

Supply Chain Effectiveness and Efficiency – Case of Chinese Onyx Industry

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Abstract

Supply chain management of an organization is a major determinant of the success of organizational success. If the supply chain becomes lean, then members of the supply chain will get benefits. Organizations should strive to improve the competitiveness of its supply chain management practices so that all members of the supply chain can obtain benefits from such competitiveness. Onyx industry of China is an important sector of China as lots of people are engaged in this area. The sector has international roots as raw materials are obtained from Pakistan whereas finished products are sold in different Asian and European countries. There are some factors, which may enhance the competitiveness of supply chain of Onyx industry. These factors include transportation-in and transportation-out that has to be incurred by the members of supply chain. In the case of Onyx industry, transportation charges (in and out) are leading to loss of competitiveness of supply chain. Further to this, the technical capability of all the members of the supply chain is also important as because of the high level of technical capability, manufacturers can produce goods in efficient ways, which adds to the effectiveness of supply chain. In the case of onyx extraction, technical capabilities of onyx extractors of Pakistan were not high which lead to loss of competitiveness. However, Chinese manufacturers obtained the better quality of onyx raw material from Pakistan. Likewise, extraction companies of Pakistan are not earning cost-efficiency which lead to loss of competitiveness. Further to this, political and militant activities in Pakistan had also resulted in delays in delivery as lead time had increased. The political and legal factors of Pakistan have caused problems for supply chain competitiveness of onyx industry of China. There are different ways through which inter-government relations are harnessing supply chain competitiveness, and there are other areas in which such ties between the two parties can benefit them. Because of good relations between China and Pakistan, Onyx manufacturers of China have favored access to onyx resources of

Pakistan. In the absence of this, onyx resources can be sold to India. Likewise, Karakoram highway, which was developed by China, is also supporting transportation of onyx raw materials to China. Government can take different steps in helping businesses in increasing their supply chain competitiveness.

Keywords: Supply Chain Management, China, Government

1.0: Introduction

This section of research paper will present background of research, research problem as well as research question. Moreover, this section will also introduce the purpose of this research paper, which will be followed by limitations.

1.1: Background

This section of the research paper will present the background of the investigation.

1.1.1: Supply Chain Management

Thun and Hoenig (2011) highlighted that in order to improve its competitive position, reduce its cost and develop differentiation, business may not rely on its own resources and competencies only, rather it may involve other individuals and organizations that may provide related products and services which are needed by the business. Such an involvement of firms that provide goods and services, which are required by the organization leads to the development of the supply chain of the organization. Waters and Rinsler (2014) suggested that supply chain management (SCM) involves arranging private as well as external activities of the business in such a way that business engages external vendors which provide supporting goods and services to the firm and help business in the provision of value to the end customers. Li et al. (2014) suggested that SCM involves movements of tangible goods and/or services from one member of the supply chain

(supplier) to another member and from that member to the end consumer/customer. Organizations should identify, select, develop and maintain its relations with its suppliers with an aim to increase value for all related parties including members of supply chain, shareholders and end-consumer. Krajewski et al. (2012) added that there are number of factors which may have influence on the competitiveness of SCM. These factors should be identified, considered and evaluated. If these factors are supporting, then their positive impact should be capitalized by the organization. On the contrary, if such factor is not beneficial then the firm should develop methods through which such negative influence of factors can be mitigated. This would increase effectiveness and efficiency of supply chain. If the supply chain of a business is effective and efficient as compared to another business then it would become source of competitive advantage for the firm (Liao et al., 2011).

1.1.2: Competitiveness of Supply Chain

Fawcett et al. (2014) suggested that with the increase in awareness of SCM related practices, business are trying to optimize their relations with suppliers so that competitiveness of supply chain can be improved. Trkman (2010) suggested that over the period of time, due to development of transport and communication infrastructure, deregulation of economies and market convergence, internationalization of businesses has increased. Porter and Tanner (2012) regarded international trade as a basis for gaining competitive advantage. From last many decades, companies are selling their products and services in the global markets and many of them, at the same time, acquire resources needed to produce such goods and services. The purpose of such internationalization of business activity is to maximize value for all members of supply chain. For instance, customers in the international market may obtain better quality of finished goods as compared to the products, which are available to the customers from their local market. So, customer will be well off. In the case of organization and its shareholders, if domestic demand is stagnant or has become saturated, then exporting to other countries will bring additional revenues. Likewise, suppliers can also produce its products on large scale and export those to international markets. It would support vendors in earning economies of scale as well as make more profits. Fawcett et al. (2014) suggested that if any of these members of supply chain would have an advantage then there are chances that rest of the members of supply chain could also get benefit out of it. The cooperation between the members of supply chain as well as support from other related parties, including Government, can enhance the competitiveness of SCM

1.1.3: Public Policy and SCM

Alawneh et al. (2013) highlighted the role of Government in the economic development of the country and suggested that there are number of ways in which Government can support businesses. For instance, Government of a country creates market mechanism as well as market infrastructure through which businesses can be supported. Likewise, Government can also develop and implement policies which may harness the growth of an economy. Verbeke (2013) suggested that Government of a country may deregulate economy and as a result of this, businesses can import required raw materials and components from abroad. This may enhance effectiveness and efficiency of operations as it has developed its supply chain in such a way that overall competitiveness of business has improved. Sasagawa et al. (2014) added that there are various methods through which Government of a country may influence SCM competitiveness of an industry. The Government of a country can devise such policies through which businesses can quickly enter into contracts with foreign parties. Government may reduce tax rates on imports as well as may provide credit on easier terms to the organizations which are inclined towards international trade.

1.1.4: Overview of Chinese's Onyx Sector

Tse (2012) suggested that marble and tile industry of China is one of the leading marble and tile industry of the world. The industry is not only catering to the needs of the local market but also at the same time, every year, lots of foreign exchange is earned by China through exporting value added marble and tile items. Firms which produce onyx related items is an important sub-sector of marble industry of China. Onyx is available in different colours including purple, blue, black, red and white. There are various onyx items which are exported to other countries including tiles, columns, showers, vases, counter-tops, sinks, balls, fireplaces, etc. Kynicky et al. (2012) highlighted that owing to the availability of cheap labor and China's proximity to factors of production especially raw materials, the onyx industry of China became competitive over the years. The onyx manufacturers obtain natural marble both from China as well as from Pakistan. China exports finished products to Saudi Arabia, UAE, Dubai, Bahrain and many countries across the European Union. Cheung and Gill (2013) highlighted that Kingdom of Saudi Arabia alone has an export potential of US\$ 66 billion. Very recently, the onyx industry of China suffered a lot as the competition from Russian, Middle Eastern, American and Malaysian companies has increased. The firms from these countries have started importing raw materials and attempt to capture markets where China had been

selling previously. Kynicky et al. (2012) highlighted that largest supplier of onyx related raw materials to China is Pakistan. Pakistan has over 350 million tonnes of marble and granite which it can export to other countries as well as use for in-house needs. Recently, Italian, European and Korean firms have shown interest in entering in to joint ventures with Pakistani counterparts and indulge in extraction, refinement and export of marble especially onyx. Cheung and Gill (2013) highlighted that a major blow to onyx industry of China came in the form of emergence of India as one of its main competitors in the international market. Contrary to Chinese practices where China has to import raw materials from Pakistan and other countries, Indian supply chain is based on India's own natural reserve. This and other factors has made supply chain of Chinese firms less competitive as compared to India. Likewise, export of raw material by Russian, Middle Eastern, American and Malaysian companies may also make situation worse for China as these importers can process raw material locally and sell it to local customers thus reducing export of China to these countries.

1.2: Problem Discussion

This section will present problem discussion related to this research project.

1.2.1: SCM Related Challenges And Influence of Firms' Competitiveness

Porter (2008) highlighted that competitiveness of a business is associated with maintaining and expanding its market position in such a way that over the period, sales and profits also grow. It is a dynamic concept and with the change in business conditions (Internal and external), extent of competitiveness also changes. Among various factors which influence the competitiveness of an organization, SCM is a major one (Liao et al., 2011). Carter and Easton (2011) argued that management of international supply chains is usually not an easier task. The related parties have to counter not only local political, social, legal, technological and economic factors but also at the same time, such factors also has to be considered of the country who are member of the supply chain. An analysis and management of factors influencing supply chain needs careful attention. Brewer et al. (2013) suggested that the very nature of interconnectedness of firms in the supply chain has created a situation in which success or failure of one of the firms may jeopardize the whole supply chain. Depending on the situation, businesses should work hard to overcome the existing barriers or challenges and should come with a strategy that such factors should not influence firms' performance in future. Maruchek et al. (2011) highlighted the case of the pharmaceutical industry of America and suggested

that because of failure on the part of suppliers, American firms had to suffer lots of losses and had lost their market competitiveness. These problems become a trouble for these companies. Prajogo and Olhager (2012) emphasized the importance of overcoming challenges related to supply chain and attempt to overcome those as competition has mounted to international level and there are chances that if competitiveness is lost then it would be difficult to be gained back.

1.2.2: Role of Government As An Economic Manager

Thompson and Martin (2010) highlighted the role of Government of a country in the management of an economy and suggested that there are various ways in which Government can support or hinder economic activities in a country. For instance, Government may restrict import of certain items in a country so that local industry can be saved. On the contrary, Government may remove import barriers so that local end-customers, as well as businesses, can obtain those. Helfat and Peteraf (2003) highlighted that international relations of Government with Governments of another country may also influence the economic development of a country in general and the growth and prosperity of a sector in specific. Likewise, Hill and Jones (2007) highlighted the influence of businesses and suggested that Government of a country formulates the fiscal and monetary policy which has an impact on the macro-economical environment as well as industries operating in the country. Further to this, Government of a country may enter into a preferential treatment agreement with another country through which country can obtain benefits for itself as well as for its people. All of these factors have a direct influence on the competitiveness of supply chain of firms. So, if SCM of a firm no longer remains competitive and that too because of factors which are under the control of the Government then one should analyze the role of Government so that SCM's competitiveness can be restored.

1.3: Research Question

The above sections asserted the importance of SCM related activities for the businesses and suggested that effectiveness and efficiency of SCM may enhance competitiveness of firms in the supply chain. The government of a country has control over the economic activities of the country. Because of this control, decisions of Government may either harness or hinder growth of business. One such area is supply chain management. In the case of Chinese onyx industry, because of competition from the foreign firms in different areas, the sector is losing its competitiveness so the analysis is to be carried out in this field so that sector can get benefit out of this.

Following is the research question for this paper.
How does Chinese Government can help Onyx industry in increasing supply chain effectiveness and efficiency for enhancing overall business competitiveness?

1.4: Purpose of Research

The essence of this research is to identify and evaluate different ways by which Government of a country can assist local business in the form of support for the enhancement of supply chain competitiveness. In this regard, the researcher will evaluate the case of Onyx industry of China. Chinese onyx is losing its supply competitiveness effectiveness due to competition with firms from other parts of the world.

1.5: Limitations

There are some limitations of this research.

- 1- The findings of this study are mainly based on secondary data. Bryman and Bell (2007) proposed that secondary should be used with caution as this is collected and processed for some other research and may not be current.
- 2- There may be other ways through which competitiveness of supply chain management practices can be increased. However, the focus of this paper would remain on the role of government in enhancing the competitiveness of the firm.
- 3- There are numerous ways through which government can influence supply chain management practices. The area where the role of Government is discussed in this paper is not exhaustive.

2.0: Theoretical Perspective

This section will present theory related to the research problem, which was given in the previous section. The major topics covered in this section include the basis of effectiveness and efficiency of the supply chain as well as ways through which Governmental actions can improve supply chain competitiveness of an industry.

2.1: Supply Chain Management

Waters and Rinsler (2014) proposed that SCM deals with arranging internal and external activities of an organization so that it can obtain goods and services from its vendors in such a way that overall effectiveness and efficiency of operations may increase. Li et al. (2014) highlighted nature of SCM practices and reported that SCM is concerned with movements of tangible goods and services from one member of the

supply chain (supplier) to another member and from that member to the end consumer/customer. Krajewski et al. (2012) added that there are some factors which may have an influence on the competitiveness of SCM. These factors should be identified, considered and evaluated. If these factors are supporting, then their positive impact should be capitalized by the organization. If the supply chain of a business is effective and efficient as compared to another business, then it would become a source of competitive advantage for the firm (Liao et al., 2011).

2.2: Factors Influencing Competitiveness of SCM

This section will highlight various factors, which have an impact on the competitiveness of SCM. These factors are given below.

Thun and Hoenig (2011) highlighted the influence of transportation cost on the competitiveness of supply chain and suggested that more the distance between the supplier and the organization, higher would be the shipping cost (Transportation In). Likewise, more the distance between the organization and the end-customers, higher would be the transportation cost (Transportation Out). Krajewski et al. (2012) suggested that from a lean operations perspective, both transportation-in and transportation-out are a waste and has an adverse influence on the lean supply chain management practices. Further to this, Sana (2011) suggested that while selecting a supplier, the organization should consider the technical competence of the provider. If the vendor has the skills and improved technology, then his operations would be effective as well as efficient. It would ensure that overall operational cost of supplier decreases. Consequently, the supplier would be in a position to offer cost saving related benefits to the organization and hence cost related competitiveness of the segment would be enhanced.

Zu and Kaynak (2012) highlighted that an important determinant in the selection of the supplier for the attainment of competitiveness of supply chain is the quality of products offered by the supplier to the organization. There are different ways by which such quality of goods may enhance the level of competitiveness. For instance, better quality of products would create a situation in which organization does not have to rework as there would not be any faulty products in the system. Likewise, since products would be of right quality, the organization does not have to return it to the seller. Further to this, because of better quality, the organization would be in a position to charge the high price of its finished products.

Hugos (2011) highlighted that competitiveness of supply chain could be increased by selecting a supplier who earns cost efficiency. It is a significant motivation for moving out from own value chain and involving an external party in the provision of goods and services. There are different ways through organization can get such cost efficiency. These include trained labor, lower salaries, favored access to natural resources, economies of scale, Governmental support, use of technology, etc. (Mansouri et al., 2012).

Williamson (2008) highlighted another way of developing lean supply chain and suggested that if an organization gets success in identification of a reliable supplier who can deliver goods/ services in promised time, then the organization can work with the minimum level of stock. It would save stock holding cost as well as financing cost as the organization does not have to keep buffer stock. Such cost saving would enable the organization that it can develop a lean supply chain. Williamson (2008) further highlighted that lean supply chains could also be drawn up by selecting a supplier, which has less lead time. Since businesses are trying to develop international supply chains, so the issue of lead-time has become a major problem in developing lean supply chains. Consequently, organizations also have to maintain massive stock levels which increase stock holding cost, pilferage, stock obsolescence, etc. All of these are wastes and would be significant obstacles to the development of lean supply chains.

Casson (2013) highlighted an important concern in the development of international supply chain and suggested that organizations that are indulged in the development of international supply chains have to tackle both local as well as global macro environmental factors. These factors increase challenges for the business and may have an adverse influence on the competitiveness of the supply chain. A specific example could be a strike in international markets, which may increase lead time causing trouble for lean supply chain related practices. On the contrary, Casson (2013) also put forth contrasting view and suggested that there are chances that there are chances that in the foreign country, suppliers have exclusive access to raw materials which are needed by the organization. If such products are made in-house or within the country, then it would be more expensive. In such circumstances, importing from the foreign buyer is the only wise option which may yield competitiveness of supply chain.

Charan (2012) highlighted that to achieve a sufficiently efficient and effective supply chain, members of the supply chain should start cooperation with each other in a way that the members of supply chain start sharing profits and losses of each other. He highlighted the case of the automobile industry and argued that to achieve a global status truly, members of

the international auto industry should integrate with each other and develop a global supply chain. Having a higher level of collaboration and cooperation can do this. Moreover, members of the internal supply chain should involve each other in enterprise resource planning. The extent of the relationship between the members should be to a level that the members should be geographically apart from each other yet on the business level they should be a partner in profits and losses. Having cross-company ownership can ensure this. Share exchange between the members of the supply chain can lead to cross-company ownership. The thrust of trust and cooperation between the members of the supply chain should be such that they should not run distant facilities separately rather they should cooperate with each other and jointly analyze business trends and complicated business situation. This cooperation and collaboration among the members will help businesses in flourishing together and share risks of losses and other business risks.

2.3: Role of Government In Increasing Supply Chain Effectiveness

Charan (2012) highlighted the issue of lean supply chain at Government level and suggested that sometimes harmonious relations between two neighboring countries can also help organizations in developing lean supply chains. These are situations where such neighboring countries give each other favorite nation status and start trading with each other on preferential basis. It may include eradication of tariffs, quotas, taxes, etc. All of these factors support the development of lean supply chain.

3.0: Analysis and Discussion

In this section, analysis and discussion on related aspects of the research paper will be presented.

In the case of the onyx industry of China, Pakistan exports lots of material to China. China purchases almost all the onyx that Pakistan exports to any foreign country. Consequently, firms have to incur transportation cost for importing it to China. Likewise, the main buyers of onyx products are located in foreign countries. Once, final products are ready; they have to be exported to foreign countries including Kingdom of Saudi Arabia, UAE, European countries, etc. Krajewski et al. (2012) regarded transportation in and out, both, a waste as these do not add value. So, these two are obstacles for the implementation of the lean value chain. In the case of China, Government has entered into a long-term contract with Government of Pakistan. As a result of this agreement, an extension of Karakoram highway is to be carried out in the next three

years time. As a consequence of this extension, the distance between China and some of its foreign markets will be reduced from 45 days to 12 days. By doing this, Government of China will help the onyx industry in developing a more competitive industry. Such exclusive and favored access to China will contribute to overcoming the loss of competitiveness of onyx industry to Indian counterparts.

The technical competency of the suppliers of onyx to Chinese is not much. Most of the onyx is available in Baluchistan and Khyber Pakhtoon Kha. Both of these provinces are not very educated, and generally, production system in these two provinces are not very advanced (Kiani et al., 2015). The technical competencies of people who are engaged in the extraction of onyx are very less. Consequently, they are using the primitive and less advanced method of extraction of onyx. Most of the onyx is extracted by using explosion method of extraction. Due to the bomb explosion, the waste rate of onyx is around 80 per cent which is a major challenge to implementation of attainment of a high level of supply chain competitiveness.

Further to this, the raw onyx available in Pakistan is among the best onyx in the world. Pakistan has over 60 different types of onyx, marbles, and granite which it can export to foreign markets. Such excellent quality of onyx is not even available in India. As mentioned earlier, China purchases all onyx which is extracted by Pakistani producers. Such acquisition of all the extracted was made possible because of harmonious relations between Government of Pakistan and Government of China. Pakistani Government did not object trade between Pakistan and China. It is important to mention here that Pakistan does not enjoy good relations with India, which hampered bilateral trade between two countries. Courtesy of Pak-China relations, the onyx industry of China has access to superior quality of onyx, which may support industry in increasing its supply chain competitiveness. This stiffness of Pakistani onyx, to which China has favored access, is high which results in less wastage during the cutting process. It increases the competitiveness of supply chain as the level of waste is less. At the same time, high quality of raw materials also enables Chinese producers that they can charge high prices. It also increases the level of competitiveness as higher prices lead to more profits.

As mentioned earlier, that onyx is obtained from Pakistani people who are residing in provinces of Baluchistan and Khyber Pakhtoon Kha. People are not very educated and are using old methods of extraction. Labour is not very trained, and there is an insufficient use of technology in this area. The Government of Pakistan is also not paying lots of attention in this area,

so margins of industry are small. Now, this has both advantages and disadvantages. Where non-availability of trained staff and technology is a problem for supply chain competitiveness there, it leads to lower profits for the people who are engaged in extraction. It increases supply chain competitiveness as lower profits would result in lower sales prices and higher value for final customers. Likewise, transportation of onyx from Khyber Pakhtoon Kha to China is carried out without any delay as it is transported through Karakoram Highway, which is quite developed, and a quick way of transportation between China and Pakistan.

In the case of Onyx extraction in Pakistan, there is as such no coordination between the onyx manufacturers of China and onyx extractors of Pakistan. Pakistani counter parts continue extracting materials and piling up. Whenever required, Chinese manufacturer purchases it from Pakistan. However, the nature of the product is such that Pakistani counterparts do not have to incur any specific storage cost or stock obsolescence issue. They just have to face the opportunity cost of money which is tied up, but that is not substantial. They can stop further extraction at any time. It has a positive influence on the competitiveness of supply chain.

The political, legal and social disturbance in Baluchistan and Khyber Pakhtoon Kha is one of the biggest problems faced by the people of these two provinces. Because of terrorist activities, foreign investment is not coming in these areas. Moreover, because of terrorist activities, operations of existing businesses are also jeopardized. Lots of cases were reported in recent few months where terrorists stop vehicles and set them to fire. Likewise, strikes in different parts of Pakistan are also a major challenge for the transportation of onyx to China. These things are reducing the competitiveness level of the supply chain of China. The problem of Pakistan has become problems of China. The government of China, having harmonious relations with Pakistan, should carry out some activities so that these challenges can be managed.

Considerable effectiveness in the supply chain can be achieved if the extraction techniques used in this area are improved. If the members of supply chain start cooperating with each other, then overall effectiveness and competitiveness of supply chain can be enhanced. For instance, onyx extraction sector of Pakistan is not an organized industry. One of the underlying reason for this is that onyx extraction parties fear that if they would allow Government to participate in this area, the Government will have an idea of their business activities and would start taxing them. They refrain from receiving support from Government. At the same time, since Government does not receive any revenue from this area, so it does not invest much in this sector.

Likewise, Chinese companies also do not cooperate much with the extraction companies of Pakistan as former that if later would learn tricks of trade then prices of extracted onyx will be increased. Such non-cooperation leads to a wastage of 80 percent, which is not an ideal condition. This fear of benefit of other parties in the supply chain is resulting in a reduction in the competitiveness of supply chain of onyx. In all of this situation, Government of China is the one who earns tax money on the sales of onyx by Chinese companies to foreign markets. However, even the Chinese government is not paying much attention to this area, so supply chain competitiveness is compromised in this area.

4.0: Conclusion and Recommendations

Based on the analysis carried out in the previous section, conclusion, and recommendations related to research are given below.

4.1: Conclusion

Supply chain management is a major determinant of the success of an organization. If the supply chain becomes lean, then members of the supply chain will get benefits. Organizations should strive to improve the competitiveness of its supply chain management practices so that all members of the supply chain can obtain benefits from such competitiveness. Onyx industry of China is an important sector of China as lots of people are engaged in this area. The sector has international roots as raw materials are obtained from Pakistan whereas finished products are sold in different Asian and European countries of the world. There are many factors which may enhance the competitiveness of supply chain of an industry. These factors include transportation in and transportation out that has to be incurred by the members of supply chain. In the case of Onyx industry, because of transportation in and out is leading to loss of competitiveness of supply chain. Further to this, the technical capability of all the members of the supply chain is also important as because of the high level of technical capability, manufacturers can produce goods in efficient ways, which adds to the effectiveness of supply chain. In the case of Onyx extraction, technical capabilities of onyx extractors of Pakistan was not high which lead to loss of competitiveness. However, better quality of onyx raw material, which was obtained by manufacturers of onyx of China. Likewise, extraction companies of Pakistan are not earning cost-efficiency which lead to loss of competitiveness. Further to this, political and militant activities in Pakistan had also resulted in delays in delivery as lead times have increased. The political and legal factors of Pakistan have caused problems for supply chain competitiveness of onyx industry of

China. There are some ways through which inter-Government relations is harnessing supply chain competitiveness, and there are other areas in which such ties between the two parties can be used. The link between China and Pakistan is giving favored access to onyx resources of Pakistan. In the absence of this, onyx resources can be sold to India. Likewise, Karakoram highway, which was developed by China, is also supporting transportation of onyx raw materials to China. There are many ways by which Government can support the competitiveness of supply chain.

4.2: Recommendations

Following are recommendations for concerned stakeholders.

1- Government of Pakistan should ensure proper law and order situation in Pakistan. It is causing a major problem, not only, in the transportation of goods from Pakistan to China but also at the same time; it is also causing problems in the extraction of onyx in Pakistan.

2- Government of Pakistan should start to focus on onyx extraction sector. This industry is earning lots of foreign exchange for the country. If this industry is supported, then the level of earnings can be increased. In this regard, Government should develop industry development infrastructure including Government departments, which can provide support to onyx clusters. A technical training department, for instance, can make things better.

3- Based on close relations between China and Pakistan, Government of China can invest in the onyx industry of Pakistan. If the competitiveness of sector will be increased, Chinese Government can directly obtain benefits from this in the form of an increase in taxation revenues.

4- Based on close ties between China and Pakistan, a Government level arrangement can be made where Chinese firms can enter into joint ventures with Pakistani extraction companies and can use better technology for extraction

5- The investment of China in infrastructure sector of Pakistan will increase the competitiveness of supply chain as Chinese manufacturer will have earlier access to foreign markets.

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