jewelry, Coins (66.4)	Iron & steel (58.3)	Zinc & articles thereof (31.9)
Salt, sulphur, earth & stone, lime & cement (30.0)	Iron & steel (22.8)	Salt, sulphur, earth & stone, lime & cement (26.7)	Pearls, stones, prec. metals, imitation jewelry, coins (19.9)
Zinc & articles thereof (10.7)	Salt, sulphur, earth & stone, lime & cement (5.7)	Pearls, stones, prec. Metals, imitation jewelry, coins (7.8)	Salt, sulphur, earth & stone, lime & cement (19.9)
Lead & articles thereof (7.1)	Zinc & articles thereof (4.2)	Raw hides & skins & leather (5.2)	Iron & steel (19.2)
Aluminum & articles thereof (4.3)	Articles of iron or steel (0.3)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (0.8)	Inorganic chem., org/inorg compounds of precious metals, isotopes (4.6)
Wool & fine or coarse animal hair, inc. Yarns & woven fabrics thereof (3.0)	Raw hides & skins & leather (0.2)	Aluminum & articles thereof (0.5)	Lead & articles thereof (1.4)
Plastics & articles thereof (2.9)	Silk, inc. Yarns & woven fabrics thereof (0.2)	Lead & articles thereof (0.4)	Lac, gums, resins, etc (1.2)
Base metals nesoi, cermets, articles etc. (1.03)	Copper & articles thereof (0.03)	Base metals nesoi, cermets, articles etc (0.2)	Raw hides & skins & leather (0.99)
Raw hides & skins & leather (0.7)	Tools, spoons & forks of base metal (0.03)	Copper & articles thereof (0.1)	Base metals nesoi, cermets, articles etc (0.3)
	Knitted or crocheted fabrics (0.02)	Electrical machinery & equip. & parts, telecommunications equip., sound recorders, television recorders (0.02)	Miscellaneous chemical products (0.2)

Note: Figures in parentheses show percentage share of India's imports from Kazakhstan.

Source: UN Comtrade, 2011.

However, over the last five years (2005-09), the composition of bilateral trade (exports as well as imports) has remained more or less unchanged. There is hardly any sign of product diversification. As George et. al. (2010) observed, 'Trade deepening through exploring prospects in other commodities and reaping full potential of bilateral trade is yet to be materialized'.

India's export of services to Kazakhstan was remaining negligible during the study period. In 2009, other than personal travel, financial services accounted for 3.94 percent of India's total export of that category and architectural, engineering and other technical consultancy accounted for 1.95 percent (International Trade Statistics, 2011).

Trade Specialization:

The degree of trade specialization of India and Kazakhstan in each other's market has been evaluated through Revealed Symmetric Comparative Advantage (RSCA). Trade specialization analysis enables to find out the goods where India's comparative advantage in exports truly lies. In case of items where Kazakhstan enjoys a comparative advantage, it would be beneficial for India to import them. A direct outcome of this is the efficient utilization of the existing resources of both countries.

Before evaluating the degree of trade specialization of India and Kazakhstan in each other's market, the sector-wise specialization of both countries in International trade has been analyzing with the help of RSCA. There are total 15 sectors of manufacture commodities, according to HS classification. An overall examination reveals that during 2010, India has comparative advantage in 9 out of total 15 sectors. It indicates the country's strong position in international trade. In 2010, the country has a highest competitiveness in sector stone/glass followed by sector textile, according to RSCA. On the other hand, sector 'mineral products' has a highest share (20.88 percent) in India's global exports, in 2010. Mineral products are followed by sectors stone/ glass (15.49 percent), textile (12.31 percent) and metals (9.95 percent), respectively. (Appendix, Table 5)

India is a dominant producer and exporter of particular resources and products related to primary sector. However, country's improving presence in the chemical industry strengthens its global competitiveness in sector chemicals & allied industries. The country has a potential to develop as a leading player in the large market of generic pharmaceuticals. Thus, India need to consolidate its presence in this sector further and also make some headway in highly lucrative proprietary drugs business that is dominated by MNEs with product innovations (Kumar, 2011).

On the contrary Kazakhstan has a comparative advantage in primarily two sectors namely mineral products and metals. Thus, it reveals that Kazakhstan needs to look up its industrial and manufacture sectors to improve its position in international market. It has been found out that India can increase its gross trade with Kazakhstan by improving export of products from sectors textile and chemical products.

Revealed Symmetric Comparative Advantage (RSCA)

Table 4.9 presents a summary of the Revealed Symmetric Comparative Advantage (RSCA) of the Indian and Kazakhstan Commodities in each other's market (This summary has been driving from calculations done in Appendix, Table 6 & 7). The pattern of India's RSCA in Kazakhstan's market shows that there is a move up in the number of commodities having a positive value or advantages.

Table 4.9: Summary of Revealed Symmetric Comparative Advantage for India-Kazakhstan Bilateral Trade

Year	India in Kazakhstan				Kazakhstan in India			
	1995	2000	2005	2010	1995	2000	2005	2010
No. of Commodities	11	36	55	58	9	4	5	9
Percentage Share (total exports)	100	97.8	98.71	99.98	97.23	99.09	90.81	99.57

Source: Author's calculations based on UN Comtrade, 2011.

Table depicts that the number of commodities having $RCA > 1$ or $RSCA > 0$ is excellent during the period 1995-2010. Since Indian exports to Kazakhstan have been increasing over the period but the share of Kazakhstan in India's total exports has almost remained constant. An increase in the number of commodities being exported

to Kazakhstan is an indication of the fact that India is taking interest to exploit the unexploited sources of Central Asia. The same trend has not found for Kazakhstan. The number of commodities having RCA greater than one remains almost constant over the period but their share has been increasing slightly.

India's exports to Kazakhstan: Table 4.10 discloses India's top ten commodities with highest revealed symmetric comparative advantage in Kazakhstan market, for 1995, 2000, 2005 and 2010.

Table 4.10: India's Top Ten Commodities with Highest Revealed Symmetric Comparative Advantages in Kazakhstan

HS Code	Commodity	1995	2000	2005	2010
61	Articles of apparel & clothing accessories- knitted or crocheted	0.9548	0.9996	0.9996	0.9997
09	Coffee, tea, mate & spices	0.9998	0.9998	0.9998	0.9997
42	Articles of leather, saddler & harness etc.	–	0.9999	0.9998	0.9990
62	Articles Of apparel & clothing accessories-not knitted or crocheted	0.7746	0.9988	0.9979	0.9985
30	Pharmaceutical products	0.9989	0.9967	0.9979	0.9976
63	Made-up textile articles nesoi, needlecraft sets, worn clothing, rags	–	0.9907	0.9945	0.9953
13	Lac, gum, resin etc.	–	–	–	0.9934
29	Organic chemicals	–	0.9903	–	0.9918
69	Ceramic products	–	–	–	0.9882
50	Silk, Inc. yarns & woven fabrics thereof	–	–	0.9989	0.9863
97	Works of art collectors' pieces, antiques	–	–	0.9997	–
58	Special woven fabrics, tufted textiles, laces	–	–	0.9952	–
24	Tobacco & manufactured tobacco substitutes	0.9972	–	0.9926	–
59	Impregnated, coated, covered or laminated textile products, textile products for industrial use	–	0.9891	–	–
08	Ed. fruits & nuts, peel of citrus/ melons	–	0.9890	–	–
33	Oils & resinoids, perfumery, cosmetic or toilet preparations	0.9885	0.9881	–	–
96	Miscellaneous manufactured articles	0.9960	–	–	–
20	Preps of vegetable fats, oils & waxes	0.9634	–	–	–
90	Optical, photographic, cinematographic, medical or surgical instruments etc	0.8096	–	–	–
39	Plastic & articles thereof	0.7633	–	–	–

Note: _ (Hyphen) indicate that the particular item is not included in top ten lists in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

Table reveals that India has an advantage to export textile products to Kazakhstan market, since 1995. Also, Indian coffee/tea and pharmaceutical products have a strong hold in Kazakhstan during the study period. In 1995, Indian coffee, tea, mate & spices (0.9998); pharmaceutical products (0.9989) and tobacco & manufactured tobacco substitutes (0.9972) has a near to perfect advantage in Kazakhstan market. However, during 2000-2005 articles of leather & saddler has highest advantage; whereas it has tendency to decline from 0.9999 in 2000 to 0.9990 in 2010. During 2010, articles of apparel & clothing accessories- both knitted & not knitted (with RSCA values 0.9997 and 0.9985 respectively) have been enjoying a highest advantage. Indian coffee, tea (0.9997) and pharmaceutical products (0.9976) also have maximum return in Kazakhstan market in 2010. Table reveals that during 2010, the advantage range is found incredibly high i.e. 0.99. In other words, it is near to perfection.

There have been some slight changes in India's revealed comparative advantage graph in Kazakhstan market, in last decade. However composition of products has changed relatively. New products have introduced and simultaneously old ones have lost their position in top ten. It has been found that the composition and RSCA both remain almost unchangeable. It indicates that since 2000, Indian products have a strong hold in Kazakhstan market. However, in India's top ten disadvantage areas no commodity of previous year can be obtained a place in list in succeeding year.

Table 4.11 reveals India's top ten commodities with highest revealed symmetric comparative disadvantage in Kazakhstan market, for 2000, 2005 and 2010. As there has been found no commodity with disadvantage for 1995; thus it is not mentioned in table. In 2000 there were three products namely aluminum & articles thereof; umbrellas, sun umbrellas, walking sticks, & parts and tin & articles, wherein India has a loss to exports to Kazakhstan. It may be due to India's limited or negligible trade with Kazakhstan. In 2005 there has been found six commodities namely beverages, spirits & vinegar (-0.8825); toys, games & sports equip, parts etc. (-0.8276); paper & paperboards, articles of paper etc. (-0.6731); railway or tramway

locomotives, etc. (-0.6259); headgear & other parts (-0.3507) and woods & articles of wood (-0.2883), with India's revealed symmetric disadvantages in Kazakhstan.

Table 4.11: India's Top Ten Commodities with Highest Revealed Symmetric Comparative Disadvantages in Kazakhstan

HS Code	Commodity	2000	2005	2010
23	Residues from food industries, animal feed	–	–	-0.9909
04	Dairy, eggs, honey & ed. Products	–	–	-0.9484
75	Nickel & articles thereof	–	–	-0.8868
49	Printed books, newspapers, pictures, manuscripts, typescripts & plans	–	–	-0.8065
35	Albuminoidal sub, starches, glues, enzymes	–	–	-0.7977
70	Glass & glassware	–	–	-0.7577
92	Musical Instruments, parts & accessories	–	–	-0.6035
16	Ed. prep of meat, fish crustaceans etc.	–	–	-0.5108
15	Animal or vegetable fats, oils & waxes	–	–	-0.4730
72	Iron & steel	–	–	-0.4309
22	Beverages, spirits & vinegar	–	-0.8825	–
95	Toys, games & sports equip, parts etc.	–	-0.8276	–
48	Paper & paperboards, articles of paper etc.	–	-0.6731	–
86	Railway or tramway locomotives, rolling stock, track fixtures & fittings, signals	–	-0.6259	–
65	Headgear & other parts	–	-0.3507	–
44	Woods & articles of wood, wood Charcoal	–	-0.2883	–
76	Aluminum & articles thereof	-0.0792	–	–
68	Umbrellas, sun umbrellas, walking sticks, whips, riding-crops & parts	-0.5360	–	–
80	Tin & articles there of	-0.7379	–	–

Note: _ (Hyphen) indicate that the particular item is not included in top ten lists in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

During 2010, no commodity of previous year has been put a place in top ten disadvantages list. Table reveals that in 2010, India should not deal with Kazakhstan in residues from food industries, animal feed (-0.9909); dairy, egg, honey & edible products (-0.9484); nickel & articles thereof (-0.8868); printed books, newspapers, pictures (-0.8065) etc. Sector wise, these are the traditional sectors (foodstuffs and metals) of Kazakhstan, thus India has no advantage to export these products to Kazakhstan.

The RSCA analysis of India's top ten export commodities to Kazakhstan shows that coffee, tea, mate & spices and pharmaceutical products is the top most commodity group in the Indian export basket to Kazakhstan, over the period (Appendix- A, Table 3). With a perfect RSCA (+1) coffee, tea, mate & spices has its share more than 77 percent of total exports to Kazakhstan in 1995. The second most important export commodity group is pharmaceutical products followed by residues from food industries, animal feed; miscellaneous manufactured articles etc. India has a slightly constant and near to perfect RSCA (0.99 almost) for pharmaceutical products in the Kazakhstani markets during 1995 to 2010. In 2010, it has become the top most commodities in Indian export basket to Kazakhstan. On the other hand, coffee, tea mate & spices has a perfect RSCA since 1995 and also it is among the top exports to Kazakhstan, however its share in total exports to Kazakhstan has declined from 77.2 percent in 1995 to 29.3 percent in 2010.

Kazakhstan's exports to India: Table 4.12 and 4.13 analyses the competitiveness of Kazakhstan in Indian market, during the study period. Large positive values for zinc & articles; lead & articles; base metal nesoi, cermets and iron & steel has been indicating that metal, the traditional sector of Kazakhstan in world market has also gained advantage in India, during the study period. However, country has a disadvantage if it exports copper & articles; nickel & articles and aluminum & articles in Indian market.

Table 4.12 discloses Kazakhstan's top ten commodities with highest revealed symmetric comparative advantage (RSCA) in Indian market, for 1995, 2000, 2005 and 2010. RSCA measure for Kazakhstan's exports to India indicates that the republic has an advantage to export metal products, since 1995. In 1995, Kazakhstani zinc & articles (0.9670); tobacco & manuf. tobacco substitutes (0.9242) and lead & articles (0.9802) have greatest advantage in Indian market. During 2000, there were only four commodity having advantages in Indian market. It has included zinc & articles thereof (0.9172); iron & steel (0.8469); tobacco & manuf. tobacco substitutes (0.7441) and pearls, stones, precious metals etc. (0.5594). In 2005 commodity composition changed again. Tobacco (0.9590) and raw hides/skin (0.9202) dominated in that year. However, during 2010 lac, gum, resin (0.9432) has

joined the highest return list; while the RSCA value for lead & articles has declined to 0.7920. The top advantages products of Kazakhstan in Indian market also have a place in its top ten exports to India. Over the period, almost all metals except zinc have a turned down in advantages. The product namely zinc & articles has gained an advantage from 0.9670 in 1995 to 0.9951 in 2010, resulted in an impressive increase in its share of total exports (from 10.7 percent in 1995 to 31.9 percent in 2010) (Appendix-A, Table4). However, the highest decline has found in pearls, stones, prec. metals (from 0.56 in 1995 to 0.008 in 2010).

Table 4.12: Kazakhstan's Top Ten Commodities with highest Revealed Symmetric Comparative Advantages in India

HS Code	Commodity	1995	2000	2005	2010
79	Zinc & articles thereof	0.9670	0.9172		0.9951
25	Tobacco & manuf. Tobacco substitutes	0.9242	0.7441	0.9590	0.9494
13	Lac, gum, resins etc.	–	–	–	0.9432
78	Lead & articles thereof	0.9802	–	0.4740	0.7920
41	Raw hides & skins & leather	0.3203	–	0.9202	0.7563
72	Iron & steel	0.7886	0.8469	0.8787	0.7257
81	Base metals nesoi, cermets, articles etc.	0.7496		0.4067	0.7030
28	Inorganic chem. org/inorg compounds of precious metals, isotopes	–	–	–	0.6305
71	Pearls, stones, precious metals, imitation Jewellery, coins	–	0.5594	–	0.0086
76	Aluminum & articles thereof	0.7163	–	–	–
51	Wool & fine or coarse animal hair, inc. yarns & woven fabrics thereof	0.7145	–	–	–
39	Plastic & articles thereof	0.0560	–	–	–

Note: Blank cells indicate that the particular item is not included in top ten lists in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

Table 4.13 reveals Kazakhstan's top ten commodities with highest revealed symmetric comparative disadvantages in India for 2000, 2005 and 2010. There has been found no commodity with disadvantage for 1995; thus it is not mentioned in table. These are the commodities wherein Kazakhstan has no benefit/ advantage to export to India. Table reveals that structure of Kazakhstan's top ten disadvantages has completely changed during 2000-2010. Copper & articles (-0.8546) and tools/spoons (-0.8101) have the most disadvantage commodity in 2000. However in

2005, nuclear reactors, boilers, machinery & mechanical appliances, computers (-0.8470) and electrical machinery & equip. & parts, telecommunications equip., sound recorders, television recorders (-0.9956) have top disadvantages commodities. These two commodities are included in India's top ten exports to Kazakhstan in same year..

Table 4.13: Kazakhstan's Top Ten Commodities with Highest Revealed Symmetric Comparative Disadvantages in India

HS Code	Commodity	2000	2005	2010
39	Plastic & articles thereof	–	–	-0.9982
96	Miscellaneous manufactured articles	–	–	-0.9929
84	Nuclear reactors, boilers, machinery & mechanical appliances, computers	–	-0.8470	-0.9890
44	Woods & articles of wood, wood charcoal	–	–	-0.9890
73	Articles of iron & steel	–	-0.2184	-0.9759
75	Nickel & articles thereof	–	–	-0.9707
76	Aluminum & articles thereof	–	-0.0631	-0.9375
74	Copper & articles thereof	-0.8546	-0.6060	-0.6478
38	Miscellaneous chemical products	–	–	-0.6341
22	Beverages, spirits & vinegar	–	–	-0.5071
71	Pearls, stones, precious metals, imitation Jewellery, coins	–	-0.3595	–
85	Electrical machinery & equip. & parts, telecommunications equip., sound recorders, television recorders	–	-0.9956	–
82	Tools, spoons & forks of base metal	-0.8101	–	–
60	Knitted or crocheted fabrics	-0.6531	–	–
50	Silk, inc. yarn & woven fabrics thereof	-0.2077	–	–
41	Raw hides & skins & leathers	-0.1003	–	–

Note: _ (Hyphen) indicate that the particular item is not included in top ten lists in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

The top five disadvantages products in 2010 have been including plastic & articles thereof (-0.9982); miscellaneous manufactured articles (-0.9929); nuclear reactors, boilers, machinery & mechanical appliances, computers (-0.9890); woods & articles of wood, wood charcoal (-0.9890) and articles of iron & steel (-0.9759). Out of these five, three commodities i.e. plastic & articles; miscellaneous manufactured articles; woods & articles of wood and nickel & articles are found as new entries in 2010.

An analysis of the RSCA values of the top ten commodities exported from Kazakhstan to India reveals that sector 'metals' have been on apex accounting for five out of total nine exports to India in 1995. The competitiveness of this sector has found very high. Kazakhstan has a significant improvement in its competitiveness in commodity namely salt, sulphur, earth & stone, lime & cement. However, it has been losing its competitiveness in certain commodity groups such as nuclear reactors, boilers, machinery; plastic and articles thereof; articles of iron and steel etc.

Intra-Industry Trade (IIT)

Intra-industry trade (IIT) arises if a country, in same period of time, imports and exports similar types of goods or services taken from the same sector. IIT allows a country to take advantage of larger markets. Most commonly used index to measure the IIT is Grubel- Lloyd (G-L) index. Zero value of the G-L index means there are no exports or imports of a particular commodity group, i.e. no IIT in that particular commodity category. On the other hand, the G-L index value equals 100 if exports exactly equals to the imports, both being positive.

There have been stumpy prospects of intra-industry trade between India and Kazakhstan because of disparities in economic structures and the level of development of both countries. Table 4.14 highlights the changes in value of G-L Index (IIT) between India and Kazakhstan, during 1995, 2000, 2005 and 2010. In 1995 there has been found only two sectors (plastics/ rubbers and textiles) in which both countries have two-way trade with each other. Intra-industry trade grows up due to increase in bilateral trade. In 2000, the intra-industry trade has increased in four sectors namely raw hides, skins, leather, & furs; textiles; stone / glass and metals.

In 2005, four new sectors namely mineral products; chemicals & allied industries; wood & wood products and machinery / electrical have joined the list. However, there has been found no intra-industry trade in textile in the same year and in following years also. In 2010, India and Kazakhstan has an intra industry trade in twelve out of total fifteen manufactured goods sectors. Sectors namely raw hides, skins, leather, & furs; transportation; chemical & allied industry; stone/glass;

vegetable products; foodstuffs; mineral products; metals; wood & wood products; machinery/electrical; plastics/ rubbers and miscellaneous commodities have highest value of intra-industry trade. Thus, Table reveals that intra-industry trade between India and Kazakhstan has increased during the study period.

Table 4.14: India-Kazakhstan Bilateral Grubel–Lloyd Index

Sector (with HS Code)	1995	2000	2005	2010
01-05 Animal & Animal Products	–	–	0	0
06-15 Vegetable Products	0	0	0	6.556
16-24 Foodstuffs	0	0	0	4.379
25-27 Mineral Products	0	0	8.916	3.662
28-38 Chemicals & Allied Industries	0	0	0.001	24.177
39-40 Plastics / Rubbers	4.744	0	0	0.196
41-43 Raw Hides, Skins, Leather, & Furs	0	1.749	30.001	57.004
44-49 Wood & Wood Products	–	0	0.034	1.751
50-63 Textiles	13.752	1.243	0	0
64-67 Footwear / Headgear	–	0	0	0
68-71 Stone / Glass	–	0.064	91.096	15.656
72-83 Metals	0	96.615	60.330	2.642
84-85 Machinery / Electrical	0	0	2.541	1.496
86-89 Transportation		0	0	40.119
90-97 Miscellaneous	0	0	0	0.081

Note: _ (Hyphen) indicate that the particular sector has not included in top tens in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

Table 4.15 depicts the top five commodities according to the highest value of intra-industry trade. As can be observed from the Table, between 1995 and 2010, the two-way flow in bilateral trade has been enhanced significantly. In 1995, both countries have high intra industry trade in only one commodity plastic & articles. However, in 2000 there are total five commodities which have increased to thirteen in 2010. Out of these thirteen the five major commodities with highest G-L index are aluminum & articles; miscellaneous chemical products; oil seeds/ misc. grains etc; copper & articles and tools, spoons, forks of base metal. The composition of commodity categories with high value of intra-industry trade has significantly changed almost every year.

Table 4.15: Top Five Commodities according to Highest Value of India-Kazakhstan Intra-Industry Trade

1995			2000			2005			2010		
HS Code	Commodity	G-L	HS Code	Commodity	G-L	HS Code	Commodity	G-L	HS Code	Commodity	G-L
39	Plastics & Articles thereof	4.7	72	Iron & Steel	32.5	74	Copper & Articles thereof	92.1	76	Aluminum & Articles thereof	98.30
			41	Raw Hides, Skin & Leather	21.9	76	Aluminum & Articles thereof	55.7	38	Miscellaneous Chemical Products	82.60
			82	Tools, Spoons, Forks of Base Metal	6.4	72	Iron & Steel	42.5	12	Oil Seeds/ Misc. Grains etc.	77.86
			73	Articles of Iron & Steel	3.7	25	Salt, Sulphur, Earth & Stone	4.6	74	Copper & Articles thereof	76.76
						84	Nuclear Reactors, Boilers, Machinery etc.	3.01	82	Tools, Spoons, Forks of Base Metal	34.00

Source: Author's calculations based on UN Comtrade, 2011.

Note: Blank cells indicate that the particular commodity is not included in top ten lists in the particular year

Trade Complementarity Index (TCI)

TCI measures the degree to which the export pattern of one country matches the import pattern of its trading partner. A high degree of complementarity indicates more favorable prospects for a successful trade arrangement. If trade complementarity index has a relatively small value, the development potential of bilateral trade will be limited.

Table 4.16: India-Kazakhstan Bilateral Trade Complementarity Index

Year	TCI (India)	TCI (Kazakhstan)
1995	33.5	48.7
2000	34.8	52.5
2005	47.2	45.4
2010	49.4	44.3

Source: Author's calculations based on UN Comtrade, 2011.

Table 4.16 depicts the results of TCI for India and Kazakhstan. To measure the complementarity in Indo-Kazakhstan bilateral trade, trade complementarity index (TCI) has been calculated for the period 1995, 2000, 2005 and 2010. The trade complementarity for India's exports to Kazakhstan has increased whereas trade complementarity for Kazakhstan's exports to India has declined. Table shows that the compatibility index of Indian exports has been continuously increasing from 33.5 percent in 1995 to 49.4 percent in 2010. A continuous increase in TCI values indicates that Indian export pattern is becoming more compatible with Kazakhstan's import pattern. However, Kazakhstani export's TCI has increased from 48.7 per cent in 1995 to 52.5 percent in 2000. After 2000, TCI for India's imports to Kazakhstan has a continuous decline and it reached to a level of 44.3 per cent in 2010. Overall, the level of complementarities in bilateral trade is normal which indicates that there is an untapped potential for both India and Kazakhstan to develop their bilateral trade ties based on these complementarities.

Terms of Trade:

The competitiveness of Indian and Kazakhstani exports in each other's market can be measured with the help of the net barter terms of trade (ToT) i.e. the rate at which one country's goods exchange against those of another. It expresses the

relation between export prices and import prices and said to be favorable to a country when the prices of its exports are high relatively to the prices of its imports.

Table 4.17: Indo-Kazakhstan Bilateral Terms of Trade (ToT)

Year	India's Export Price Index for Kazakhstan (Px)	India's Import Price Index for Kazakhstan (Pm)	India's ToT for Kazakhstan	Kazakhstan's ToT for India
1998	0.85	0.98	86.58	115.49
1999	0.93	1.85	50.22	199.12
2000	0.69	0.98	70.26	142.33
2001	0.2	0.97	20.67	483.78
2002	0.67	1.32	50.55	197.82
2003	0.8	0.86	92.47	108.14
2004	0.71	1.31	54.53	183.39
2005	0.85	1.68	50.2	199.19
2006	0.91	5.33	17.02	587.47
2007	0.4	2.85	14.06	711.4
2008	0.82	2.47	32.99	303.12
2009	0.83	2.44	34.12	293.1
2010	0.75	1.212	61.54	162.5

Source: Author's calculations based on data collected from Export-Import Data Bank of Department of Commerce, Government of India, 2011.

Table 4.17 shows that Kazakhstan has a higher value of ToT for India as compared to India's ToT for Kazakhstan, during the study period. There has lot of fluctuations in India's terms of trade (ToT) with Kazakhstan, during 1998-2010. With a tendency to decline, it has remained always unfavorable to India due to high prices of imports than exports. In 1998, India's ToT with Kazakhstan was about to 87 which fluctuated and reached to its highest level of 92.47 in 2003. After that it has continuously declining and reached a level of 14 till the year 2007. In 2008 it started improving and in 2010 it was on the brink of 62. India's Import price index for Kazakhstan has always high due to the import of oil and other energy products. On the other hand, Kazakhstan's ToT for India is said to be favorable due to above mentioned reasons. It was 115 in 1998 which after some fluctuations reached to its highest level of 711 in 2007. After that it started to decline continuously till the end of study period. In 2010 Kazakhstan's TOT for India was 162.5.

To Sum-up Kazakhstan is the largest trade partner of India in Central Asia region. It alone makes up more than half of country's total trade with the region. Considering the volume of bilateral trade between India and Kazakhstan, it is however insignificant but has recently registered a faster growth than earlier. India's exports to republic have been continuously increasing during the study period, with a compound growth rate of 21.60 percent. However, the growth rate of India's imports from Kazakhstan is remain lower i.e. 19.77 percent. In last fifteen years, total trade between both countries has grown by 20.06 percent, from US\$ 16.50 million in 1995 to US\$ 303.71 million in 2010. Since 1995, both countries have a little share (nearly less than 1 percent) in each others' trade basket. But this share has tendency to increase exhibiting increasing role of the republic in India's trade. However, the declining values of trade intensity index (0.004 for India and 0.22 for Kazakhstan in 2010) suggest low trade concentration among themselves due to continuing barriers.

Regarding composition of Indo-Kazakhstan bilateral trade, it has been found that since 1995, there are much more changes in composition of India's exports to Kazakhstan. Coffee, tea, mate & spices; pharmaceutical products; articles of apparel & clothing accessories (both knitted and not knitted); nuclear reactors, boilers, machinery; leather products; ceramic products; electronic machinery & equipments etc. are the peak commodities in the former's export basket to later, over the period. Regarding the composition of imports from Kazakhstan, it can be said that since 1995 the Indian imports from republic has highly concentrated around few commodities named zinc & articles; Iron& steel; copper & articles; salt & sulphur, lead & articles; pearls/ stones; inorganic chemicals; lac & gum; raw hides & skin & leather; base metals etc. Overall, a handful sectors specifically mineral products; stone/glass; chemicals & allied industries and metals are dominated in Indo-Kazakhstan bilateral trade during the study period.

As per the RSCA results, labour-intensive products of textiles; scale-intensive chemical products; raw hides, skins & leather products and coffee, tea, mate & spices are the foremost Indian exports enjoying a comparative advantage in Kazakhstan, during the study period. On the other hand, republic has a comparative advantage in primarily two sectors only i.e. mineral products and metals. Thus, the republic still in

transition phase and needs to expand its industrial and manufacture sectors to improve its position in Indian as well as international market. Regarding G-L Index results, the intra-industry trade (IIT) between India and from only two sectors namely plastics/rubbers and textiles in 1995 to twelve sectors in 2010 namely raw hides, skins, leather, & furs; transportation; chemical commodities; stone/glass; vegetable products; foodstuffs; mineral products; metals; wood & wood products; machinery/electrical; plastics/ rubbers and miscellaneous. Commodity-wise, the five major commodities with highest G-L index in 2010 are aluminum & articles; miscellaneous chemical products; oil seeds/ misc. grains etc; copper & articles and tools, spoons, forks of base metal. An improvement in IIT between India and Kazakhstan is an indication of the fact that there is a huge potential for merchandise bilateral trade. Both countries can earn benefits, in long term, by utilizing this potential.

As per Trade Complementarity Index (TCI) results, India's TCI to Kazakhstan is increased from 33.5 in 1995 to 49.4 in 2010; whereas TCI for Kazakhstan's exports to India has a declined over the period from 48.7 in 1995 to 44.3 in 2010. The results indicate that Indian export pattern is becoming more compatible with Kazakhstan's import pattern. Based on this compatibility, India and Kazakhstan both can develop their bilateral trade ties. It is necessary for exporters of both countries to target their increase in exports of those commodity groups in which they have a comparative advantage. Further, India has been a declining Terms of Trade (ToT) from 86.58 in 1995 to 61.54 in 2010; While, Kazakhstan's terms of trade for India is increased from 115.49 in 1995 to 162.5 in 2010. However, Indo-Kazakhstan ToT has always been remaining unfavorable to India due to relatively high imports price index which may be due to the import of oil and other energy products.

CHAPTER 5

Indo-Kazakhstan Trade: Potential and Barriers

The high potential in Indo-Kazakhstan bilateral trade pursue from the fact that both the economies are high-growth-large-economies in their respective sub-regions. While both the economies are labor abundant with a growing industrial base, there are certain complementarities in various sectors. Based on these complementarities, both countries can enhance their bilateral trade ties by tapping the untapped potential. This chapter highlights India and Kazakhstan's potential trade areas for enhancing two way flow of trade. Some trade barriers, existing and proposed trade routes and initiatives by Indian government to boost the bilateral trade ties are also discussed.

Trade Potential:

Indo-Kazakhstan bilateral trade potential has been calculated by using the 'Indicative Trade Potential (ITP)'. The concept of "Indicative Trade Potential" based on trade flow analysis has been used broadly by the International Trade Centre in Geneva (division of the UN system and closely affiliated with UNCTAD and the WTO). ITP by isolating total demand and total export capacity helps to identify the products for which there is the highest trade complementarity between the exports of a country and the imports of the target country. A positive ITP suggests that a trade opportunity exists and vice versa. At first, there has been examined the trade flows between India and Kazakhstan for the year 2010. Examining the trade flow is essential in order to investigate whether the supply capacity of India matches the import demand of Kazakhstan and vice-versa. Here, export data is used as the alternative variable for the production of one country and import data can be observed as a substitute for demand in another country.

Table 5.1 & 5.2 present an estimate of India and Kazakhstan's export potential in each other's market, for major commodities. The major commodity in this section are defined as the commodities included in both major top twenty imports by

one country from world as well as major top twenty exports by another country to world.

a) India's Exports to Kazakhstan: Table 5.1 reveals that there exist trade complementarities between the exports of India and the imports of Kazakhstan for all major commodities. The existence of a high ITP is a necessary condition for trade to take place between the two countries in the short run. Thus, there has been existing highest export opportunity for nuclear reactors, boilers, machinery & mechanical appliances, computers with an undeveloped trade potential of US\$ 4312.3 million. After that, there has been commodities electrical machinery & equipments & parts, telecommunication equip., sound recorders (US\$ 2496.1 million); mineral fuels, oil, waxes & bituminous sub (US\$ 2379.7 million); articles of iron and steel (US\$ 1769.1 million) and vehicles other than railways or tramway rolling stock(US\$ 1035.7 million).

Machinery/ electrical and transport equipment are major items in India's export basket but exports of these commodities to Kazakhstan are still marginal. During 2010, out of the total US\$ 16849.2 million Indian exports of machinery and instruments, only US\$ 6.7 million (0.04 percent of total Indian exports and 0.10 percent of total Kazakhstani imports) had been exported to Kazakhstan. In the case of transport equipments, a marginal US\$ 0.16 million (0.001 percent) of total exports of US\$ 13509.2 million had been exported to Kazakhstan during the same period. It has a negligible share of 0.015 percent in Kazakhstan's import. Thus, there has a probability to increase the exports of these products to Kazakhstan.

Based on India's export capabilities and demand existing in Kazakhstan Sinate & Tiwari (2007) pointed out some potential Indian export items to Kazakhstan that are machinery and transport equipments; electrical machinery; chemicals and related products; iron & steel products; ores and minerals; petroleum products; food products; tobacco; cement; aluminum; measuring instruments; paper and paperboard; plastics & rubber articles; unmanufactured tobacco; cosmetics and toiletries, ceramic products; furniture & parts. These products are the principal imports of Kazakhstan, accounting for about 68.44 percent share in republics' total

global imports, in 2010. China, EU, Russia, Ukraine, Turkey and USA are the major sources of these imports for Kazakhstan.

Towards enhancing these exports, as observed by Sinate & Tiwari (2007), the focus can be on the following items:

- Pumps for liquids, and air or vacuum pumps (HS-8413 & 8414);
- Refrigerators and freezers (HS- 8418);
- Machinery or laboratory equipment; centrifuges (HS- 8419 & 8421); Automatic data processing machines, and parts and accessories (HS-8471 & 8473);
- Machines & mechanical appliances (HS-8479); Taps, cocks & valves (HS-8481);
- Electric transformers (HS-8504);
- Records, tapes & other recorded media (HS-8524);
- Transmission apparatus for radio telephony (HS-8525);
- Insulated wires & cables (HS- 8544);
- Public transport motor vehicles; Motor cars; Motor vehicles for transport of goods; parts and accessories thereof (HS- 8702, 8703, 8704 & 8708).

During 2010, India's export of chemical products to Kazakhstan is amounted to US\$ 52.4 million; accounting for a marginal 0.24 percent of India's total exports (US\$ 22.12 billion). In these chemicals, pharmaceuticals products with worth US\$ 46.8 million have a large share (near to 99 percent). Therefore, to enhance presence of Indian Chemicals in Kazakhstan market, focus would be on other items also. These are carbonates / proxy-carbonates (HS-2836); human and animal blood prepared for therapeutic uses (HS-3002); medicaments (HS-3004); insecticides, fungicides and herbicides (HS-3808) etc. In metals, articles of iron and steel have also presented a potential for exports to Kazakhstan.

b) Kazakhstan's Exports to India: Table 5.2 reveals the existence of a high ITP for five out of ten commodities. Mineral fuels, oil, waxes & bituminous sub with undeveloped potential of US\$ 41032.9 million has followed by pearls, stones, prec. metals, imitation jewelry, coins (US\$ 3640.1 million); electrical machinery & equipments & parts, telecommunication equip (US\$ 2185.2 million); iron & steel (US\$ 2598.6 million) and ores, slag & ash (US\$ 1167.5 million).

Table 5.1: Commodity-wise India's Export Potential with Kazakhstan (2010)

HS Code	Commodity	India's exports to Kazakhstan (million US\$)	India's exports to world (million US\$)	Share of Kazakh in India's exports	Kazakh's imports from World (million US\$)	Share of India in Kazakh's import	Indicative Potential Trade (ITP)	Undeveloped Trade Potential (million US\$)
		A	B	C= A/B*100	D	E= A/D*100	F= min(B,D)-A	G=F-A
84	Nuclear Reactors, Boilers, Machinery & Mechanical Appliances, Computers	5.1	8149.8	0.06	4322.5	0.12	4317.4	4312.3
85	Electrical Machinery & Equipments & parts, Telecommunication equip., Sound Recorders	1.6	8699.3	0.02	2499.3	0.06	2497.7	2496.1
27	Mineral Fuels, Oil, Waxes & Bituminous Sub	0	37984.1	0	2379.7	0	2379.7	2379.7
73	Articles of Iron and Steel	0.7	6367.6	0.01	1770.5	0.04	1769.8	1769.1
87	Vehicles other than Railways or Tramway Rolling Stock	1.6	9285.8	0.02	1038.9	0.02	1037.3	1035.7
30	Pharmaceutical Products	46.8	6093.2	0.8	924.7	5.06	877.9	831.1
39	Plastics & Articles thereof	1.6	3638.4	0.04	783	0.21	781.4	779.8
90	Optical, Photographic, Cinematographic, Medical/Surgical Instruments etc.	0.6	1440.7	0.04	757.2	0.08	756.6	756
72	Iron & Steel	0.01	6996.2	0.0001	498.6	0.002	498.6	498.6
89	Ships, Boats & Floating Structure	0	4223.3	0	404.8	0	404.8	404.8

Source: Author's Calculations based on UN Comtrade, 2011.

Thus, the principal items that can be imported from Kazakhstan are mineral products, natural or cultured pearls and metals. India spends a big part of its export earnings on the imports of mineral products especially mineral fuels and oils etc. On the other hand this commodity is the major item in Kazakhstan's export basket. In 2010, India imported mineral products of worth US\$ 22.74 million from Kazakhstan (0.05 percent of Kazakh's total global exports and 0.02 percent of India's total global imports). Hence, the republic has a potential to export more mineral fuels to India. Hate (2007) considered Kazakhstan as an alternative of Iran to fulfill India's energy needs. Kazakhstan also has a potential in metals. During 2010, out of the total US\$ 20370 million Indian imports of metals, only US\$ 60.6 million (0.8 percent of total Kazakh exports and 0.3 percent of total Indian imports) are exported by Kazakhstan. The republic has exported almost all metals to India except base metals and its articles which comprises the 6 percent of India's total metal import from world in 2010. To enhancing exports of metals, republic's focus, therefore, may be on this product.

Kazakhstan is in transaction period and it has been increasing its demands for services sector. India's export basket to the republic may include the services like engineering and construction services, business management and consultancy, agrobusiness services, public relations and advertising, travel services etc (George, et. al. 2011). According to International Trade Statistics- 2010 of WTO, in 2009 Kazakhstan imports the services of total US\$ 48.15 million from world. Out of that India has a negligible share of just 0.001 percent (US\$ 0.06 million). India's total service exports in the same year were of US\$ 87434 million. Considering EU-27 as a single unit, it ranked among the top five countries in the export of computer and information services, commercial services, communication services and personal services (WTO, 2011).

Overall, the potential for cooperation between the two countries is almost remained untapped and thus there exists a vast scope to increase and diversify the bilateral trade.

Table 5.2: Commodity-wise Kazakhstan's Export Potential with India (2010)

HS Code	Commodity	Kazakh's export to India (million US\$)	Kazakh's export to World (million US\$)	Share of India in Kazakh's exports	India's import from world (million US\$)	Share of Kazakh in India's imports	Indicative Potential Trade (ITP)	Undeveloped Trade Potential (million US\$)
		A	B	C= A/B*100	D	E= A/D*100	F= min(B,D)-A	G= F-A
27	Mineral fuels, oil, waxes & bituminous sub	0	41032.9	0	110840.7	0	41032.9	41032.9
71	Pearls, stones, prec. metals, imitation jewelry, coins	22.8	1213.1	1.9	68629.9	0.03	1190.3	1167.5
84	Nuclear reactors, boilers, machinery & mechanical appliances, computers	0.05	144.5	0.03	28090.1	0.0001	144.45	144.4
85	Electrical machinery & equipments & parts, telecommunication equip.	0	63.5	0	25209.4	0	63.5	63.5
72	Iron & steel	21.9	3683.9	0.6	10701.3	0.20	3662	3640.1
26	Ores, slag & ash	0	2185.2	0	5540.7	0	2185.2	2185.2
28	Inorganic chem. org/inorg compounds of precious metals, isotopes	5.3	2609.2	0.2	3665.2	0.14	2603.9	2598.6
88	Aircraft, spacecraft & parts thereof	0	100.9	0	3335.5	0	100.9	100.9
73	Articles of iron & steel	0.01	97.9	0.01	3071.3	0.0003	97.89	97.8
76	Aluminum & articles thereof	0.02	372.8	0.005	2063.5	0.0	372.83	372.8

Source: Author's Calculations based on UN Comtrade, 2011.

As President Nazarbayev on his visit to India in January 2009, said, “Captains of Indian industry should not hesitate or be shy of taking advantage of the positive investment climate in Kazakhstan. In fact, both countries should explore the possibilities of cooperation beyond hydrocarbons, oil and gas, and venture into areas like information technology, pharmaceuticals, metallurgy, agriculture, textiles, infrastructure, dairy sector and tourism” (quoted in Hussain, 2009).

Trade Barriers:

The potential for Indo-Kazakhstan trade has been restricted by many trade barriers. These constraints and limitations should be examined to tap the real potential of this bilateral trade and also to understand the future course of their relationships. Some of these obstacles are:

- **Geographical and Political Barriers:** The biggest obstacle in enhancing bilateral trade is the lack of direct access between India and Kazakhstan. Kazakhstan is a land-locked country.

➤ **Map 5.1: Geographical view of Kazakhstan**



Source: <https://maps.google.com/>. Accessed 2012, February17

As clear from map 5.1 it shares borders with Russia, Uzbekistan, China, Kyrgyzstan, and Turkmenistan and Caspian Sea. Since Kazakhstan and India do not share borders efforts are being made to improve regional cooperation to establish transport corridors. Presently, trade is occurred through the black sea, China and via Iran- Afghanistan-Pakistan. Some businessmen carry goods with them by air from India to be sold in Central Asian markets. This can hardly be called a cost effective way of doing business (Sarma, 2010). Due to the New Delhi's troubled relations with Islamabad and China, India is not able to take advantage of their geographical closeness to Kazakhstan. Also, there are unstable political situations in Pakistan and Afghanistan which directly affects the Indo-Kazakh trade. Indian companies are however actively exploring the possibility of taking up internationally funded projects and establishing joint ventures in Kazakhstan in different areas to effectively surmount these logistical obstacles.

- **Transport Bottlenecks:** Transport bottlenecks and inadequate travel links is the main problem of the whole Central Asia. All Central Asian Republics (CARs) are landlocked and situated far from major international seaports and developed country markets. Also, region has difficult topography that complicates their transport links with the other parts of the world, particularly South Asia. Thus, there are high transport costs and long and unpredictable transit times for international shipments to and from the CARs (Ganiev, et. al. 2006). Kazakhstan as a Central Asian country has faced same problems. It has no access to navigable international waterway thus has to depend upon other neighboring countries for trade and transportation routes for their natural resources. There are a few air links between both countries but trade by air cannot be competitive.
- **Information Gap:** Another important reason for the rather modest level of bilateral trade is the lack of adequate and authentic information available in both countries about each other's potential and prospects. The enormous information gap between two countries keeps them away from realizing the full potential of bilateral relationship. People in Kazakhstan are well informed about

Indian tea, films, music, culture, dance, yoga as well as Indian spiritual gurus but are not adequately conversant with the immense progress that India has achieved in the vanguard fields of science and technology like biotechnology, nanotechnology, space, nuclear energy, IT etc.(Sajjanhar, 2010). Also policymakers are not aware about the high quality international education and healthcare services provided by India. Traders and businessmen in India as well as Kazakhstan have not possessed up-to-dates of trade and business regulations and norms of each other country. This is one important constraint due to which bilateral trade and investment flow is affected (Attari, 2010).

- **Trade Policy Barriers:** India has a complex and opaque tariff system with a comparatively high average tariff rate. Moreover, it has many exceptions to the standard “most favored nation” (MFN) tariff rate, which makes difficult for foreign companies to determine the correct tariff rate for their exports. Also, there are common trends of irregular enforcement of existing tariff laws, as well as claims of arbitrary evaluation of imported goods, in country (Ruddar Datt & Sundharam, 2009).

Table 5.3: Tariff Structure of India and Kazakhstan (Percent)

	Year	India			Kazakhstan		
		Total	Agri.	Non-agri.	Total	Agri.	Non-agri.
Simple Average Final Bound		48.7	113.1	34.6			
Simple Average MFN Applied	2010	12	33.3	8.9	9.2	13.7	8.5
Trade Weighted Averages	2009	6.9	44.2	5.1	9.3	19.8	8.3

Source: WTO, World Tariff Profile, 2011

Kazakhstan is still passing through the phase of economic transition. In 2006 Asian Development Bank (ADB) commented on Kazakhstan’s tariff structure. According to ADB, Kazakhstan has a rather complex tariff schedule with a large number of tariff bands and a high maximum tariff rate. It also comments, that a serious problem with tariffs in Kazakhstan is that “changes in tariff schedules are rather frequent and unpredictable.” (Ganiev,et.al. 2006). Table 5.3 reveals the tariff structure of India and Kazakhstan in international

trade market. Table reveals that the simple average MFN tariff rate of India was only 12 percent in 2010. It declined from 15.1 percent in 2006. There is decline in both agricultural and industrial average tariffs, due to India's shift towards lower tariffs. The average for WTO non-agricultural products (8.9 percent) is considerably lower than the average for WTO agricultural products, which is 33.3 percent. Kazakhstan is slightly more open with non-agricultural trade than with agricultural trade. Kazakhstan's simple average MFN applied tariff is 9.2 percent.

In 2008 a number of reforms, aimed at improving the trade facilitation environment were implemented by Kazakhstan. Some selected measures are: reducing administrative barriers, improving customs control and making it easier to obtain a certificate of origin (IFC, 2009). But still Kazakhstan's high tariff rate, quantitative restriction and another strict trade policies discourage the foreign traders.

- **Lack of Infrastructure:** Poor infrastructure is another major hurdle in the growth of mutual economic ties between India and Kazakhstan. For instance, banking in Kazakhstan is not as efficient to handle international transactions. The country is not willing or able to privatize the banking system (Sarma, 2010). Also, Indian banks take more interest in west rather than Central Asia due to high returns on investment in developed world. Meanwhile, Punjab national Bank starts operations in Almaty. It has a majority stake in Kazakhstan-based JSC Dana Bank (IE, 2010). There is also non-availability of hard currency and lack of conversion facilities that providing a further impediments for the growth of bilateral trade relations (Bhatia, 2009).
- **The other hurdles:** Competition by external players (like EU, China, Russia and USA) with better connectivity with Kazakhstan and whole Central Asia is also adversely affecting the process. Kazakhstan holds near to fifty percent of its trade with EU and China. This trade, for a variety of political, economic and technical reasons, cannot be diverted to Indian enterprises. So, Indian traders and investors are not prepared to take risk. Additionally, the language barrier along with inadequate marketing through main newspapers by the respective

government also restricts the development of tourism and other business between the two countries.(Bhatia, 2009)

These hurdles have to be overcome to raise the already initiated trade and economic cooperation to higher level.

Trade Routes:

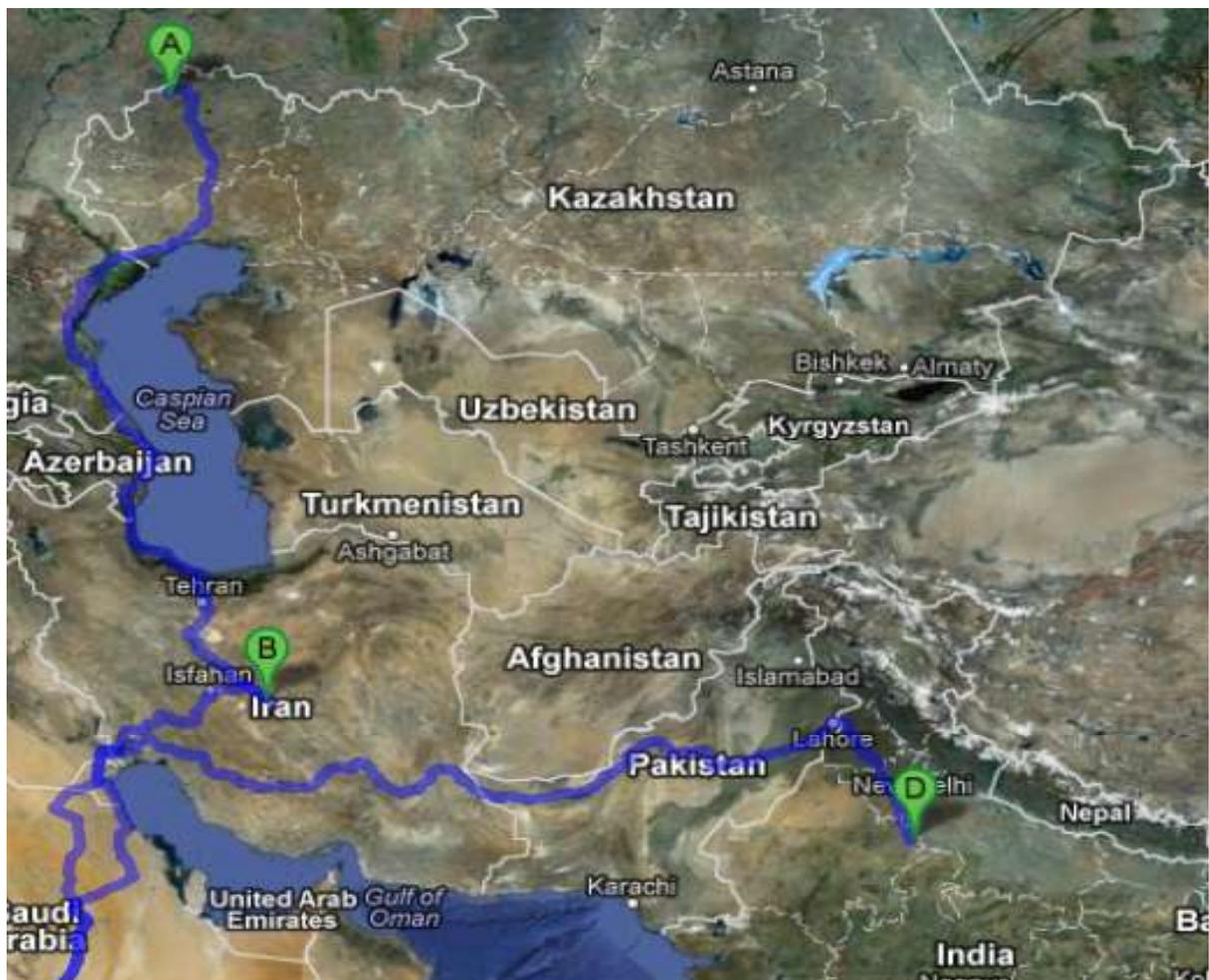
Some of above mentioned hurdles may be overcome by establishing direct transit link between the two countries. Since Kazakhstan and India do not share borders efforts are being made to improve regional cooperation to establish transport corridors. Presently, trade is occurred through the black sea, China and via Iran. Some businessmen carry goods with them by air from India to be sold in Central Asian markets. This can hardly be called a cost effective way of doing business (Sarma, 2010).

It is true that, India's engagement with Kazakhstan and whole central Asia both politically and economically, is on the rise; but country cannot take optimal advantage of the region's rich natural resources such as oil and gas, uranium and minerals without improving connectivity with these countries (Pahariya, 209). Thus, various land routes are explored by both countries; to enhance their commercial relations. The two sides explored the possibilities of using the Afghanistan- Iran- Kazakhstan trade route through the Caspian Sea and by using the newly rebuilt Zaranj-Delaram Highway and also the another route through Xinjiang Province in China to establish new trade links between the two countries (TET, 2009).

One proposal which has very exciting project for both the countries, indeed for the entire region of Central and South Asia related to the North- South Transport Corridor from Aktau on the Caspian Sea through Iran to the Arabian Sea (Parinda News, 2005). The International North South Transport Corridor Agreement was signed originally by Russia, India and Iran in 2000, during the second Euro-Asian Conference on Transport in St. Petersburg. Kazakhstan joined this agreement in April 2003. The Kazakh portion of the route will include railways and highways, as well as a sea route through Aktau that will provide an outlet through the Caspian Sea to international sea routes (Kushkumbayev, 2007). Possible routes for the transit

transportation cargo from/ to India via Kazakhstan, offered via port Aktau – Iranian ports and via rail-road station Sary-Agash-Sarakhs station (Islamic Republic of Iran) (TH, 2000). This new corridor can boost Indian trade with CARs as well as Central Europe. India offered a joint task force to work on increasing flow of goods from/ to India through Aktau port due to the International North South Transport Corridor transport Agreement. There are several bottlenecks, like lack of infrastructure and finance, yet to be cleared before the corridor could become viable. (Map- 5.2)

Map: 5.2 International North South Transport Corridors



Source: <https://maps.google.com/>. Accessed 2012 February 17.

Another transit route which has been widely discussed is an agreement with China for the use of its road to Kyrgyzstan through the Xinjiang province. India can use this road by constructing a link road in Ladakh joining the Tibet-Xinjiang road.

Ladakh is already linked by road with Himachal Pradesh (Roy, 2001). The road would be passed through Almaty in Kazakhstan to, Korgas, Yinning, Kuqa, Aksu, Kashgar, Yarkand, Yecheng (along the Xinjiang-Tibet Highway No. 219) Mazar, Shahidulla, Sumxi, Derub, Resum, Shiquanhe, Gar, Kailash, Burang and finally to Lepu-lekh (Ladakh in India). The total distance is less than 3,000 kilometers as compared to the over 5,000 kilometer long route via Iran (Stoban, 2008). It may be a shortest route to Kazakhstan but the viability of this route depends on China's willingness to cooperate. If China cooperates then in long time, all three countries (China, India and Kazakhstan) may earn gain from this route.

Air transportation between India and Central Asia is playing an important role for greater regional integration. There are more than 29 direct weekly flights from India to all the important destinations in Greater Central Asia out of which three flights are from Delhi to Almaty. These flights are operated as low-cost carriers by Air Astana. (Sachdeva, 2010)

Bilateral Initiatives:

The serious efforts are made by India to strengthen the bilateral tie with Kazakhstan and other Central Asian countries. It resulted in the launching of the "Focus: CIS" Programme, in April 2003. The Programme was launched under the EXIM Policy (2003-04). It focuses on countries of the CIS region, with emphasis in the first phase on seven countries, namely, Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, Tajikistan, Azerbaijan and Ukraine. This programme has increased mutual direct interactions among businessmen by identifying the areas of bilateral interest and investment and also increased India's exports to the CIS region through integrated efforts of Government of India and various agencies like India Trade Promotion Organization (ITPO), Export Promotion Councils (EPCs), Apex Chambers of Commerce & Industry, Indian Missions and institutions such as EXIM Bank, Export Credit Guarantee Corporation (ECGC) etc. (DoC 2003)

Recently India has taken several trade initiatives with Kazakhstan and other CIS countries. President Nazarbayev's visit to India in January 2009, gave a fresh impetus to bilateral trade and commercial relations. During this visit, an agreement between ONGC Videsh Ltd. and KazMunaiGaz on Satpayev oil block and MoU

between NPCIL and Kazatomprom envisaging cooperation including supply of uranium to India was signed. In January 2011, the Joint Working Group on Trade and Economy held its first meeting in New Delhi. (MEA, 2012)

To enhance the bilateral relations, Prime Minister Manmohan Singh paid an official visit to Kazakhstan in April, 2011. This visit is need to be viewed in the context of regional developments in and around Central Asia, India's growing energy needs, and Kazakhstan's increasing role in the region and its immense hydrocarbon reserves. During the visit, seven bilateral agreements were signed in energy, IT, agriculture, civil matters and health. One of the most significant achievements of this visit was the signing of the "Joint Action Plan" on furthering the strategic partnership between the two countries. This plan provides a 'Road Map' for the period 2011-2014, to enhance bilateral cooperation in several areas -- hydrocarbons, civil nuclear energy, space, information technology and cyber security, high technology and innovative technology, pharmaceuticals, health care, agriculture and cultural exchanges. (Roy, 2011)

The 9th session of the Kazakhstan-India Inter-Governmental Commission (IGC) on cooperation in trade and economy, science & technology and culture was held in Astana on 11-12 October, 2011. The Kazakh delegation was led by Mr. Sauat Mynbayev, Minister of Oil and Gas of Kazakhstan and the Indian side was led by Mr. R.P.N Singh, Minister of State, Petroleum and Natural gas. The two sides reviewed the progress of the last IGC and agreed to expand the scope of mutual cooperation under the forum (MEA, 2012).

Future Projections: On the basis of above discussion, it is quite clear that the potential of both India and Kazakhstan is much bigger than the exiting level of trade. There are enormous complementarities in bilateral trade and investment that need to be tapped. Kazakhstan is rich in mineral resources and is trying to diversify its economy into sectors such as telecommunications, financial services, transport, construction, pharmaceuticals, food processing. On the other hand, India has an advanced technology sector and a highly skilled manpower. It is also ready to help Kazakhstan in its diversification process.

However, the two-way trade less than actual potential and remains the most unsatisfactory part of India's relations with Kazakhstan. It may be due to the lack of land connectivity. The implementation of the International North South Corridor will facilitate cheaper movement of goods. India should also be considered some new routes which could directly connect India, China and Central Asia as suggested by Professor Stobdan (2008). Here, Kazakhstan can play a key role in developing this route due to its good political and economic relations with both China as well as India. This would further improve the chances of increasing cooperation between South Asia, Central Asia and China, keeping India at the centre. The potential for trade lies in the export of industrial and agricultural products. Considering the present level of industrialization of CIS countries, Indian rather than Western technology may be more suitable for Kazakhstan. Besides, Kazakhstan offers prospects for import of raw wool by India. (Hussain, 2009)

Kazakhstan has a greater importance for India in the context of uranium supply after the Nuclear Supplies' Group (NSG) waiver. It is the second largest producer of uranium after Australia. Also, unlike Australia and Japan, it does not insist India to sign the Non-Proliferation Treaty (NPT). The NPT is an international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament (UN, 2012). On the other hand, the republic like other Central Asian countries needs a huge foreign direct investment (FDI) for exploration, production and export of their hidden energy resources. To fully utilize India's potential to contribute in transition of Kazakhstan and Kazakhstan's ability to provide the scarce hydrocarbon and uranium resources to India, the process of bilateral cooperation needs to be speed-up in future.

CHAPTER 6

Conclusions

Kazakhstan is the largest trade partner of India in Central Asia region. It alone makes up more than half of country's total trade with the region. Considering the volume of bilateral trade between India and Kazakhstan, it is however insignificant but has recently registered a faster growth than earlier. India's exports to republic have been continuously increasing during the study period, with a compound growth rate of 21.60 percent. However, the growth rate of India's imports from Kazakhstan is remain lower i.e. 19.77 percent. In last fifteen years, total trade between both countries has grown by 20.06 percent, from US\$ 16.50 million in 1995 to US\$ 303.71 million in 2010. Since 1995, both countries have a little share (nearly less than 1 percent) in each others' trade basket. But this share has tendency to increase exhibiting increasing role of the republic in India's trade. However, the declining values of trade intensity index (0.004 for India and 0.22 for Kazakhstan in 2010) suggest low trade concentration among themselves due to continuing barriers.

Regarding composition of Indo-Kazakhstan bilateral trade, it has been found that since 1995, there are much more changes in composition of India's exports to Kazakhstan. Coffee, tea, mate & spices; pharmaceutical products; articles of apparel & clothing accessories (both knitted and not knitted); nuclear reactors, boilers, machinery; leather products; ceramic products; electronic machinery & equipments etc. are the peak commodities in the former's export basket to later, over the period. Regarding the composition of imports from Kazakhstan, it can be said that since 1995 the Indian imports from republic has highly concentrated around few commodities named zinc & articles; Iron& steel; copper & articles; salt & sulphur, lead & articles; pearls/ stones; inorganic chemicals; lac & gum; raw hides & skin & leather; base metals etc. Overall, a handful sectors specifically mineral products; stone/glass; chemicals & allied industries and metals are dominated in Indo-Kazakhstan bilateral trade during the study period.

As per the RSCA results, labour-intensive products of textiles; scale-intensive chemical products; raw hides, skins & leather products and coffee, tea, mate & spices are the foremost Indian exports enjoying a comparative advantage in Kazakhstan,

during the study period. On the other hand, republic has a comparative advantage in primarily two sectors only i.e. mineral products and metals. Thus, the republic still in transition phase and needs to expand its industrial and manufacture sectors to improve its position in Indian as well as international market. Regarding G-L Index results, the intra-industry trade (IIT) between India and from only two sectors namely plastics/rubbers and textiles in 1995 to twelve sectors in 2010 namely raw hides, skins, leather, & furs; transportation; chemical commodities; stone/glass; vegetable products; foodstuffs; mineral products; metals; wood & wood products; machinery/electrical; plastics/ rubbers and miscellaneous. Commodity-wise, the five major commodities with highest G-L index in 2010 are aluminum & articles; miscellaneous chemical products; oil seeds/ misc. grains etc; copper & articles and tools, spoons, forks of base metal. An improvement in IIT between India and Kazakhstan indicates that there is a huge potential for merchandise bilateral trade. Both countries can earn benefits, in long term, by utilizing this potential.

As per Trade Complementarity Index (TCI) results, India's TCI to Kazakhstan is increased from 33.5 in 1995 to 49.4 in 2010; whereas TCI for Kazakhstan's exports to India has a declined over the period from 48.7 in 1995 to 44.3 in 2010. The results indicate that Indian export pattern is becoming more compatible with Kazakhstan's import pattern. Based on this compatibility, India and Kazakhstan both can develop their bilateral trade ties. It is necessary for exporters of both countries to target their increase in exports of those commodity groups in which they have a comparative advantage. Further, India has been a declining Terms of Trade (ToT) from 86.58 in 1995 to 61.54 in 2010; While, Kazakhstan's terms of trade for India is increased from 115.49 in 1995 to 162.5 in 2010. However, Indo-Kazakhstan ToT has always been remaining unfavorable to India due to relatively high imports price index which may be due to the import of oil and other energy products.

Regarding future prospects, Kazakhstan has been identified as one of the India's trading partners with a high unexploited trade potential. Based on India's export capabilities and demand existing in the republic, potential export items to later include; machinery and transport equipments; electrical machinery; chemicals and

related products; iron & steel products; ores and minerals; petroleum products; food products etc. However, India can increase the imports of minerals and metals (especially base metals) from Kazakhstan. Thus, there exists a vast scope to increase and diversify the bilateral trade. But this prospect has been restricted by many trade barriers.

The biggest hurdle in enhancing bilateral trade is the lack of direct access between India and Kazakhstan. Kazakhstan is a land-locked country and has no common border with India. Only connecting link between both countries is through Afghanistan-Pakistan or via China. Tension in India's relations with its neighbors directly affects the Indo-Kazakh trade. Further, Central Asia's landlocked geography leads to transport bottlenecks in this region which further leads to high transport costs and long and unpredictable transit times for international shipments to and from the Central Asian Republics (CARs). Another important reason for rather modest level of bilateral trade is the lack of adequate and authentic information available in both countries about each other's potential and prospects. The enormous information gap between two countries keeps them away from realizing the full potential of bilateral relationship. Traders and businessmen in India as well as Kazakhstan have not possessed up-to-dates of trade and business regulations and norms of each other country.

Further, both countries have a complex tariff and opaque tariff system. Kazakhstan is still passing through the phase of economic transition; thus has large number of tariff bands and a high (maximum 100 percent) tariff rate with frequent and unpredictable changes in tariff schedules. These high tariff rates along with other quantitative restriction and strict trade policies discouraged the foreign traders. The other hurdles may include poor infrastructure of republic, competition to India by external players (like EU, China, Russia and USA) and language barrier along with inadequate marketing through main newspapers by the respective government. These hurdles have to be examined and overcome to raise the already initiated trade and economic cooperation to higher level.

To overcome above mentioned barriers there is need of direct transit link between the two countries. The most important one is North- South Transport Corridor from Aktau on the Caspian Sea through Iran to the Arabian Sea. This new corridor can boost India's trade with Central Asia as well as Central Europe. But, there are several bottlenecks, like lack of infrastructure and finance, yet to be cleared before the corridor can become viable. Another transit route which has been widely discussed is an agreement with China for the use of its road to Kyrgyzstan through the Xinjiang province. India can use this road by constructing a link road in Ladakh joining the Tibet-Xinjiang road. It may be a shortest route to Kazakhstan but the viability of this route depends on China's willingness to cooperate.

To sum-up, though there is low increase in merchandise trade between India and Kazakhstan is mainly due to the changing demand structure and comparative advantages in certain different commodities in various sectors. Kazakhstan has been specializing in a few energy products while India in primary goods and heavy industry products. Also, both the countries have advantages in different products from same sectors which reveals the opportunity for higher intra-industry trade in future, which would reduce cost and enhance the benefits for both the countries. Thus, there are enormous complementarities in bilateral trade that need to be tapped. There is required to overcome the geographical, political and other hurdles to increase two way flows of goods. Just before fully utilize India's potential to contribute in transition of Kazakhstan and Kazakhstan's ability to provide the scarce energy and other resources to India there has been required to boost the process of bilateral cooperation.

For India, Kazakhstan could be a gateway to the energy rich Central Asian region. Following are certain suggestions that may serve this goal:

- ❖ Kazakhstan's import structure is mostly composed of machinery, electric & electronic equipment, pharmaceuticals and transport equipments and other manufactured goods. To improve bilateral trade, India should align itself to Kazakhstan's import structure and demand. India should continue to focus on meeting the demand in Kazakhstan market for variety of primary commodities like coffee, tea, spices, tobacco, rubber etc. These are some of the

commodities in India's export to the republic. The republic also offers large potential for manufactured goods such as leather and leather products; chemicals; drugs and pharmaceuticals. Indian manufacturers will need to align their export strategy to meet the requirements of later for this purpose.

- ❖ According to the trade theory, there is a higher chance for trade in a particular commodity between two countries occurs when the exporting country's RCA is above unity and the importing country below unity for this product (Castro, 2012). In this context, India can increase exports of animal & animal products; vegetable products; chemicals; leather products; textiles and footwear to Kazakhstan. An expansion in exports may also be helpful for India to balance the unfavorable terms of trade.
- ❖ To overcome trade barriers there is need of direct transit link between the two countries. As mentioned in study, North- South Transport Corridor via Iran and transit route via Kyrgyzstan-China-Ladakh is under-discussion. Both countries should initiate to clear the bottlenecks like political difference, lack of infrastructure and finance etc. Also, India and Kazakhstan should make a joint task force to work on to explore more viable and cheap trade routes.
- ❖ Kazakh government should review their tariff schedule. Although, higher tariff rates create revenue and reserves, protect domestic industry and allow import substitution to take place in selected sectors; but it also discouraged the foreign traders. Thus, the republic needs to follow a strict schedule of reduction of duties stage-by-stage. Also the rules governing this schedule should transparent and predictable, so that foreign traders and investors can build their business strategy for Kazakhstan.
- ❖ India should provide the necessary resources and manpower to assist Kazakhstan to join the WTO as early as possible. If Kazakhstan becomes a WTO member, the republic's efforts to diversify the economy beyond oil and gas sector will be more successful and there will be more potential for India to trade with and invest in republic.
- ❖ There should provision of specific finance in India's Foreign Trade Policy, for regular business delegation meeting in both the countries. Business Consular

Service Centers based on public-private partnerships should be set up in Astana, Almaty, New Delhi and Mumbai.

- ❖ An efficient spreading of relevant information about opportunities and potential existing in both countries is important to nurturing the bilateral trade. For this India should expand/enhance bilateral exchange of visits (of specially trade and industry delegations) and participation in trade fairs, exhibitions, buyer-sellers-meets etc. This would serve to increase awareness about both countries' economic status and export capabilities. Also, an online portal linking key industry/trade association and chambers of both countries can be developed which may provide up-to-date information of trade and business regulations and norms of each other country. Exporters can develop their own websites to promote their trade.
- ❖ To establish a proper mechanism for financial transaction, India government should encourage the Indian banks to develop correspondent relations with selected banks in Kazakhstan and open the branches/representative offices here. It would serve to facilitate and promote bilateral trade and investment relations. Meanwhile, Punjab National Bank starts operations in Almaty. It has a majority stake in Kazakhstan-based JSC Dana Bank (IE, 2010).
- ❖ Trade chases investment. Thus, the best way of promoting trade is through joint ventures (JVs). In Kazakhstan, Indian JVs are predominantly in drugs and pharmaceuticals (Sinate & Tiwari, 2007). Many Indian Oil & Gas, Pharmaceuticals and Engineering Companies have already set up offices in Kazakhstan. In April 2011, India's Oil & Natural Gas Commission (ONGC) agreed to purchase a 25 per cent stake in a Kazakh oil exploration block, marking the public sector's entry into the country's oil and gas sector (Bandyopadhyay, 2011). Punjab National Bank (PNB) already has a presence in republic. However, Potential sectors for investment in Kazakhstan include oil and gas, power generation and distribution, telecommunications equipments, medical equipment and supplies, pollution control equipment, agricultural machinery, food processing and packaging, construction and engineering services, and mining needs more attention from India (Sinate & Tiwari, 2007).

- ❖ Indian trade bodies and universities should commence some study courses related to local cultures, business practices and habits; for traders of both countries. It would serve to facilitate business interactions and foster linkages with counterparts in both countries.
- ❖ India, China and Kazakhstan should develop a sub regional framework agreement designed to facilitate cross-border transit trade. This way India can increase trade relations with Kazakhstan and also can play a multidimensional role in the development of whole Central Asia (George et. al., 2011).

Consequently, as Pahariy (2009) observed, “it is a good time to negotiate with Kazakhstan for a FTA and to rewrite the history of economic-cultural cooperation between the two countries in order to facilitate future cooperation between India and Central Asia”.

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APPENDIX A

Indo-Kazakhstan Trade: Some Important Tables

Table 1: India's Top Ten Export Commodities to World

1995	2000	2005	2010
Pearls, stones, precious metals, imitation jewelry, coins(16.64)	Pearls, stones, precious metals, imitation jewelry, coins(18.44)	Pearls, stones, precious metals, imitation jewelry, coins(16.09)	Minerals, fuels, oils, waxes & bituminous (17.23)
Articles of apparels & clothing accessories- not knitted or crocheted (8.50)	Articles of apparels & clothing accessories- not knitted or crocheted (8.83)	Minerals, fuels, oils, waxes & bituminous (10.46)	Pearls, stones, precious metals, imitation jewelry, coins(14.73)
Cotton, inc. yarn & woven fabrics (6.27)	Cotton, inc. yarn & woven fabrics (5.40)	Articles of apparels & clothing accessories- not knitted or crocheted (5.06)	Vehicles other than railways (4,21)
Cereals(4.66)	Articles of apparels & clothing accessories- knitted or crocheted (4.07)	Ores slag & ash (4.83)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders (3.95)
Fish & crustaceans(3.15)	Organic chemicals (3.81)	Organic chemicals (4.42)	Organic chemicals (3.90)
Articles of apparels & clothing accessories- knitted or crocheted (3.06)	Minerals, fuels, oils, waxes & bituminous (3.41)	Iron & steel (4.32)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (3.70)
Vehicles other than railways (2.85)	Fish & crustaceans (3.24)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (4.05)	Iron & steel (3.17)
Coffee, tea, mate & spices (2.81)	Nuclear reactors, boilers, machinery & mechanical appliances, computers(2.90)	Vehicles other than railways (3.19)	Ores slag & ash (3.13)
Nuclear Reactors, Boilers, Machinery & Mechanical Appliances, Computers (2.70)	Iron & steel (2.77)	Articles of apparels & clothing accessories- knitted or crocheted (3.11)	Cotton, inc. yarn & woven fabrics (3.13)
Articles of leather, saddler & harness, travel goods, hand bags, articles of gut (2.66)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders (2.70)	Articles of iron & steel (2.74)	Articles of iron & steel (2.89)

Note: Figures in parentheses show percentage share of India's exports to World.

Source: UN Comtrade, 2011.

Table 2: India's Top Ten Import Commodities from World

1995	2000	2005	2010
Mineral Fuels, oil, waxes & bituminous sub (23.67)	Mineral Fuels, oil, waxes & bituminous sub (36.54)	Mineral Fuels, oil, waxes & bituminous sub (32.88)	Mineral Fuels, oil, waxes & bituminous sub (31.67)
Nuclear reactors, boilers, machinery & mechanical appliances, computers (11.52)	Pearls, stones, precious metals, imitation jewellery, coins (18.77)	Pearls, stones, precious metals, imitation jewellery, coins (16.56)	Pearls, stones, precious metals, imitation jewellery, coins (19.61)
Pearls, stones, precious metals, imitation jewellery, coins (8.24)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (7.96)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (9.14)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (8.03)
Electrical machinery & equipments & parts, telecommunication equip., sound recorders (5.69)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders (5.09)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders (7.86)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders(7.20)
Organic chemicals (5.43)	Organic chemicals (3.01)	Iron and steel (3.77)	Organic chemicals (3.46)
Iron and steel (4.45)	Animal or vegetable fats, oils & waxes (2.80)	Organic chemicals (3.62)	Iron and steel (3.06)
Fertilizers(3.77)	Inorganic chem., org/inorg compounds of precious metals, isotopes (2.18)	optical, photographic, cinematographic, medical or surgical instruments etc. (1.82)	Plastics & Articles thereof (2.10)
optical, photographic, cinematographic, medical or surgical instruments etc. (2.59)	Iron and steel (1.89)	Animal or vegetable fats, oils & waxes (1.82)	Animal or vegetable fats, OILS & waxes (1.91)
Inorganic chem., org/inorg compounds of precious metals, isotopes (2.37)	optical, photographic, cinematographic, medical or surgical instruments etc. (1.78)	Plastics & articles thereof (1.72)	Fertilizers (1.76)
Animal or vegetable fats, Oils & Waxes (2.08)	Plastics & articles thereof (1.29)	Inorganic chem., org/inorg compounds of precious metals, isotopes (1.67)	Ores slag & ash (1.58)

Note: Figures in parentheses show percentage share of India's imports from World.

Source: UN Comtrade, 2011.

Table 3: Kazakhstan's Top Ten Export Commodities to World

1995	2000	2005	2010
Minerals, fuels, oils, waxes & bituminous (24.99)	Minerals, fuels, oils, waxes & bituminous (52.79)	Minerals, fuels, oils, waxes & bituminous (70.12)	Minerals, fuels, oils, waxes & bituminous (71.68)
Iron & steel (20.32)	Iron & steel (13.47)	Iron & steel(8.06)	Iron & steel(6.44)
Copper & articles thereof (11.73)	Copper & articles thereof (8.44)	Copper & articles thereof(5.41)	Inorganic chem., org/inorg compounds of precious metals, isotopes (4.56)
Inorganic chem., org/inorg compounds of precious metals, isotopes (7.75)	Cereals (5.73)	Ores slag & ash (3.32)	Ores slag & ash (3.82)
Cereals (5.90)	Pearls, stones, precious metals, imitation jewelry, coins(4.21)	Inorganic chem., org/inorg compounds of precious metals, isotopes (3.04)	Copper & articles thereof(3.76)
Nickel & articles thereof (2.89)	Inorganic chem., org/inorg compounds of precious metals, isotopes(2.75)	Pearls, stones, precious metals, imitation jewelry, coins(1.43)	Pearls, stones, precious metals, imitation jewelry, coins(2.12)
Zinc & articles there of (2.78)	Zinc & articles there of (2.08)	Zinc & articles there of(1.12)	Cereals(1.73)
Ores slag & ash (2.73)	Ores slag & ash(2.08)	Raw hides, skin & leather(0.91)	Milling industry products(0.97)
Nuclear reactors, boilers, machinery & mechanical appliances, computers (1.86)	Nuclear reactors, boilers, machinery & mechanical appliances, computers(1.03)	Cereals(0.86)	Zinc & articles there of(0.97)
Salt, sulphur, earth &stone, lime & cement(1.61)	Cotton, inc. yarn & woven fabrics(1.00)	Nuclear reactors, boilers, machinery & mechanical appliances, computers(0.67)	Aluminum& articles thereof(0.65)

Note: Figures in parentheses show percentage share of Kazakhstan exports to World.

Source: UN Comtrade, 2011.

Table 4: Kazakhstan's Top Ten Import Commodities from World

1995	2000	2005	2010
Mineral fuels, oil, waxes & bituminous sub (25.03)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (19.42)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (19.45)	Nuclear reactors, boilers, machinery & mechanical appliances, computers (17.99)
Nuclear reactors, boilers, machinery & mechanical appliances, computers (13.58)	Mineral fuels, oil, waxes & bituminous sub (11.45)	Mineral fuels, oil, waxes & bituminous sub (11.90)	Electrical machinery & equipments & parts, telecommunication equip.(10.40)
Electrical machinery & equipments & parts, telecommunication equip (6.24)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders (9.05)	Vehicles other than railways or tramway rolling stock (9.79)	Mineral fuels, oil, waxes & bituminous sub (9.91)
Vehicles other than railways or tramway rolling stock (5.61)	Vehicles other than railways or tramway rolling stock (8.98)	Rticles of iron and steel (9.03)	Rticles of iron and steel (7.37)
Rticles of iron and steel (4.34)	Rticles of iron and steel (6.52)	Electrical machinery & equipments & parts, telecommunication equip., sound recorders (8.83)	Vehicles other than railways or tramway rolling stock (4.32)
Sugars & sugar confectionery (3.25)	Optical, photographic, cinematographic, medical or surgical instruments etc.(2.55)	Iron and steel (3.80)	Pharmaceutical products (3.85)
Ores slag & ash (2.87)	Paper and paperboard, articles of paper pulp (2.27)	Railway or tramway locomotives, rolling stock, track fixtures & fittings, signals (2.65)	Plastics & articles thereof (3.26)
Rubbers & articles thereof (2.34)	Iron and steel (2.25)	Plastics & articles thereof (2.49)	Optical, photographic, cinematographic, medical or surgical instruments etc. (3.15)
Inorganic chem., org/inorg compounds of precious metals, isotopes (2.32)	Sugars & sugar confectionery (2.22)	Pharmaceutical products (2.39)	Railway or tramway locomotives, rolling stock, track fixtures & fittings, signals (2.83)
Salt, sulphur, earth & stone, lime & cement (2.20)	Plastics & articles thereof (2.15)	Optical, photographic, cinematographic, medical or surgical instruments etc. (1.98)	Furniture, bedding, cushion, lamps & lighting fitness nesoi etc. (2.71)

Note: Figures in parentheses percentage share of Kazakhstan's imports from World. Source: UN Comtrade.

Table 5: Sector-wise Revealed Symmetric Comparative Advantages of India and Kazakhstan with World (2010)

Sector (with HS Code)	Share (%)*		RSCA	
	India	Kazakhstan	India	Kazakhstan
01-05 Animal & Animal Products	1.93	0.18	0.0321	-0.8229
06-15 Vegetable Products	4.45	2.90	0.1965	-0.0155
16-24 Foodstuffs	2.28	0.33	-0.0949	-0.8045
25-27 Mineral Products	20.88	76.02	0.1686	0.6731
28-38 Chemicals & Allied Industries	10.04	4.72	0.0489	-0.3173
39-40 Plastics / Rubbers	2.41	0.09	-0.2817	-0.958
41-43 Raw Hides, Skins & Leather	1.01	0.10	0.2485	-0.715
44-49 Wood & Wood Products	0.53	0.05	-0.6499	-0.96
50-63 Textiles	12.31	0.21	0.4957	-0.9036
64-67 Footwear / Headgear	0.85	0.00	0.0775	-0.9954
68-71 Stone / Glass	15.49	2.16	0.6052	-0.2771
72-83 Metals	9.95	12.58	0.1486	0.2608
84-85 Machinery / Electrical	7.64	0.36	-0.5356	-0.9717
86-89 Transportation	6.85	0.24	-0.1785	-0.9523
90-97 Miscellaneous	1.32	0.06	-0.6129	-0.9797

Source: Author's calculations based on UN Comtrade, 2011.

Note: *Indicates percentage share of particular sector in total exports of country to World.

Table 6: India's Revealed Symmetric Comparative Advantages (RSCA) to Kazakhstan (Commodity-wise)

HS Code	Commodity	1995		2000		2005		2010	
		Share	RSCA	Share	RSCA	Share	RSCA	Share	RSCA
04	Dairy, Eggs, Honey, & Ed. Products	77.20	0.9997	0.003	0.4280	0.08	0.8176	0.000	-0.9484
06	Live Trees & Other Plants			0.20	0.9890	0.001	0.4532	0.001	0.0387
07	Edible Vegetables			41.65	0.9998	0.03	0.9820	0.05	0.8577
08	Ed. Fruits & Nuts, Peel of Citrus/Melons					0.07	0.9558	0.13	0.8777
09	Coffee, Tea, Mate & Spices					27.91	0.9998	29.27	0.9997
10	Cereals							0.005	0.7608
11	Milling Industry Products							0.001	0.5134
12	Oil Seeds/Misc. Grains/Med. Plants/Straw			0.02	0.7997	0.005	0.5986	0.009	0.7662
13	Lac, Gums, Resins, etc.					0.03	0.9881	0.05	0.9934
14	Vegetable Plaiting Materials							0.003	0.9755
15	Animal or Vegetable Fats, Oils & Waxes					0.008	0.2414	0.002	-0.4730
16	Ed. Prep. of Meat, Fish, Crustaceans, etc							0.001	-0.5108
17	Sugars & Sugar Confectionery					0.14	0.8230	0.04	0.4871
19	Cocoa & Cocoa Preparations					0.005	0.0009	0.01	0.3600
20	Preps. of Cereals, Flour, Starch or Milk	0.20	0.9634					0.40	0.9740
21	Preps of Veggies, Fruits, Nuts, etc.			0.16	0.9332	0.59	0.9779	0.30	0.9501
22	Misc. Edible Preparations					0.0001	-0.8825		
23	Beverages, Spirits & Vinegar							0.000	-0.9909
24	Residues from Food Industries, Animal Feed	7.43	0.9972			1.20	0.9926	0.008	0.2815
25	Tobacco & Manuf. Tobacco Substitutes					0.16	0.9081	0.37	0.9743
27	Mineral Fuels, Oils, Waxes & Bituminous Sub					0.16	0.1520		
28	Inorganic Chem, Org/Inorg					0.02	0.3512	0.18	0.8960

	Compounds of Precious Metals, Isotopes								
29	Organic Chemicals			1.09	0.9903	0.63	0.9883	1.01	0.9918
30	Pharmaceutical Products	12.67	0.9989	10.77	0.9967	22.61	0.9979	32.04	0.9976
32	Tanning or Dyeing Extracts, Dyes, Pigments, Paints & Varnishes, Putty, & Inks			0.04	0.7189	0.09	0.8965	0.29	0.9623
33	Oils & Resinoids, Perfumery, Cosmetic or Toilet Preparations	0.76	0.9884	1.10	0.9881	0.48	0.9673	0.91	0.9758
34	Soaps, Waxes, Scouring Products, Candles, Modeling Pastes, Dental Waxes			0.11	0.8274	0.05	0.7584	0.34	0.9571
35	Albuminoidal Sub, Starches, Glues, Enzymes					0.02	0.8865	0.000	-0.7977
37	Photographic or Cinematographic Goods					0.002	0.5844	0.01	0.8968
38	Miscellaneous Chemical Products					0.56	0.9541	0.68	0.9568
39	Plastics & Articles thereof	0.06	0.7632	0.76	0.9451	0.30	0.8486	0.39	0.8448
40	Rubbers & Articles thereof			1.51	0.9769	1.14	0.9767	1.10	0.9753
41	Raw Hides & Skins & Leather			0.01	0.9758				
42	Articles of Leather, Saddlery & Harness, Travel Goods, Handbags, Articles Of Gut			12.40	0.9999	7.65	0.9998	1.94	0.9990
44	Wood & Articles of Wood, Wood Charcoal			0.03	0.5242	0.007	-0.2883	0.13	0.8610
49	Printed Books, Newspapers, Pictures, Manuscripts, Typescripts & Plans			0.06	0.8605	0.060	0.8622	0.001	-0.8065
50	Silk, inc. Yarns & Woven Fabrics Thereof					0.03	0.9989	0.005	0.9863
51	Wool & Fine or Coarse Animal Hair, inc. Yarns & Woven Fabrics Thereof					0.02	0.9851		

52	Cotton, Inc. Yarns & Woven Fabrics Thereof			0.08	0.9870	0.02	0.8613	0.06	0.9811
54	Man-made Filaments, Inc. Yarns & Woven etc.			0.07	0.9828			0.000	-0.0854
55	Man-made Staple Fibers, Inc. Yarns etc.			0.04	0.9091			0.006	0.7696
56	Wadding, Felt & Nonwovens, Special Yarns, Twine, Cordage, Ropes & Cables & Articles							0.13	0.9787
57	Carpets & Other Textile Floor Coverings			0.04	0.9517	0.001	0.4314	0.06	0.9593
58	Special Woven Fabrics, Tufted Textiles, Lace					0.03	0.9952	0.007	0.9543
59	Impregnated, Coated, Covered, Or Laminated Textile Prod, Textile Prod For Industrial Use			0.49	0.9891			0.001	-0.0880
61	Articles Of Apparel & Clothing Accessories-Knitted Or Crocheted	0.16	0.9547	5.17	0.9996	6.54	0.9996	16.33	0.9997
62	Articles Of Apparel & Clothing Accessories-Not Knitted Or Crocheted	0.04	0.7745	3.05	0.9988	2.39	0.9979	4.90	0.9985
63	Made-Up Textile Articles Nesoi, Needlecraft Sets, Wom Clothing, Rags			0.42	0.9907	0.63	0.9945	0.76	0.9953
64	Footwear, Gaiters, & the Like			0.01	0.5150	0.02	0.7692	0.02	0.8446
65	Headgear & Other Parts					0.000	-0.3507	0.000	0.0570
66	Umbrellas, Sun Umbrellas, Walking-Sticks, Whips, Riding-Crops & Parts							0.000	0.1417
68	Articles Of Stone, Plaster, Cement, Asbestos, Mica Or Similar Materials			0.002	-0.5360	0.16	0.9218	0.11	0.8826
69	Ceramic Products					1.50	0.9891	1.46	0.9882
70	Glass & Glassware					0.04	0.7451	0.001	-0.7577
71	Pearls, Stones, Prec.			0.006	0.593	0.003	0.373	0.21	0.9856

	Metals, Imitation Jewelry, Coins				4		9		
72	Iron & Steel			1.67	0.973 4	4.10	0.981 6	0.01	- 0.4309
73	Articles of Iron and Steel			7.69	0.983 2	2.29	0.924 2	0.50	0.7411
74	Copper & Articles thereof					0.04	0.957 4	0.06	0.9445
75	Nickle & Articles thereof							0.000	- 0.8868
76	Aluminium & Articles thereof			0.005	- 0.079 2	0.05	0.744 7	0.02	0.4947
80	Tin and Articles thereof			0.000 1	- 0.737 9				
82	Tools, Spoons & Forks of Base Metals			0.30	0.969 3	0.19	0.953 2	0.22	0.9489
83	Miscellaneous Articles of Base Metals					0.015	0.615 8	0.02	0.5895
84	Nuclear Reactors, Boilers, Machinery & Mechanical Appliances, Computers	0.97	0.755 3	5.52	0.932 0	12.89	0.970 3	3.50	0.9023
85	Electrical Machinery & Equip. & Parts, Telecommunications Equip., Sound Recorders, Television Recorders			0.63	0.747 1	2.76	0.938 1	1.08	0.8240
86	Railway or Tramway Locomotives, Rolling Stock, Track Fixtures & Fittings, Signals					0.006	- 0.625 9		
87	Vehicles Other Than Railway or Tramway Rolling Stock			0.84	0.806 1	0.52	0.681 8	0.11	0.4412
90	Optical, Photographic, Cinematographic, Measuring, Checking, Precision, Medical or Surgical Instruments & Accessories	0.17	0.809 6	1.61	0.968 8	0.31	0.880 6	0.42	0.8592
91	Clocks & Watches & Parts thereof			0.04	0.979 0	0.01	0.937 0	0.04	0.9783
92	Musical Instruments, Parts & Accessories					0.001	0.685 6	0.000	- 0.6035
94	Furniture, Bedding, Cushions, Lamps & Lighting Fittings Nesoi, Illuminated			0.03	0.500 2	0.02	0.035 7	0.07	0.4632

	Signs, Nameplates & The Like, Prefabricated Buildings								
95	Toys, Games & Sports Equip, Parts & Acces.					0.000	- 0.827 6	0.01	0.7014
96	Miscellaneous Manufactured Articles	0.29	0.996 0			0.01	0.889 2	0.05	0.9577
97	Works of Art. Collectors' Pieces, Antiques					0.08	0.999 7	0.03	0.9843

Note: Blank cells indicate that the particular item is not included in trade lists in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

Table 7: Kazakhstan's Revealed Symmetric Comparative Advantages (RSCA) to India

HS Code	Commodity	1995		2000		2005		2010	
		Share	RSCA	Share	RSCA	Share	RSCA	Share	RSCA
12	Oil Seeds/Misc. Grains/Med. Plants/Straw							0.02	- 0.423 3
13	Lac, Gums, Resins, etc.							1.15	0.943 2
22	Misc. Edible Preparations							0.02	- 0.507 1
25	Tobacco & Manuf. Tobacco Substitutes	30.04	0.924 2	5.69	0.744 1	26.69	0.959 0	19.92	0.949 4
28	Inorganic Chem, Org/Inorg Compounds of Precious Metals, Isotopes							4.62	0.630 5
38	Miscellaneous Chemical Products							0.17	- 0.634 1
39	PLASTICS & ARTICLES THEREOF	2.90	0.056 0					0.002	- 0.998 2
41	Raw Hides & Skins & Leather	0.70	0.320 3	0.29	- 0.100 3	5.19	0.920 2	0.99	0.756 3
44	Wood & Articles of Wood, Wood Charcoal							0.003	- 0.989 0
50	Silk, inc. Yarns & Woven Fabrics Thereof			0.16	- 0.207 7				
51	Wool & Fine or Coarse Animal Hair, inc. Yarns & Woven Fabrics Thereof	2.96	0.714 5						
60	Knitted or Crocheted Fabrics			0.02	- 0.653 1				
71	Pearls, Stones, Prec. Metals, Imitation Jewelry, Coins	37.61	0.788 6	66.43	0.559 4	7.80	- 0.359 5	19.95	0.008 6
72	Iron & Steel			22.75	0.846 9	58.39	0.878 7	19.23	0.725 7
73	Articles of Iron and Steel			0.38	- 0.218 4			0.01	- 0.975 9

74	Copper & Articles thereof			0.03	0.854 6	0.14	0.606 0	0.10	0.647 8
75	Nickle & Articles there of	4.26	0.716 3					0.003	0.970 7
76	Aluminium & Articles thereof	7.06	0.980 2			0.47	0.063 1	0.02	0.937 5
78	Lead & Articles there of	10.71	0.967 0			0.35	0.474 0	1.42	0.792 0
79	Zinc & Articles thereof			4.22	0.917 2			31.95	0.995 1
81	Base Metals Nesoi, Cermets, Articles etc	1.03	0.749 6			0.19	0.406 7	0.34	0.703 0
82	Tools, Spoons & Forks of Base Metals			0.03	0.810 1				
84	Nuclear Reactors, Boilers, Machinery & Mechanical Appliances, Computers					0.76	0.847 0	0.04	0.989 0
85	Electrical Machinery & Equip. & Parts, Telecommunications Equip., Sound Recorders, Television Recorders					0.02	0.995 6		
86	Railway Or Tramway Locomotives, Rolling Stock, Track Fixtures & Fittings, Signals							0.04	0.375 3
96	Musical Instruments, Parts & Accessories	0.000	0.992 9						

Note: Blank cells indicate that the particular item is not included in trade lists in the particular year.

Source: Author's calculations based on UN Comtrade, 2011.

APPENDIX B

Results and Findings of Revealed Symmetric Comparative Advantages and Grubel–Lloyd Index.

Trade Specialization (RSCA)	
Sectors where India has specialization (Top Five)	Stone / Glass; Textiles; Raw Hides, Skins & Leather; Vegetable Products; Mineral Products.
Commodity those India should export to Kazakhstan (Top Ten)	Articles of Apparel & Clothing Accessories- Knitted or Crocheted
	Coffee, Tea, Mate & Spices
	Articles of Leather Saddlery & Harness, Travel Goods, Handbags, Articles of Gut
	Articles of Apparel & Clothing Accessories- not Knitted or Crocheted
	Pharmaceutical Products
	Made-up Textile Articles nesoi, Needlecraft Sets, Worn Clothing, Rags
	Lac, Gum, Resin etc
	Organic Chemicals
	Ceramic Products
	Silk, inc. Yarn & Woven Fabric thereof
Sectors where Kazakhstan has Specialization (Top Five)	Mineral Products; Metals.
Commodity those Kazakhstan should export to India (Top Ten)	Zinc & Articles thereof
	Salt, Sulphur, Earth & Stone, Lime & cement
	Lac, Gum, Resin etc.
	Lead & Articles thereof
	Raw Hides & Skin & Leather
	Iron & Steel
	Base Metals Nesoi, Cermets, Articles etc.
	Inorganic Chem., Org/inorg Compounds of Precious Metals, Isotopes
	Pearls, Stones, Prec. Metals, Imitation Jewelry, Coins
Intra Industry Trade (IIT)/ Two Way Trade (G-L Index)	
Sectors	Raw Hides, Skins, Leather etc; Transportation; Chemicals & Allied Industries; Stone / Glass; Vegetable Products; Foodstuffs; Mineral Products; Metals; Wood & Wood Products; Machinery / Electrical; Plastics / Rubbers; Miscellaneous.
Top Five Products with Highest Value of Intra-Industry Trade	Aluminum & articles thereof; Miscellaneous; Chemical products; Oil seeds/ misc. grains etc; Copper & articles thereof; Tools, spoons, forks of base metal.