



**ECONOMIC RELATIONS
BETWEEN
TURKEY AND CHINA**

***SECTORAL ROUND TABLE
MEETINGS***

TUSIAD

4 OCTOBER 2019

SECTORAL ROUND TABLE MEETINGS - 1 TRANSPORTATION AND LOGISTICS SECTORS

China's Belt and Road Initiative (BRI) offers an important opportunity for the development of the transportation and logistics infrastructure in Eurasia. The projects which have already been completed in the context of this initiative or which are still in progress contribute significantly to the development of the physical infrastructure of the countries in the region. Due to its geographic position as a link between Europe and Asia, Turkey finds itself at a key junction of BRI. Seen from Turkey's position, BRI promises benefits such as the development of the country's domestic transportation and logistics infrastructure, as well as the strengthening of Turkey's external transportation networks, making them more efficient and thus increasing its export potential. These issues were discussed at the round table meeting dedicated to the transportation and logistics sector, which was attended by sector professionals and representatives of relevant public institutions. The participants developed political proposals designed to actively position the country in the Belt and Road Initiative.

PORTS AND MARITIME ROUTES

Currently, the only major project in Turkey that may be addressed in the context of BRI is the Kumport container port in Istanbul Ambarlı. In 2015, a consortium of Chinese companies led by Cosco Pacific acquired a 65 percent share of the port for a price of \$940 million. In the following years, the port's capacity was expanded through additional investments. Today, Kumport plays an important role both in Turkey's logistics infrastructure and within BRI as part of the logistics network of Chinese harbour projects in the Aegean and the Mediterranean region such as Piraeus, Haifa and Iskenderun. However, Kumport has no rail connection and the nearest logistics centre by road is 20 km away in Halkalı. These deficiencies constitute a weakness.

There are other ports of importance in Turkey's cooperation with China, with Çandarlı, Zonguldak Filyos and Mersin as the main contenders. Turkey has already expressed its desire to cooperate with China in this area. However, the Chinese side has not taken concrete steps with respect to the harbours mentioned here thus far. It seems that Chinese companies prefer the restoration of existing harbours to the construction of new ports. We are of the opinion that Turkish ports could be utilised in this context.

TÜSIAD is convinced that a comprehensive discussion of areas of economic cooperation between Turkey and China, which includes the stakeholders of the respective sectors, yields beneficial outcomes. For this purpose, sectoral round table meetings were held in the months of October-November 2019.

The event, which focused on three sectors of prime importance, i.e. transportation/logistics, tourism, information and communication technologies, was organised in coordination with TÜSIAD China Network. Public and private sector stakeholders participated in the meetings and formulated proposals to be submitted to decision-makers. We worked with Atli Global as a content partner in the preparation stage of the meetings and in the reporting process.

When addressing the issue of attracting Chinese investments for Turkish container ports, it must be taken into account that the majority of ports in Turkey do not yet operate with full capacity and that the general situation is characterised by excess capacity. For this reason, the more pertinent question is what contributions such investments would make to the Turkish ports and to the country's economy in general, and how they would generate added value. Ninety-five percent of the containers handled at the port of Piraeus are not destined for the Greek market but forwarded to third countries. Irrespective of the benefits of port development for a country's economy, the example of Piraeus shows that their use as transit ports only does not generate much added value for the country. For this reason, if it is decided to work with China on port development in Turkey, priorities need to be identified on how to generate value that goes beyond simply serving as transit points.

RAIL CONNECTIONS

Rail connections and high-speed railway lines play a prominent role among BRI projects. We are of the opinion that an intensification of the cooperation in the area of rail connections between Turkey and China concerning BRI will contribute to the development of our country's railway infrastructure, and, by connecting harbours to the railway network and improving the country's external railway links both quantitatively and qualitatively, to the overall improvement of Turkey's export potential. In 2015, Turkey and China signed a "Railway Agreement" which came into force in 2017. This agreement provides

a suitable basis for cooperation in this area. However, no concrete progress has been made on the Kars-Edirne high-speed railway line project which has been on the agenda for almost ten years and which is planned to be constructed in cooperation with China. Additionally, it is still unclear how a railway line that transverses Turkey, connecting China and Central Asia to Europe will pass through the Bosphorus Straits, to what extent the Yavuz Sultan Selim Bridge will be used, and whether or not freight will be transported on the Marmaray line.

The Baku-Tbilisi-Kars railway line entered into service in October 2017 and constitutes a significant step in connecting Turkey, the Caucasus, and Central Asia. In 2015, Turkey and China signed a memorandum of understanding on harmonizing the Silk Road Economic Belt, the 21st Maritime Silk Road, and the Middle Corridor Initiative, which came into force in 2017. This agreement prepared the necessary legal basis for the integration of said railway line into BRI. However, implementation-related problems show that it is still too early to establish a connection between the Baku-Tbilisi-Kars railway line on the one hand and China and BRI on the other. Despite the great demand for the railway line, customs procedures are still very time-consuming. At Kars, from customs alone containers may have to wait for six days to be processed. Other problems emerge after leaving Baku for passage to the Caspian Sea and entry into Central Asia. On and offloading from train to ship and ship to train cause a serious loss of time. Another question refers to what load the trains returning from the east to Turkey may

carry, because if they return empty this will increase costs. While this situation reflects the current status of the Middle Corridor connecting Central Asia and the Caucasus to Turkey, it has been reported that freight transport along the North Corridor, connecting Kazakhstan, Russia, and Germany, has already begun. Meanwhile, it is possible within 15 days to send containers by train from China to the European market. One such connection is between Wuhan in China and Duisburg in Germany, and the other between the Chinese city of Chengdu and the Dutch city of Tilburg. While some are of the opinion that the goods reaching Europe could transit to Turkey within a certain period of time, others see problems in its implementation. In particular, the current conditions of freight transport by road may lead to an unfavourable cost-time balance which could discourage companies from pursuing this route.

Concrete cooperation with China on railway infrastructure projects within the borders of Turkey, and on the Kars-Edirne high-speed railway line in particular, would contribute to the development of Turkey's economy. However, it should be stressed in this context that such cooperation must not be limited to the laying of rails; rather, it should include joint projects with China which ensure that Turkish companies generate added value in various ways, featuring the manufacturing of rail carriages as a priority area of cooperation.

ROAD CONNECTIONS

One of the main goals of our country in the area of transportation and logistics is to increase the share of passenger and freight

transport by rail and to reduce the share of road transport. However, road transport continues to dominate in both areas. In 2017, Turkey and China signed the "Treaty on International Freight and Passenger Transport by Road". However, the agreement, which aims to develop road transport, has not yet been ratified by the Turkish parliament. This constitutes a significant obstacle to the advancement of road transportation between the two countries and to third countries as well as the transit traffic through both countries. Besides that, serious problems persist between the two countries regarding their respective road transport practices. Challenges frequently mentioned in this context are the difficult and costly passage of the Caspian Sea, lack of sufficient Turkish TIR drivers for such operations, complaints by drivers regarding the issue of visas for the countries in the region, for Turkmenistan in particular.

AIR CONNECTIONS

We have recently seen positive developments in the air connections between Turkey and China. Turkish Airways has recently received permission to fly between Istanbul and Xi'an, while Chinese airlines have introduced new routes to Turkey. This has led to an increase in the air transport capacity between the two countries. However, considering the business volume between Turkey and China and growing tourist figures, the current capacity is insufficient. There are only 21 scheduled Turkish passenger flights and 14 cargo flights per week. It has been requested to increase the numbers to 42 and 21, respectively. However, a positive answer from China is still pending.

SUMMARY AND CONCLUSION

With respect to its geographical position and the associated global geopolitical balances, Turkey occupies a valuable place in the Belt and Road Initiative. At this point, it is important from Turkey's perspective, to translate this value into more business and a larger trade volume. With respect to its position and the size of its economy, the country's potential for large-scale BRI investments is very high. However, in order to mobilize this potential, Turkey must first define its own needs and priorities. Subsequently, focus areas need to be defined which, in the context of BRI, are attractive for China. Common issues with respect to China's strategy also need to be addressed. Once this has been achieved, the necessary steps to advance these issues should be taken. BRI creates mutual dependence between Turkey and China. In order to develop its own infrastructure and to increase its trade potential, Turkey needs China, while China needs Turkey in order to establish the most efficient and least risky connection between Asia and Europe. This interdependence will only increase over time. If the process is managed in a planned and well-thought-through manner, this interdependence could lead to results which may be qualified as a win-win. It will also generate positive outcomes for other areas of the Turkish economy besides transportation and logistics.

POLICY RECOMMENDATIONS

1. Turkey has not yet developed a vision with a comprehensive perspective of the Initiative in its entirety, instead, Turkey has only made use of individual BRI projects (such

as Kumport, Kars-Edirne, etc.). Under the leadership of the relevant public institutions from Turkey, a BRI strategy paper should be prepared in collaboration with organizations representing business community and universities.

2. It would be beneficial to establish a structure to coordinate all involved stakeholders and ensure effective implementation of policies. This structure should also participate in the preparation process of the strategy paper mentioned under policy recommendation 1.

3. One of the most important issues facing international freight transport are time-consuming customs procedures. Turkey and Iran are currently working on measures to speed up those procedures. Similar activities should be initiated with other neighbouring countries.

4. BRI furthers the goals of strengthening both the physical and the digital connections between countries. For Turkey to take its place on the "Digital Silk Road" it would be beneficial to design and implement joint programmes with other BRI countries and, in particular, with China.

5. The development of routes and corridors which, in the context of BRI, bypass Turkey or have the potential of doing so, should be monitored. In order to position itself as a first choice, Turkey should place its emphasis on diplomatic initiatives in the respective countries and on the joint development of transportation strategies. In this sense, it would be very beneficial to work with Iran on BRI's South Corridor.

6. Efforts should be continued to increase the number of flights by Turkish airline companies to China.

7. In order to achieve a transfer of knowledge regarding logistics centres from China to Turkey, investments should be actively encouraged.

8. The Turkish parliament should ratify the "Treaty of International Freight and Passenger Transport by Road" Signed in 2017, its implementation would establish the legislative infrastructure necessary to remove the obstacles faced by road carriers. After the treaty has been ratified, it will be important to ensure that the licensing system works efficiently.

9. Port development projects in Turkey should be presented to the Chinese in a convincing way. The promotion should highlight the ports' importance in a regional context and address aspects such as the geopolitical position of Turkey, the new economic geography taking shape in the eastern Mediterranean, and the construction potential in a post-war Middle East.

10. Cooperation with China on railways should not solely focus on the construction of new railway lines. Rather, the entire content of the treaty signed in 2015 should be considered, and priority should be given to multi-dimensional and technological development.

11. The railway sector should be liberalised in general, and the private sector should be included in order to improve productivity.

12. Transports from Turkey to Central Asia and China, either by rail or by road, face problems in their passage through

the Caspian Sea. In order to define and solve these problems, it would be beneficial to establish a working group with representatives from all countries involved.

13. Legislative changes and long-term planning may encourage Turkish and Chinese companies to invest in transportation and logistics. The issue could be included in Turkey's Development Plans, the Transportation Master Plan, the Logistics Master Plan, or the Combined Transportation Regulation to establish a suitable basis for such investments.

25 OCTOBER 2019

SECTORAL ROUND TABLE MEETINGS - 2 TOURISM SECTOR

China is a high-potential market for the Turkish tourism sector. Currently, this potential cannot be utilised sufficiently. In 2018, Turkey recorded 394.109 entries by Chinese passport holders. This figure is considered to reflect the total number of Chinese tourists in our country and comprises just 1% of all foreign visitors. Turkey wants to attract more Chinese tourists, and the focus is both on quantity and quality. In other words, the aim is not only to increase Turkey's share of the 139 million Chinese citizens who travel abroad every year, but also to welcome more tourists who spent at least \$2.000 during their vacation.

A round table meeting dedicated to the tourism sector was organised, which was attended by sector representatives and representatives of relevant public institutions. The participants developed proposals designed to achieve the sector's goals.

TRANSPORTATION AND TOUR OPERATORS

Tourism between countries which are geographically far apart, like Turkey and China, relies on air traffic. Consequently, improvements in tourism require improvements in air travel. Currently, four airlines operate between Turkey and China. The flight frequency has increased lately and new routes have been established, like the one by Turkish Airlines between Istanbul and Xi'an, which will begin operations in March. However, this is still considered insufficient in order to meet growing demand.

Most passengers who fly from China to Turkey do not come as tourists but use Istanbul only as a transit point. For them, shopping opportunities, in particular through expansion of the active section at Istanbul Airport, should be improved with an emphasis on luxury items. Such measures would bring benefits.

It is no coincidence that most tourists come from Russia. It is the result of the activities of tour operators established by Turkish entrepreneurs in that country. A similar strategy should be pursued in China, including establishing contacts with influential tour operators in China and forming partnerships. This would help us increase our market share in China.

COMMUNICATION WITH CHINESE TOURISTS

The fundamental pre-condition for addressing Chinese tourists is using their own language. If we want to achieve our goal of increasing the number of Chinese tourists, we must speak Chinese and offer our services in Chinese. Failure to provide such services seriously reduces customer satisfaction. For example: In most hotels, entry and check-in procedures usually do not take more than 10 minutes. However, if the hotel's personnel do not speak Chinese this procedure can last up to 50 minutes, causing serious dissatisfaction for the Chinese guest. For this reason, it is of great importance to offer more Chinese language courses and to attract Chinese speakers to jobs in the tourism sector. Currently, universities, the private sector, and the four Confucius Institutes in our country offer Chinese language courses, but it is not sufficient to meet the demand.

It is critical to train more tourist guides who can speak Chinese. Currently 8.450 licenced tourist guides are registered with the Tourist Guide Union (TUREB) of which 278 know Chinese but only 60-70 of them are proficient enough to guide Chinese tourist groups. For this reason, in order to meet the demand, unlicensed guides who speak Chinese accompany licenced colleagues creating a kind of shadow employment. However, this practice does not offer a permanent solution. Also, a large majority of Chinese speaking licenced tour guides have only marginal knowledge of the Chinese culture, history, and geography. This may be of little importance when presenting touristic sites in Turkey, but it does create difficulties when

trying to establish contact with Chinese tourists. To teach licenced guides Chinese is not easy because, due to the nature of their job, they are constantly on the move. Tour guides present Turkey to the outside world. It is, therefore, imperative that they are well-educated and qualified.

One of the biggest problems Chinese tourists face in Turkey is related to food. Even though Chinese tourists, and the young generation in particular, have begun to open up to the local cuisine, it does not take long before they want something their palate is accustomed to. At times, this causes serious problems even with breakfast. Touristic facilities need to improve in this area and provide food that satisfies the expectations of Chinese tourists.

China is the country which has made the fastest transition from a cash economy to a post-cash economy. In China even credit cards are no longer used, most payments are made electronically with a QR code. In the countries they visit, Chinese tourists request the same mode of payment. For this reason, Turkey needs to remove the obstacles to electronic payment channels and offer tourists these modes of payment.

Another fundamental condition that needs to be fulfilled when addressing Chinese tourists is security. Tourists must feel safe. The coup attempt a few years ago and terrorist attacks have created, quite naturally, a negative image. To change this image and to make tourists feel safe requires a focus on communication and narrative.

PRODUCT DIVERSITY

"Turkey 2023 Tourism Strategy", published

by the Ministry of Culture and Tourism in September 2019, emphasizes more product diversity and a focus on different tourism products. In this context, it is important to prepare and market new products and tourism packages for Chinese tourists. Chinese people are less drawn by sun and sea tourism, and more interested in cultural tourism. Therefore, activities in this area should be intensified. It would be beneficial to organise historic spaces in such a way as to offer Chinese tourist a better experience, to design cultural and arts events with the support of Chinese tour operators, and to increase the number of potentially interesting museums by involving private entrepreneurs as well.

Health and beauty tourism is a field motivating more and more Chinese citizens to book a trip abroad. High in demand are skin bleaching treatments and eyelid-forming interventions. Turkey's health sector has a lot of experience in health tourism. With novel products it could become more attractive for Chinese tourists. Another area with a high potential is sports tourism. The introduction of tai chi, which is very popular in China, is one strategy that could be pursued. Another approach could be to make sports branches, which are popular with other foreigners, more accessible to Chinese visitors. Turkey's capital of sports tourism, Antalya, is currently almost unknown to the Chinese. Due to their little interest in sun and sea tourism, Chinese citizens may be attracted by sports activities in the winter months. Here, golf may be the sport of choice. Also camps for children could be organised and even be combined with sports activities. This would promote tourism

and ensure that people from both countries get to know each other at a young age

MICE (Meetings, Incentives, Conferences, Exhibitions) is another area, where Turkish tourism is strong. This so-called congress tourism should be considered as a means to advance our relationship with China. Lately, the number of academic, scientific and corporate delegations visiting our country has been increasing rapidly. With a well-planned and implemented MICE policy this potential can be tapped for the benefit of the economy.

PROMOTION OF TURKEY

To attract more Chinese tourists requires a better and more effective promotion of our country in China. China announced 2018 as Turkey Tourism Year, and events were organised on that occasion to promote our country in China. This had positive effects, but it is obvious that we still have a long way ahead of us. The promotion of Turkey in China has, over the years, given way to an excessive focus on clichés. One example is the inclusion, lately, in all promotional events of hot-air balloons, which are popular in Cappadocia, one of the favourite destinations of Chinese tourists. It is necessary to diversify. Turkey should be presented to the Chinese as an exotic country and places and activities should be highlighted which emphasise this exoticism. Examples are Mount Nemrut, the second largest crater in the world in Ağrı, Göbeklitepe, the pastures in the Black Sea region, the Aegean Sea (whose name to Chinese ears has a semblance with the Chinese word for love) and destinations

along its coast. Also Turkish brands with international recognition could be used in those promotions, or existing pairings between Turkish and Chinese cities (Afyon-Yunfu, Ankara-Beijing, Antalya-Haikou, Alanya-Fushun, Bursa-Anshan, Denizli-Jiaozhou, Eskisehir-Changzhou, Istanbul-Shanghai, Istanbul-Xi'an, Izmir-Wuhan, Izmir-Xiamen, Izmir-Chengdu, Konya-Henan, Mardin-Golmud, Trabzon-Rizhao, Zonguldak-Jinhua) could be highlighted. In addition to that, new city "twinning" concepts could be developed and used for promotional purposes.

Promotion of one country's people in another country is moving further away from traditional methods and towards social media, which reaches many more people. This requires effective use of Chinese social media. For this purpose, people with large numbers of followers, so-called "influencers", "Youtubers" and "phenomena" should be won over to advertise Turkey.

So far, Turkey has invited six Chinese social media phenomena, and these persons have then shared their experiences in Turkey on social media with their followers. More such influencers should be involved to achieve a higher impact via popular social media channels. Also, smartphone applications could be developed for promotional purposes, or film series could be developed in cooperation with Chinese filmmakers to introduce Chinese viewers to Turkey and the Turkish way of life. Partnerships could then be developed between film festivals in both countries. It would be beneficial to separately promote Istanbul, the country's biggest city with the largest tourist capacity,

and to position the city in a special way that addresses Chinese tourists in particular. It is important in this context to develop the touristic sites in Istanbul, to increase tourism investments in the city, and to implement measures to improve the experience of Chinese tourists in Istanbul. The Tourism Platform implemented by the Metropolitan Municipality of Istanbul is an important initiative to realize these activities.

SUMMARY AND CONCLUSION

The Ministry of Culture and Tourism plans in the long term to increase the number of tourists from China to four million a year. To achieve this goal, the first thing that needs to be done is to establish the infrastructure necessary to serve so many Chinese tourists. The Chinese market presents a huge potential for the Turkish tourism sector, however, to tap into this potential requires communication with Chinese tourists in their own language, and improvement of the capacity to address them. It further requires the development of the means of transportation, and the formulation of long-term strategies on which to shape the activities of tour operators and other relevant organisations. Products ranging from culture and arts tourism to sports tourism need to be diversified and Turkey must be more efficiently promoted among Chinese tourists. It has also become obvious that political problems between Turkey and China have a negative impact on tourist numbers. Improvements there will translate into improvements in tourism. Growing tourist numbers will lead to more contacts between our people and facilitate a better mutual understanding. That is an important step in reducing the problems between countries.

POLICY RECOMMENDATIONS

1. Accelerate initiatives to increase the frequency of flights between Turkey and China.
2. Tourism companies and tour operators in Turkey should be encouraged to build partnerships with Chinese firms, develop their cooperation and thus gain a permanent presence in the Chinese market.
3. The number of Chinese speakers in the tourism sector needs to be further developed. For this purpose, educational institutions should be encouraged to offer Chinese language courses, Chinese speakers should receive the necessary training to become eligible for a tourist guide licence, Turkish citizens living in China should be mobilised for the tourism sector through offering them the opportunity to obtain a tourist guide licence via distance learning, and courses in Chinese culture should be offered alongside Chinese language courses.
4. Where the language capacity is not sufficient, maximal use of technology should be made. For example, in hotels without Chinese-speaking personnel, Chinese guests could be offered the opportunity to check-in with the aid of a digital interface in Chinese.
5. Electronic payment systems such as WeChat and AliPay are widely used by Chinese citizens. The legal and physical infrastructure necessary for widespread use of these systems in Turkey should be prepared and implemented. It would have a direct effect on the spending behaviour of Chinese tourists in Turkey.
6. Innovative tourism packages and products

attractive for Chinese tourists should be designed and implemented. The focus should be on cultural and artistic events and activities. Also, the products offered in the areas of health, sports, and congress tourism should be diversified.

7. For its promotion in China, Turkey should develop both its content and the channels it uses. In terms of content, the hot-air balloons used in Cappadocia have become a cliché that should be overcome. Emphasis should instead be focused on places and experiences in Turkey which Chinese tourists may find exotic. Also, promotion activities should make efficient use of the opportunities offered by social media in order to increase interaction. We are of the opinion that long-term digital media campaigns in China could have a great impact.

8. A system should be established which closely monitors the changing preferences and consumption habits of the Chinese people. A suitable method for this purpose could be the development of joint projects with Chinese university departments such as business management, marketing, etc.

9. For the purpose of developing tourism products and achieving a greater marketing impact, it would be beneficial to establish a platform that ensures better coordination and cooperation between the Ministry of Culture and Tourism, municipalities, tour operators, and tourism companies.

10. Pricing is a very sensitive issue in the tourism sector. Price reductions are not an effective solution to attract more tourists. On the contrary, they generate the image of a cheap country. Turkey needs to position itself

as a high-level destination where high quality is offered at an appropriate price.

11. Participation both by our country and by companies in tourism fairs organised in China is a precondition for achieving a strong position in the market.

12. Temporary Chinese-Turkish exhibitions lasting three or six months should be organised. Such exhibitions would help to bring culture, trade, and tourism together.

13. Luxury shopping opportunities for Chinese tourists should be developed and offered in big cities, in particular in Istanbul, in order to stimulate spending.

14. Istanbul Airport should be transformed into an attractive shopping space not only for Chinese tourists visiting Turkey but also for those in transit spending time in the airport. It would also be beneficial to equip Istanbul Airport with signs and tables in Chinese.

15. The pros and cons of establishing a “Chinatown” in Istanbul should be assessed. As a kind of preliminary study, temporary exhibitions on Chinese culture and the country’s economy could be organised and accompanied by promotional activities and measurement of the response in society.

28 NOVEMBER 2019

SECTORAL ROUND TABLE MEETINGS - 3

INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

Information and communication technologies (ICT) is a fast-developing sector whose innovations and up-to-date applications have contributed to productivity gains in all sectors of the economy. A sufficient ICT capacity, today, is an absolute necessity for the creation of a sustainable basis for economic development and the improvement of a country's level of prosperity. It is no coincidence that countries, which are dominant actors of the global economy, are at the same time capable of developing new technologies with their own resources and continuously improving their technological capacities. The two currently leading countries in the area of ICT, China and the United States, are also the world's two largest economies. This fact points to an underlying virtuous circle: Economically growing countries generate more wealth and can invest more in technology, and these investments in turn support their economic growth and income generation. If such a virtuous circle cannot be established, it may lead to a vicious cycle instead: countries that cannot invest in technology cannot advance economically, and because their economy does not grow and generate wealth, their investments in technology remain limited and no development is achieved. Countries caught up in this vicious cycle remain technologically dependent on other countries and have difficulties meeting their requirements in this field.

Turkey is making great efforts to establish virtuous circles in all areas, including in ICT. Countries in this position need to follow two paths: 1- Development of one's own resources and investment in human resources, education and the country's corporate capacity; 2- Cooperation with technological countries and transition from being only a buyer of finished products to joint production and technology transfer. China, which lately has made great advances in technology, is an important potential partner for Turkey. At this round table meeting, dedicated to ICT and bringing together sector representatives and representatives from public institutions, proposals were formulated on how to develop such cooperation.

THE SOFTWARE SECTOR

Despite its many subdivisions, the main distinction in the ICT sector is between hardware and software, the two fundamental constituents that complement and depend on each other. We are of the opinion that software cooperation between Turkey and China offers a wide range of opportunities. Software is fundamental to innovative technologies and developments such as 5G, artificial intelligence, the internet of things and blockchain. China has made enormous progress in these areas. The software sector in Turkey is also fast

developing and has begun to position itself as a competitive force in the international market. The focus of cooperation with Chinese software companies should be in areas where Turkish software is strong. This applies in particular to finance technologies. Moreover, cooperation need not be limited to partnerships between software firms. Just like big Turkish companies with operations in China work with Chinese software firms to meet their IT needs, Chinese companies which invest in Turkey and/or assume big projects could work with Turkish software developers for their IT solutions. This would help both sides to reduce costs and increase quality.

Turkey offers the advantage of lower software development costs than China which may help Turkish software firms to win customers in China. Software is a sub-group of the service sector and could be made eligible for incentives from the sector. The Turquality programme of our country's Ministry of Trade meanwhile extends to companies in the service sector as well, providing incentives of various size offered by the ministry. These opportunities could be used to encourage software exports from Turkey to China.

SECTORAL APPLICATIONS

Application of ICT has led to productivity gains in all sectors of the economy. This increases the importance not only of the ICT sector itself but also raises the question of how to apply it to other sectors. China is advancing fast in this area. Use of ICT applications in all aspects of business life is quickly spreading,

in particular in areas defined by China as long-term priority industries where the aim is to improve productivity and become world leaders. This vision is taking shape in the framework of the "Made in China 2025" programme initiated by the Chinese government in 2015. It prioritises the following activities and branches of industry: advanced information technology, high-tech products such as digitally-controlled machine tools and robots, aviation equipment, oceanographic engineering and high-tech ships, modern railway transport equipment, energy savings and novel energy devices, electrical hardware, novel materials, biopharmacology, high-performance medical devices, and agricultural machinery. Turkey should focus its cooperation with China on those areas and develop joint projects. This would encourage direct Chinese investments in Turkey which would result in technology and knowledge transfer, including in ICT applications. Such a development would support Turkey in the advancement of its own technological capacity.

In addition to the industries covered by the above-mentioned "Made in China 2025" initiative, the finance sector is another promising area of ICT cooperation. Developments in financial technologies have sped up procedures and reduced costs, therefore becoming a driving force of the global economy. Also, electronic payment systems have become a part of daily life in many parts of the world, and in no country more so than China. Chinese consumers have gone directly from cash

to electronic payments, skipping the credit card process. Today, even minor payments are being made with the aid of smartphone-based software. Cooperation in this area and the introduction of Chinese applications in Turkey would improve the functionality of the Turkish finance sector, increase its productivity and make life easier not only for consumers but for all economic actors.

Payment technologies are closely related to other sectors. Cooperation with China on technology will not only help to improve Turkey's capacity but also contribute to the development of the economic and trade relations with China in their entirety. The most obvious example is tourism. Chinese tourists want to use the electronic payment system they know from home in the countries they visit. Where this is not possible, they reduce their spending or do not visit at all. Implementation and wide deployment of these technologies also in Turkey is not only important for the country's own technological infrastructure, but also for attracting more Chinese tourists and increasing their spending.

DATA SHARING

More technology and better use of technology also means that more data is generated and used on such systems. Big data, as this abundance of data generated by billions of users is called, is essential for the algorithms that power fundamental ICT applications such as artificial intelligence. At the same time, companies also use ICT applications to process and interpret data

in their respective fields of interest, in order to put them to good use. For example, they collect data on user activities on social media, their preferences, consumption habits, then process the data and use them within the legally stipulated framework, for the purpose of establishing their business strategies. It is for this reason that data sharing is an important area of cooperation between countries. Chinese consumer data is of prime importance for Turkish companies that want to export to China or invest in the country. However, data transfer between countries is subject to strict regulations. A number of countries publish lists of countries considered safe with respect to data security, and only allow data transfer to such countries. Turkey has not yet established such a list. There are complaints that Turkish companies active abroad cannot transfer their externally gathered data to Turkey. International treaties may help to overcome this situation.

There are a number of obstacles in the way of Turkish-Chinese cooperation in ICT and some factors which slow down procedures. Their removal will open the way to a closer partnership. The main obstacle is language. Not only does it impede communication between individuals working in the sector, it also negatively affects content development in various ICT areas.

Other problems are caused by national legislation and regulations. One problem concerns data transfer between our countries as mentioned above; another is regarding legal obstacles which Chinese technology companies that want to

become active in Turkey face. For example, if a Chinese firm wants to bring a certain technology to our country, and if its area of activity is subject to regulations, it must establish a company in Turkey and become a local player, or it must enter into partnership with a Turkish company. This leads to higher costs, slows down procedures, and causes new problems between the partners on various issues, including data sharing. Localisation and the production of local components is the keys to success in the global economy, particularly in technology-related fields. The legislation should facilitate this.

CYBER SECURITY

Cyber security is the most important aspect of ICT, not only with respect to cooperation between countries, but also with respect to the entire sector. Cyber-attacks cause grave losses both to companies and countries. These attacks know no physical borders, and the location of the hacker and the location of their targets do not necessarily need to be in the same country. This situation requires cross-border cooperation on cyber security.

Cooperation between Turkey and China on this subject should be in two areas:

1. Joint cyber security projects with Chinese institutions
2. Protection against cyber security risks

The two areas mentioned above are connected to a problem Chinese ICT firms face in various countries in the world, particularly in the West. Entry of Chinese firms in foreign markets is impeded by

fears that their commercial activities may constitute a security risk for the host country. Lately, ICT has become an area of geopolitical struggle as witnessed in the dispute between China and the United States on 5G. ICT is governed by globally accepted and binding international standards. ICT cooperation between Turkey and China must be developed in accordance with these standards.

SUMMARY AND CONCLUSION

Turkey's ICT cooperation with China has so far yielded positive results. Chinese firms have established R&D centres in our country where Turkish and Chinese engineers work on joint projects contributing to the advancement of Turkey's technological capacity. However, technology is developing fast and, in all areas, as is the global economic equilibrium. Consequently, Turkey's technological needs are increasing. One way of meeting our country's demand is cooperation with China, a country whose technological capabilities are fast improving. In the area of digitalisation, China has caught up with western countries and in some areas has even overtaken them. Parallel to the Belt and Road Initiative, whose goal is to connect Asia and Europe with infrastructure and investment projects, China has also initiated the "Digital Silk Road" project in order to internationalise its ICT capacity. It would be beneficial for both countries to define the priorities of a cooperation between China and Turkey in the area of ICT. Then, both sides should develop medium and long-term approaches on the basis of those priorities, focusing in particular on the strengths of both parties such as software. This approach will address ICT from a perspective that takes into account the entire economy and will further develop the applications in other sectors. Steps should be taken on the issue of big data sharing, which underlies the functionality of ICT and makes applications such as artificial intelligence so powerful, and to take measures to overcome legal obstacles and security concerns in order to open the way for a fruitful cooperation.

POLICY RECOMMENDATIONS

1. Legal obstacles should be removed for the purpose of encouraging investments by Chinese technology firms in Turkey. The business environment should also be improved. We are of the opinion that for the preparation of legal amendments a workshop with all stakeholders would be beneficial.
2. Turkish and Chinese companies have initiated preparatory work on cooperation in 5G technologies. Such work should be extended to other areas such as artificial intelligence, blockchain, and the internet of things.
3. The ICT dimension should be included in all work and efforts undertaken in Turkey with respect to the Belt and Road Initiative. An action plan should be prepared for Turkey to take part in the "Digital Silk Road".
4. The information exchange and dialogue between the two countries should be strengthened with conferences organised in Turkey and China focused on specific ICT areas and in which the private and the public sector, universities and research institutions participate. Such conferences are currently organised with western countries (e.g. The Turkish-German Artificial Intelligence Conference).
5. Cooperation programmes currently being developed between Turkish and Chinese universities should focus on technology and engineering.
6. Financial technologies and electronic payment systems would have a direct impact

on a number of different sectors, primarily on the tourism sector. The use in our country of novelties and applications implemented in this area in China should be considered.

7. All sectors of the economy use the opportunities offered by the ICT sector. For this reason, every sector should establish its current status of ICT use and identify its needs. This work should be led by representative organisations of the respective sectors.

8. Turkey should establish a list of “secure countries” with which data may be shared. Also, the necessary measures should be taken to ensure that Turkey is entered into the lists of other countries. Activities should be initiated in order to conclude international treaties which enable Turkish companies active abroad to transfer their external data to Turkey.

9. International cyber security-related developments should be monitored and, consequently, the necessary measures be taken. Cooperation in the area of ICT should be based on internationally recognised standards.



www.tusiad.org