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CHINA'S INNOVATION POTENTIAL SUPPORT INSTRUMENTS ON THE EXAMPLE OF SCIENCE AND TECHNOLOGY INDUSTRIAL PARKS

Abstract: The paper discusses China's trade in the aspect of high-tech products, which in the recent years records dynamic growth. It is also a result of the policy implemented by that country in the sphere of S&T assistance and in the building up of innovation potential. As part of that policy, there were set up science and technology industrial parks, inclusive of those at the state level. These parks develop rapidly, in terms of employment and industrial production volume, just like the number of firms that conduct in there their business activity. The STIPs and the TBIs became major elements of the innovation system which is currently established in China.

Key words: science and technology industrial parks, innovation potential, innovation policy.

1. Introduction

The economy of China is undergoing dynamic transformation related to the intensification of efforts in support of science and technology, which is reflected in specific directions of implemented economic policy, the outlays allocated for this objective, and that is determined by toolkit supporting the creation and diffusion of innovations. In 2006, in China, the expenditure intensity on R&D activity constituted 1.42% of that country's GDP.[1] The share of the business sector spending in the total amount spent on that activity sphere was 69.1%, whereas government spending accounted for 24.7%.[2] Such expenditure break-down is similar to the one

[1] In the years 1995-2005, there was recorded a substantial gross domestic expenditure growth dynamics related to the research and development sphere, as an average growth rate of that type of expenditure exceeded 18% (in constant prices). Quoted after: M. Schaaper, *Measuring China's Innovation System, National Specificities and International Comparisons*, OECD Science, Technology and Industry Working Pap*ers* 2009/1, OECD 2009, p. 38. Still in 1995, the R&D activity expenditure was 0.57% of the China's GDP, and in 2000, it was 0.9%, *OECD Reviews of Innovation Policy: China*, OECD 2008, p. 496

[2] *China Science and Technology Statistics Data Book 2007*, Ministry of Science and Technology of the People's Republic of China, pp. 2, 5, http://www.most.gov.cn/eng/statistics/2007/index.htm.

characteristic of the OECD countries.[3] However, the share of foreign funds in the R&D expenditure financing is still insignificant.[4] The observed dynamic foreign investments inflow to this country in several activity spheres also concerned the research and development field. Due to this, we tend to observe a gradual increase of the share in Chinese exports of technologically advanced products. Foreign companies account for approximately 25% of outlays spent on R&D by the business sector in China.[5]

As a part of science and technology programmes project, action was assumed to build up the innovation potential of China, *inter alia*, through the development of suitable infrastructure. There have been formed national S&T industrial parks (STIPs), technology based business incubators (TBIs), and promotion of activities favouring cooperation between the spheres of business and science has also been started. These instruments are also to contribute to the transformation of the Chinese economy, assisting it in its march to dynamic growth, while becoming a constituent of national/regional innovation system.

The paper discusses China's trade in high technology products and it points to the role played by S&T Industrial Parks and TBIs in the promotion and building of the innovation potential of the Chinese economy and in the supporting of economic development.

2. China's trade in high technology products[6]

In the world trade, alongside the USA, the European Union, and Japan, China is becoming a leading high-tech exports country. In 2006, China's share in the world exports of that type of products was 16.9%, the US high-tech exports constituted 16.8%, the EU-27 accounted for 15%, whereas Japan 8%. In case of the Asian countries, we are also dealing with high-tech re-exports. The share of the remaining countries in the world's high-tech exports was 43.3%.[7] For comparison's sake, it

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[3] *OECD Science, Technology and Industry Outlook 2008*, OECD 2008, p. 168; M. Schaaper, *op. cit*., pp. 39-40. In 2006, the share of basic and applied research amounted to 22% of the total R&D expenditure, whereas for the OECD countries it was approximately 50%. In 2006, in China, the share of the R&D development on experimental development was 78%, *ibidem*, p. 41.

[4] The share of foreign funding in the financing of research and development was 1.6% of the total amount spent on that activity sphere, quoted after: *China Science*…, p. 5.

[5] *OECD Science*…, pp. 168-169. In China, foreign companies created about 750 R&D centres, quoted after: *OECD Reviews*…, p. 69.

[6] This section was elaborated on the basis of: T. Meri, China passes the EU in high-tech exports, *Statistics in Focus* 2009, Vol. 25.

[7] For the EU-27 excluding intra-EU trade, Chinese data excludes Hong Kong. To high-technology products are included the following product groups: aerospace, computers-office machines, electronics – telecommunications, pharmacy, scientific instruments, electrical machinery, chemistry, non-electrical machinery, armament; quoted after: T. Meri, *op. cit*., p. 7.

is worth mentioning that in 1995, China's share in world exports of that type of products was barely 2.1%.

An analysis of 2006 high-tech product importers also points to the domination of the previously mentioned countries and of the EU. In first place, when considering a given country's share in the world's high-tech imports came the USA, and then, there were: EU-27, China (the share of that country in the world's high-tech imports was 15.4%), and Hong Kong came fourth. The value of Chinese high-tech exports in 2006 was euro 217 632 million (Table 1).

Table 1. High-tech trade, as a % of 2006 trade total and changes in the years 2001-2006 (in EUR million)

Specification	High-tech exports			Balance EUR million	High-tech imports		
	high-tech exports, eur million	high-tech exports as a % of total exports	annual average growth rates in 2001-2006		high-tech imports, eur million	high-tech imports as a % of total exports	annual average growth rates 2001-2006
eU-27	192 992	16.6	0.5	–34 468	227 460	16.8	–0.4
China	217 632	28.2	31.5	11 645	205 987	32.7	25.2
USA	215 780	26.1	–1.6	–15 742	231 521	15.1	–1.0

Explanation: data concern the EU-27, excluding intra-EU trade; Chinese data exclude Hong Kong.

Source: T. Meri, *op. cit*., p. 3.

Table 2. The share of the EU-27, USA, Japan, and China in the world's high tech exports in 2006, as per high-tech commodity groups (in %)

High tech products-commodity group	EU-27	USA	Japan	China	Others
Aerospace	32.8	46.7	1.2	0.7	18.6
Armament	24.3	48.4	1.1	0.5	25.8
Chemistry	21.3	17.3	4.6	14.5	42.2
Computer-office machines	8.0	10.8	5.8	33.4	42.0
Electrical machinery	10.0	12.9	14.6	9.0	53.5
Electronics-telecommunications	10.5	12.1	9.1	16.0	52.4
Non-electrical machinery	27.6	27.8	17.9	2.0	24.7
Pharmacy	44.3	20.7	1.9	3.8	29.2
Scientific instruments	20.1	20.4	12.1	10.8	36.6
Total high-tech	15.0	16.8	8.0	16.9	43.3

Explanation: data concern EU-27, excluding intra-EU trade; Chinese data exclude Hong Kong.

Source: T. Meri, *op. cit*., p. 5.

In the years 2001-2006, we observed dynamic growth of both China's high-tech exports and imports. The exports analysis according to specific commodity groups in the high-tech sector points to China having a significant share in the exports of the following commodity groups: computer-office machines and electronics-telecommunications (Table 2).

It should be noted that high-tech exports are mainly the work of foreign companies (either wholly controlled companies or joint venture companies) rather than domestic firms. As such, it poses a challenge to Chinese political reorientation. In 2006, high tech-export by Chinese state-owned enterprises was USD 16.1 billion, whereas joint-venture companies' share was USD 41.4 billion, and foreign wholly controlled ones accounted for USD 147.1 billion.[8]

The Chinese economy develops rapidly, which is a result of the reorientation of politics and of focussing attention on the S&T's significance for economic development of that country, *inter alia*, by the creation of proper instruments stimulating its innovation potential.

3. Granting of assistance to science & technology industrial parks, as instruments of China's innovation policy

The formation of China's innovation potential is taking place under the S&T programmes[9] which are also geared at modernization of the Chinese economy, development of modern industry sectors, as well as the formation of the Chinese innovation system. From the early 1980s, when this direction of economic policy was started to be implemented, there have been elaborated and introduced many programmes, some of which should be examined more closely.

Already in the early 1980s, there was activated the *National Key Technologies R&D Programme* which emphasised, *i.a.*, the necessity of traditional industry modernization and high-tech development assistance. The year 1986 saw the commencement of the *National High Technology Research and Development Program* (*863 Program*) providing assistance to the innovation potential of China, which indicated the priority agendas in the area of high technology covered by the assistance. The *Spark Program* (1986) was activated for the purpose of spurring on of research and development in rural areas, thus becoming first S&T programme for these areas' category.

A significant role in the building of the Chinese system of innovation was played by *Torch Programme*,[10] introduced in 1988, providing assistance to the development of new/high technology sectors of the industry. They were affected by the following

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[8] *OECD Reviews*…, p. 506.

[9] This point was elaborated on the basis of the following materials: http://www.most.gov.cn/eng/programmes1/200610/t20061009_36223.htm; http://gr.china-embassy.org/eng/kxjs/gjjh/ and related websites; *OECD Reviews*…

[10] *OECD Reviews*…, pp. 45, 194, 464.

instruments: the created high-technology development zones (high-tech industrial development zones) in the form of the S&T Industrial Parks and the technology-based business incubators. The latest instrument was the Innovation Fund for Technology-based SMEs. The objective of that programme was the linking science and industry together, supporting and development of endogenic innovation potential in the country through the implementation of instruments that are to serve the introduction of new high-tech products, and of industry innovations. As part of the *Torch Programme* there were identified the following functions of the new/high-tech industrial development zones: „bases for the development of new/high technologies, sources of new/high technologies and products for traditional industries, windows opening to the outside world, experimental zones for close combination of science and technology with economy, and promotion of transformation of achievement of science and technology and technical innovation, new urban areas of socialist modern civilization, schools for training and bringing up high technology industrialist".[11] The high technology industry development zones were treated as Chinese technopolises, the functioning of which shall make possible for the traditional industrial sectors to undergo changes and transformations.[12]

While identifying successive S&T programmes, one should mention the *State Key and New Product Programme* from 1988 supporting the development of new high tech products, and *Technology Achievements Spreading Programme* from 1990 promoting the spreading of technology in traditional industry. In the 1990s, there were devised successive programmes supporting basic research, SMEs high-tech innovative activity, or else, the development of research centres. On should also point to *Action Plan for Thriving Trade by Science and Technology* targeted to grant support to high-tech exports. The basic sources of support for these programmes, also reflecting the degree of involvement of key entities in their fulfilment portrays Table 3.

The created industrial parks in the field of science and technology and entrepreneurship incubators,[13] were to contribute to the creation of climate in which innovations thrive, thus facilitating cooperation between firms in the field of innovation (as part of these zones, or developing connections with enterprises located beyond the zone), or else, cooperation between firms and research centres/ university education units, which in China is central within these venues.[14] In 1988, the national STIP in Beijing was the first one that was established, as an experiment, due to the abundance of highly qualified workers, as well as suitable infrastructure.[15] and then, there were being formed other national parks of that kind in the areas of selected Chinese cities.

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[11] Quoted after: http://gr.china-embassy.org/eng/kxjs/gjjh/t146168.htm.

[12] S. Wang, Y. Wu, Y. Li, Development of technopoles in China, *Asia Pacific Viewpoint* 1998, Vol. 39, No. 3, p. 285.

[13] See also the so-called Torch industrial parks in: *ibidem*, pp. 281-301.

[14] *OECD Reviews*…, p. 68.

[15] S. Wang, Y. Wu, Y. Li, *op. cit*., p. 285.

Table 3. Key performers' participation in key S&T programmes, 2005 (in 100 million RMB)

	Total programme expenditure (estimated)	Government funding	Performed by government research institutes	Performed by the higher education sector	Performed by the business sector
National main research programmes					
Key technologies R&D programme	191.4	34.2	16.8	24.5	98.2
863 programme	113.8	50.1	13.0	18.9	72.8
Basic research programme	14.2	12.8	4.6	7.2	1.5
National industrialization programmes					
Torch programme	734.4	9.0	1.1	0.1	733.2
Spark programme	204.5	8.9	3.0	2.4	174.2
S&T achievements spreading programme	75.4	3.3	4.3	3.9	64.1

Source: *China Statistical Yearbook on Science and Technology* (NBS, 2006 a), quoted after: M. Schaaper, *op. cit*., p. 30.

The basic data concerning the S&T industrial parks are shown in Table 4. In 2005, there were 53 STIPs, i.e. Torch S&T Industrial Parks in operation. Their achievements in attracting companies, production creation, and regarding the dynamics of the value of exports as effected by companies operating within STIPs, are significant. These types of parks were venues for conducting business activity for not just domestic companies but also foreign firms. In 2005, the number of enterprises operating within the industrial parks was over 40 thousand, of which some 15% were foreign entities, or else, joint ventures with the participation of foreign capital. However, foreign companies accounted for over 80% of the total exports from these zones, which in the period 2000-2005 recorded a dynamic growth.

Table 4. Basic data concerning the S&T Industrial Parks – the 53 "Torch" S&T Industrial Parks

Specification	2000	2004	2005	Share of JV and foreign firms
Number of firms	20 796	38 565	41 990	14.9%
Employment (thousand)	2 510	4 480	5 210	30.1%
Production (RMB 100 million)	7 942	22 639	28 957	49.3%
Exports (USD 100 million)	186	823	1 116	84.8%

Source: *OECD Reviews*..., p. 63.

Detailed data concerning the structure of enterprises involved in the STIPs are shown in Table 5.

Table 5. Companies by ownership in S&T Industrial Parks

Specification	Number of firms	Employment (10 000 employees)	Revenue (RMB 100 million)	Production (RMB 100 million)	Value added (RMB 100 million)	Exports (USD 100 million)
Total	41 990	521	34 416	28 958	6 821	1 116
State-owned	1 607	54	2 738	2 106	615	27
Collective owned	825	12	672	638	187	13
Share-holding	22 840	256	14 020	10 909	2 882	112
Foreign & joint ventures	6 269	157	15 550	14 297	2 874	946
Others	10 449	41	1 435	1 006	261	18

Source: *OECD Reviews...*, p. 195, Table 4.2.

As a part of the Torch programme, the technology business incubators were also initiated. In the years 2000-2005, we observed their dynamic growth. From amongst 534 incubators operating in 2005, 49 were university centres having 49 incubators. This is so, since the university-based scientific parks „host" incubators and high technology enterprises. 28 out of these university science parks operate on the territory of the S&T industrial zones.[16] One should consider the dynamic growth of the number of companies in operation, just like the growth of the numbers of employees in the TBIs (Table 6).

Table 6. Technology Business Incubators in the years 1997-2005

Specification	1997	2000	2004	2005
Number of TBIs	80	164	464	534*
Surface (million $m^{2)}$	0.77	3.39	15.1	19.7
Number of entries in the current year	807	2 866	8933	9 714
Number of incubated firms	2 670	8 653	33 213	39 491
Number of employees	45 600	143 811	552 411	717 281
Number of graduated firms	825	2 790	11718	15 815

* of which 49 are university-based.

Source: *OECD Reviews*…, p. 63, Table 4.13, p. 230.

[16] *OECD Reviews*…, p. 194.

As regards the high-tech entities operating in that type of industrial parks, undertaking production and engaging in exports, there were certain privileges offered, as displayed in Table 7.

Table 7. Preferential policy realized in the state-level High-tech Industrial Development Zones

Specification	Offered benefits
Corporate Income Tax Rate (for foreign-invested production enterprises)	25%
Corporate Income Tax Rate (for high-tech enterprises)	15%, for the high-tech industries encouraged by the nation
Custom Duty and Value-Added Tax (VAT) (on self-use equipment and spare parts)	For the enterprises belonging to the category of encouraged industries, custom duty and VAT will be exempted
Custom Duty and Value-Added Tax (VAT) (on raw materials and parts)	Only enterprises involved in the processing trade are exempted
VAT Rate	13% for agriculture-related projects 17% for others
Licences for equipment, raw materials and office appliances (for processing trade enterprises)	For enterprises in the category of encouraged industries, licenses are exempted.
Tax on finished products using duty-free materials (sold domestically)	Levy on finished products
VAT Refund for finished products made using domestic raw materials	VAT will be refunded following departure of shipment from China
Ratio between export and domestic sales	To be decided by investors as long as their projects are in compliance with national industry guidelines and are excluded from export license and quota management

Source: quoted after: http://www.chinaknowledge.com/Manufacturing/Introduction.aspx?subchap=3&content=11.

The STIPs became key elements of the innovation system. As the OECD indicates, in China the main innovation system actors are: enterprises – also those operating within STIPS and as part of technology business incubators, higher education institutions (1792 universities, out of which the R&D activity was conducted by 678 centres), 49 university S&T parks (comprising some 4100 start-up firms) and research institutions (3901 centres of that type employing 560 thousand persons).[17] However, the enterprises, even those operating as part of the R&D zone, have a low capacity of generation and diffusion of innovations; however, this is being gradually improved along with the improvement of the framework conditions.[18]

[17] Data concern the year 2005.
[18] *OECD Reviews...*, pp. 55-56.

However, despite unquestionable success that the STIPs achieved, "it may thus be misleading to think that […] the parks have created an appropriate environment for commercialising and exporting Chinese high-technology product".[19] After over ten year's time of their operation, it may be pointed that due to certain provisions and privileges offered to the companies, they rather created industrial production and exports. Even though in 1993, the production volume of S&T industrial parks targeted for export markets was 7%, then, in 2005, it already accounted for over 30%, which is also a result of foreign companies (or firms with foreign capital participation) locating here, that engage in the transfer of technology. In 2005, as compared to 1998, the export from that type of industrial parks increased 13-fold, and production by 6.7 times.[20] However, as the OECD indicates, positive results may be seen in the sphere of BTIs through technological transfer improvement, or else, the in the scope of innovation environment creation.[21] Nevertheless, this type of initiatives plays a major role in these regions' development.

4. The innovation potential of Chinese regions

The objective of the S&T industrial parks formation was also the country's economic development. They were situated across the entire country (considering industrial zones at state level), not just in coastline regions, but in the interior, too (Table 8).

The conducted policy also geared at supporting research and development and development of modern export, through the creating of applicable financial sources and attracting of R&D investments has unquestionable influence on the building up of the innovation potential of the Chinese regions. It is very diversified. In the Eastern regions and coastline regions, the R&D expenditure volume, just like its intensity, is markedly higher than in the rest of the country, which is also a result of the policy being realized in that part of the country and stimulating the FDI inflow. In order to increase the rate of development of the rest of the country, also when it comes to other R&D indicators, the year 2000 saw the introduction of the "Go West" strategy, the result of which was the improvement in the R&D outlay, even though it still remains moderate.[22] There are also disparities in the spacing out of the TBIs which are located, most of all, in the Eastern and coastal provinces, whereas in the Western provinces, approximately 15% of those units that are in operation were situated.[23]

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[19] Quoted after: *ibidem*, p. 194.
[20] *Ibidem*, pp. 68, 194.
[21] *Ibidem*, p. 233.
[22] M. Schaaper, *op. cit*., pp. 42-43.
[23] *OECD Reviews*…, p. 233.

Table 8. State-level High-tech Industrial Development Zones

Coastline regions	Name of zone	Regions in the Interior	Name of zone
Beijing	Zhongguancun	**Chongqing**	Chongqing
Shanghai	Zhangjiang	**Anhui**	Hefei
Tianjin	Tianjin	**Gansu**	Lanzhou
Fujian	Xiamen Torch Fuzhou	**Guangxi**	Guilin, Nanning
Guangdong	Guangzhou, Shenzhen, Zhuhai, Foshan, Zhongshan Torch, Huizhou Zhongkai	**Guizhou**	Guiyang
Hainan	Haikou	**Heilongjiang**	Harbin, Daqing
Hebei	Shijiazhuang , Baoding	**Henan**	Zhengzhou, Luoyang
Jiangsu	Nanjing, Suzhou New District, Changzhou, Wuxi New District	**Hubei**	Wuhan East Lake, Xiangfan
Liaoning	Shenyang, Anshan, Dalian	**Hunan**	Zhuzhou Changsha
Shandong	Jinan, Weihai, Weifang, Zibo, Qingdao	**Inner Mongolia**	Baotou
Zhejiang	Hangzhou	**Jiangxi**	Nanchang
		Jilin	Jilin, Changchun
		Shaanxi	Xi'an, Yangling Agriculture (in Xi'an), Baoji
		Shanxi	Taiyuan
		Sichuan	Chengdu, Mianyang
		Xinjiang	Urumqi
		Yunnan	Kunming

Source: *China Knowledge*, http://www.chinaknowledge.com/Manufacturing/Introduction.aspx?subchap=3&content=8.

When it comes to the magnitude of outlays spent on R&D in 2005, it is Beijing that stands apart, then comes Jiangsu. In 14 out of Chinese regions, the relationship of R&D expenditure to GDP exceeds 1%, and in 17 of them it is greater than 0.8%. In the case of the Beijing region, the value of the expenditure expressed in terms of the GERD–GDP relationship constituted 5.55%, and in the Shaanxi region, that came next, it was 2.52% (Table 9).

Table 9. R&D innovation potential by region, 2005

Regions in China	GERD/GDP in %	R&D expenditure RMB 100 million	% share of foreign firms and industrial R&D
1. Beijing	5.55	382.1	46
2. Shaanxi	2.52	92.4	6
3. Shanghai	2.28	208.4	67
4. Tianjin	1.96	72.6	37
5. Liaoning	1.56	124.7	4
6. Jiangsu	1.47	269.8	23
7. Sichuan	1.31	96.6	3
8. Zhejiang	1.22	163.3	18
9. Hubei	1.15	75.0	14
10. Guangdong	1.09	243.8	39
11. Jilin	1.09	39.3	1
12. Shandong	1.05	195.1	6
13. Chongqing	1.04	32.0	9
14. Gansu	1.01	19.6	0
15. Heilongjiang	0.89	48.9	4
16. Anhui	0.85	45.9	8
17. Fujian	0.82	53.6	59
18. Jiangxi	0.70	28.5	10
19. Hunan	0.68	44.5	2
20. Shanxi	0.63	26.3	6
21. Yunnan	0.61	21.3	2
22. Hebei	0.58	58.9	6
23. Guizhou	0.56	11.0	1
24. Qinghai	0.54	3.0	0
25. Henan	0.52	55.6	9
26. Ningxia	0.52	3.2	14
27. Guangxi	0.36	14.6	1
28. Inner Mongolia	0.3	11.7	15
29. Xinjiang	0.25	6.4	0
30. Hainan	0.18	1.6	0
31. Tibet	0.14	0.3	0

Source: *China Statistical Yearbook on Science and Technology 2006*, National Bureau of Statistics, China Statistical Yearbook 2006 after: M. Schaaper, *op. cit*., p. 43; *OECD Reviews*…, p. 51.

5. Conclusions

Since the 1980s the granting of assistance to science and technology has become integral element of Chinese development plans. The innovation potential of the Chinese economy is improving, which is also reflected in the rising share of technologically advanced products in this country's exports. The ambitious goals specified by the Chinese government assume that the relationship of the R&D expenditure with respect to the GDP shall be 2% in 2010, and 2.5% in 2020.[24]

The high-tech industrial parks and technology business incubators, by making their mark in that country's strategy, become a significant instrument of the transformation process being under way, also that of the regional economies. By concentrating in a given area of most significant actors responsible for the creation and diffusion of innovation, they create a climate for developing innovation projects, and thus, by developing links between the fields of science and business, facilitate the introduction of new solutions in the sphere of the industry. Despite unquestionable achievements of that type of instruments, sometimes their effects in the creation of innovation potential are not satisfactory. The STIPs, however, have become the isles of innovation, and as the OECD stresses "spreading the culture and means of innovation beyond the fences of S&T industrial parks and incubators by promoting more market-based innovative clusters and networks should now be an important objective".[25] This also constitutes one of the challenges for the Chinese economic policy in the 21st century.

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[24] Such indicators were stated in *National Guideline for S&T Development*, quoted after: M. Schaaper, *op. cit*., p. 39.

[25] Quoted after: *OECD Reviews*…, p. 47.

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INSTRUMENTY WSPIERANIA POTENCJAŁU INNOWACYJNEGO CHIN NA PRZYKŁADZIE STREF ROZWOJU PRZEMYSŁOWEGO ZAAWANSOWANYCH TECHNOLOGII

Streszczenie: W artykule wskazano na wymianę handlową Chin w zakresie produktów wysokiej techniki, wzrastającą dynamicznie w ostatnich kilku latach. Jest to również rezultatem wdrażanej polityki tego kraju w zakresie wspierania S & T i budowania potencjału innowacyjnego. W jej ramach zaczęto zakładać parki naukowo-technologiczne, w tym na szczeblu narodowym. Parki te dynamicznie się rozwijają, pod względem zarówno wielkości zatrudnienia oraz wielkości produkcji przemysłowej, jak i liczby firm, które realizują tam swoją działalność. Parki naukowo-technologiczne i technologiczne inkubatory przedsiębiorczości stały się ważnym elementem systemu innowacji, który jest obecnie budowany w Chinach.