

## IV. Consequences of the patentability of food

The effects of the patentability of food are reflected in the use of the national patent systems in Brazil, China and India.<sup>233</sup> Food-related patent applications act as an indicator of the technological and economical performance in the food sector. According to Director General of WIPO *Idris* “patents are a key measure of the extent and success of an innovation culture. They can be used to measure the level of R&D activities, and ultimately, how effective those are, what structure they are taking, and which industries appear to be successful, and which not.”<sup>234</sup>

### 1. Rise of food-related patent applications

Table 5 shows the development of food-related Brazilian, Chinese and Indian patent applications. Table 5 shows the sum of national and foreign applications.

---

233 On the general benefits of the implementation of the TRIPs Agreement in India and China see *Straus&Klunker*, Harmonisierung des internationalen Patentrechts, GRUR Int. 2007, 91, 100 s.

234 *Idris&Arai*, The Intellectual Property-Conscious Nation: Mapping the Path From Developing to Developed, WIPO Publication No. 988(E) (2006), 13. For further information on the economic influences of patents, see *Straus&Klunker*, Harmonisierung des internationalen Patentrechts, GRUR Int. 2007, 91, 100.

**Table 5:****Food-related Brazilian, Chinese and Indian patent applications with priority from 1990 to 2001.<sup>235</sup>**

Year	Brazil	China	India
90	35	471	22
91	39	605	44
92	46	981	35
93	54	1751	49
94	46	1569	53
95	52	1467	76
96	50	1537	43
97	118	1527	55
98	119	1561	41
99	119	1579	23
00	128	1945	3
01	96	2210	0

Food-related Brazilian patent applications amounted to 35 patent applications in 1990 and increased steadily to a maximum of 128 in 2000. The decline in 2001 to 96 might be due to a database effect. This occurs typically in the latest years of a database, because the data from the national offices have not yet been integrated into the database. Brazilian patent applications jumped from 50 in 1996 to 118 in 1997. This doubling is due to the abolition of the exemption to patentability of food, which became effective in 1997. Thus, the patentability of food due to Art. 27 of the TRIPs Agreement has led to a substantial increase of food-related patent applications. German food-related patent applications, by comparison, did not increase significantly from 1996 to 1997 but stayed rather constant. This indicates that the patentability of food led to the doubling of Brazilian food-related patent applications in 1997. Food-related Brazilian patent applications are rather few compared to German patent applications which amounted to 726 in 1997. The number of food-related Brazilian patent applications averaged less than 20% of those in Germany from 1990 to 2001.

<sup>235</sup> Food-related patent applications are the IPC subclasses of table 1. It is referred to the first priority date that is claimed by the respective national patent application. This data was collected by the author in cooperation with *Schmoch* in 2004 at the Fraunhofer Institute for Systems and Innovations Research in Karlsruhe using PLUSPAT, a database developed by Questel-Orbit.

Chinese food-related patent applications rose tremendously from 471 in 1990 to 2,210 in 2001. Chinese food-related patent applications rose by nearly 80% from 1992 to 1993. This increase corresponds to the abolition of the exemption in the Chinese Patent Act of 1992. German patent applications rose only by 15%, from 435 in 1992 to 499 in 1993. Chinese food-related patent applications were nearly four times as high as food-related patent applications in Germany in 2001 due to high foreign direct investments made in China. Foreign patent flows into China have been dominated by the U.S., Japan and the EU, accounting for 86% of foreign patent applications until 1995.<sup>236</sup> Domestic Chinese firms file for more and more patent applications to enhance their strategic competitive value. This phenomenon is called the Great Wall of patents in China.<sup>237</sup> Many foreign companies are now confronted with numerous domestic Chinese patent applications and the danger of costly and lengthy patent disputes.

Food-related Indian patent applications have risen from 22 in 1990 to a maximum of 76 in 1995. The following decline in 2000 and 2001 might be due to a database effect. The abolition of the exemption cannot be measured yet because the respective changes of the Indian Patent Act have only gone into force retroactively on January 1, 2005. Nevertheless, there have been comparatively few food-related Indian patent applications in recent years. India had a similar amount of food-related patent applications as Brazil during the period from 1990 to 1996. However, food-related Indian patent applications decreased from 1997 on, whereas food-related Brazilian patent applications doubled from 1996 to 1997. Food-related Indian patent applications amounted to a maximum of 14% of the corresponding number of applications in Germany in 1995 and averaged 8% of that number during 1990 and 1999. This indicates that there have been rather little R&D activities in the food sector by domestic or foreign companies.

## *2. Rise of food-biotechnology-related patent applications*

The share of food-biotechnology-related Brazilian, Chinese and Indian patent applications has been relatively small, averaging less than 5% of all food-related patent applications in those countries during the period from 1990 to 2001.

---

236 Yang, The Development of Intellectual Property in China, 25 World Patent Information 131, 140 (2003).

237 Hu&Jefferson, China: A Great Wall of patents, New Economist, October 20, 2005.

**Table 6:**  
**Food biotechnology-related Brazilian, Chinese and Indian patent applications with priority from 1990 to 2001.**<sup>238</sup>

Year	Brazil	China	India
90	0	10	0
91	1	19	0
92	1	19	1
93	6	25	0
94	1	21	0
95	2	34	0
96	1	57	1
97	19	47	3
98	5	41	1
99	8	49	0
00	5	45	0
01	3	105	0

Food biotechnology-related Brazilian patent applications have been fluctuating from 0 in 1990 to a maximum of 19 in 1997, which is shown in table 6. The rise from 1 in 1996 to 19 in 1997 corresponds to the abolition of the exemption in 1997. Whereas food-related Brazilian patent applications were constant from 1997 on, food biotechnology-related Brazilian patent applications decreased steadily. The share of food biotechnology-related patent applications of the total food-related Brazilian patent applications amounted to 16% in 1997 and decreased to 4% in 2000. The food biotechnology-related Brazilian patent applications amounted to one-third of the number of food biotechnology-related German patent applications, which numbered 56 in 1997.

<sup>238</sup> Food biotechnology-related patent applications are IPC subclasses of table 1 linked with IPC subclasses of table 2. It is referred to the first priority date that is claimed by the respective national patent application. This data was collected by the author in cooperation with *Schmoch* in 2004 at the Fraunhofer Institute for Systems and Innovations Research in Karlsruhe using PLUSPAT, a database developed by Questel-Orbit.

Food biotechnology-related Chinese patent applications rose rather constantly from 10 in 1990 to 57 in 1996 and levelled off around 50 between 1997 and 2000, doubling to 105 in 2001. The abolition of the exemption in 1992 led to a slight increase from 19 to 25 in 1993. This does not reflect the 80% increase of food-related Chinese patent applications from 1992 to 1993 following the abolition of the exemption. The food biotechnology-related Chinese patent applications made up an average of 3% of all food-related Chinese patent applications during the period from 1990 to 2001. This share is considerably lower than the Chinese-to-German ratio of food biotechnology-related German patent applications, which averaged 10% during the period from 1990 to 2001. Food biotechnology-related Indian patent applications have been minimal, with a maximum of 3 in 1997.

### 3. Development of the food sector and food prices in Brazil

The turnover of the Brazilian food sector totaled U.S.\$101.2 billion in 2000, accounting for 17% of Brazil's GDP and representing a decline from 18% or U.S.\$99.3 billion, in 1994.<sup>239</sup> Brazil's agricultural production amounts to 7.8% of Brazil's GDP, with U.S.\$46.4 billion in 2000, declining from 8.4% or U.S.\$46.0 billion, in 1994.<sup>240</sup> Nevertheless, it faces a prosperous future. Brazil holds a strong position in international production of agricultural raw materials and is becoming a serious competitor in world production of agricultural raw materials. It has increased its production of agricultural raw materials and gained global market shares for major raw materials like soybean. The soybean production doubled from 18.5 million tons in 1991 to 41.5 million tons in 2001. Brazil has developed from a net importer of wheat, corn, cotton and rice to the world's third-leading corn producer with net exports of 2.7 million tons of corn in 2000-2001.<sup>241</sup>

Substantial undeveloped, but viable land remains available for the production of agricultural raw materials. A strong domestic demand from an increasingly urbanized population is backed by a growing per capita income. Last but not least, Brazil has established an extensive agricultural research network for the development of new plant varieties and the adaptation of existing plant varieties to tropical conditions.

---

239 Including Tobacco processing and transportation costs incurred by manufacturing firms, In: *Azevedo et al.*, The Food Industry in Brazil and the United States: The Effects of the FTAA on Trade and Investment, Buenos Aires 2004, 4, Table 2, using data from the Central Bank of Brazil, available at [www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina\\_WP-SITI-07.pdf](http://www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina_WP-SITI-07.pdf).

240 *Azevedo et al.*, The Food Industry in Brazil and the United States: The Effects of the FTAA on Trade and Investment, Buenos Aires 2004, 4, Table 2, using data from the Central Bank of Brazil, available at [www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina\\_WP-SITI-07.pdf](http://www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina_WP-SITI-07.pdf).

241 *Schnepf et al.*, Agriculture in Brazil and Argentina: Developments and Prospects for Major Field Crops, Agriculture and Trade Report No. (WRS013) 85, December 2001, 1, 2, available at [www.ers.usda.gov/publications/wrs013/](http://www.ers.usda.gov/publications/wrs013/).

However, the commercial planting of genetically modified plants is currently prohibited. The lower costs of genetically modified plants contributes to a "significant illicit flow from Argentina into Brazil's South."<sup>242</sup> The share of illegal genetically modified soybean in Brazil has been estimated at between 20% and 40%.

The share of the production of processed food in Brazil's GDP was 9.2%, amounting to U.S.\$54 billion, in 2000, declining from 9.8%, with U.S.\$53 billion, in 1994.<sup>243</sup> The Brazilian food sector faces a fast increase in food consumption and in market opening to foreign investments. The entry of foreign companies has forced the domestic food companies to invest more and to modernize their manufacturing facilities. The Brazilian food sector is now one of the most competitive food sectors in South America and has emerged as one of the leading suppliers of the world food market.<sup>244</sup> Employment in the food sector rose from 902,542 employees or 18.3% of Brazil's manufacturing sector in 1996 to 976,783 employees, being 18.7% of Brazil's manufacturing sector in 2000. The sector relies mainly on natural resources and labor, and has implemented labor-saving technologies only to a rather small extent. This situation is also caused by the low availability of technology. Substantial structural changes have recently taken place in the Brazilian food sector. The dairy segment was deregulated, consolidated and internationalized. In 1991, the three leading dairy companies had concentrated 52% of the Brazilian dairy market, while in 1996 they already controlled 61% of this market.<sup>245</sup> The Brazilian food sector is highly concentrated. In 2001, the top ten food companies in Brazil had a combined market share of 26%, a slight decline from 28% in 1994.<sup>246</sup>

The Brazilian food sector is largely influenced by multinational companies.<sup>247</sup> Their value share of food shipments increased from 19% in 1996 to 27% in 2000. The share of employment of multinational food companies amounted to 17% in 2000, rising from 10.9% in 1996. These companies are more technology-intensive than domestic ones, which is indicated by the significantly lower share of employment compared to the value of their shipments.

---

242 *Schnepf et al.*, Agriculture in Brazil and Argentina: Developments and Prospects for Major Field Crops, Agriculture and Trade Report No. (WRS013) 85, December 2001, 61, 63, available at [www.ers.usda.gov/publications/wrs013/](http://www.ers.usda.gov/publications/wrs013/).

243 *Azevedo et al.*, The Food Industry in Brazil and the United States: The Effects of the FTAA on Trade and Investment, Buenos Aires 2004, 4, Table 2, using data from the Central Bank of Brazil, available at [www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina\\_WP-SITI-07.pdf](http://www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina_WP-SITI-07.pdf).

244 MarketResearch.com, Country Industry Forecast – The Brazilian Food and Beverages Industry, November 3, 2004, available at [www.marketresearch.com/map/prod/1060463.html](http://www.marketresearch.com/map/prod/1060463.html).

245 *Azevedo et al.*, The Food Industry in Brazil and the United States: The Effects of the FTAA on Trade and Investment, Buenos Aires 2004, 7, Table 5, 8, 30, Table 20, using data from the Annual Industrial Research, Brazilian Institute of Geography and Statistics, available at [www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina\\_WP-SITI-07.pdf](http://www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina_WP-SITI-07.pdf).

246 *Farina&Viegas*, Foreign Direct Investment and the Brazilian Food Industry in the 90s, 5 International Food and Agribusiness Management Review 2003, Issue 2, Table 6, available at [www.ifama.org/nonmember/OpenIFAMR/Articles/v5i2/efarina.pdf](http://www.ifama.org/nonmember/OpenIFAMR/Articles/v5i2/efarina.pdf).

247 *Cabral&Traill*, Determinants of a Firm's Likelihood to Innovate and Intensity of Innovation in the Brazilian Food Industry, 1 Chain and Network Science 33 (2001).

The 8 largest multinational food companies, originating in the U.S., Argentina, France, Italy and Switzerland, controlled about 20% of the Brazilian food market in 2001. That share was only 13% in 1994.<sup>248</sup>

Thirty percent of all food expenditures in Brazil are held by agricultural products. The share of processed foods amounts to 35% of the Brazilian food expenditures. Since 1997, food prices for important agricultural raw materials like soybean, coffee and sugar have been rather depressed. In addition to these low prices, consumer food prices fell by almost 30% between 1994 and 2001.<sup>249</sup> The most important price reductions occurred in processed food, in which multinational companies have intensely invested. Launches of new food products increased substantially in the same period.<sup>250</sup>

Declining food prices and increasing industrialization of the food sector, combined with an increasing number of patent applications for food-related inventions indicate that the patentability of food had a positive rather than a negative effect on the food sector in Brazil.

#### *4. Development of the food sector and food prices in China<sup>251</sup>*

In the last several years, China has seen an economic growth rate of 7-9%.<sup>252</sup> This has lifted many parts of the population out of subsistence economy. It is foremost the middle class that is demanding more processed food. A large share of the agricultural raw materials is directly consumed by the rural population, which amounts to 60% of China's population. The reliance on self-produced food has fallen since 1990 as rural households purchased an increasing share of their food.<sup>253</sup> The fast-growing retail and catering sectors are sustaining this process. China's land resources are under pressure due to the needs for further industrialization, modern housing and infrastructure. A handicap is also the water and energy shortage, as well as environmental degradation. Therefore,

---

248 *Azevedo et al.*, *The Food Industry in Brazil and the United States: The Effects of the FTAA on Trade and Investment*, Buenos Aires 2004, 52, Table 34 using data from the Annual Industrial Research from Brazilian Institute of Geography and Statistics, available at [www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina\\_WP-SITI-07.pdf](http://www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina_WP-SITI-07.pdf).

249 *Azevedo et al.*, *The Food Industry in Brazil and the United States: The Effects of the FTAA on Trade and Investment*, Buenos Aires 2004, 5, 10, available at [www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina\\_WP-SITI-07.pdf](http://www.iadb.org/intal/Publicaciones/Azevedo-Chaddad-Farina_WP-SITI-07.pdf).

250 *Farina&Viegas*, *Foreign Direct Investment and the Brazilian Food Industry in the 90s*, 5 *International Food and Agribusiness Management Review* 2003, Issue 2, graph 1, available at [www.ifama.org/nonmember/OpenIFAMR/Articles/v5i2/efarina.pdf](http://www.ifama.org/nonmember/OpenIFAMR/Articles/v5i2/efarina.pdf).

251 *Gale et al.*, *China's Food and Agriculture: Issues for the 21st Century*, USDA, Economic Research Service, 2002, available at [www.ers.usda.gov/publications/aib775/](http://www.ers.usda.gov/publications/aib775/).

252 *Shane&Gale*, *China: A Study of Dynamic Growth*, USDA Economic Research Service Doc. WRS-04-08, 2004.

253 *Gale et al.*, *Commercialization of Food Consumption in Rural China*, USDA, Economic Research Report No. 8, 2005, available at [www.ers.usda.gov/publications/ERR8/](http://www.ers.usda.gov/publications/ERR8/).



China will rely on net imports of food in the coming years.<sup>254</sup> China's trade surplus in agricultural products<sup>255</sup> results from exported vegetables, fruits, poultry, corn, and rice. In 2003, China became a net importer of agricultural raw materials with a trade deficit of U.S.\$2 billion due to price increases in soybean and cotton imports. In 2003, the urban per capita income was more than three times higher than the rural figure. Structural imbalance has arisen from a concentration in few coastal areas whereas rural, western areas have shown less growth.<sup>256</sup>

Initially, China's food sector was dominated by the agricultural production, whereas the production of processed food was less important. The reason was that consumers prepared their own meals of rice, noodles, raw vegetables and meat. The food processing sector grew simultaneously with consumer demand for higher quality and convenience food.<sup>257</sup> China accounts for 51% of the global pork and 31% of the global rice consumption.<sup>258</sup> Lately, organic food is more in demand generating a green food sector in "full-swing" development. This new tendency is due to the rapid growth of China's national economy and per capita income. The output of organic food has increased by nearly 30% annually, and exports have grown by 50%. By 2003, 2,047 companies were involved in "green food" production, with domestic sales reaching 72.3 billion yuan and exports surpassing U.S.\$1 billion.<sup>259</sup>

The Chinese food sector feared China's WTO entry. Headlines like "Food sector to face fierce competition after WTO entry"<sup>260</sup> showed the concerns of many food companies. Many companies feared going bankrupt after China joined the WTO, because of "intensive competition from overseas food giants that will flock into the domestic market after China joins the WTO." Food from China was believed uncompetitive as a result of poor quality, packaging and marketing in comparison to foreign food. China's WTO entry led to a restructuring of its food sector, eliminating small companies without specialized products.<sup>261</sup>

---

254 Ministry of Foreign Affairs of Denmark, May 30, 2005, Food sector in China, available at [www.ambbeijing.um.dk/da/menu/Eksporttraadgivning/Markedsmuligheder/Sektoranalyser/FoedevareLandbrugOgFiskeri/FoodBeijing/](http://www.ambbeijing.um.dk/da/menu/Eksporttraadgivning/Markedsmuligheder/Sektoranalyser/FoedevareLandbrugOgFiskeri/FoodBeijing/).

255 *Gale&Hansen*, China's Exports Outpaced Imports during WTO Year One, USDA, Economic Research Service, FAU-79-02, 2003.

256 *Shane&Gale*, China: A Study of dynamic growth, USDA, Economic Research Service Doc. WRS-04-08, 2004, 9, 14.

257 *Gale et al.*, China's Food and Agriculture: Issues for the 21st Century, USDA, Economic Research Service, 2002, available at [www.ers.usda.gov/publications/aib775/](http://www.ers.usda.gov/publications/aib775/).

258 FoodNavigator Europe of June 27, 2005, China: massive opportunities for food makers and ingredients firms, available at [www.foodnavigator.com/news/news-ng.asp?id=60899-china-mas-sive-opportunities](http://www.foodnavigator.com/news/news-ng.asp?id=60899-china-mas-sive-opportunities).

259 Chinadaily of October 8, 2004, available at [www.chinadaily.com.cn/english/doc/2004-10/08/content\\_380415.htm](http://www.chinadaily.com.cn/english/doc/2004-10/08/content_380415.htm).

260 China.org, December 31, 2000, available at [www.china.org.cn/english/2000/Oct/3360.htm](http://www.china.org.cn/english/2000/Oct/3360.htm).

261 China.org, December 31, 2000, available at [www.china.org.cn/english/2000/Oct/3360.htm](http://www.china.org.cn/english/2000/Oct/3360.htm).



In 1999, China's food sector had a turnover of U.S.\$80 billion, while in the first 7 months of 2004 it generated U.S.\$104.8 billion. This contributes to nearly 10% to the country's total and represents an increase of 20%. Exports of food reached U.S.\$10.69 billion from January 2004 to July 2004, which was 7.7% more than last year. Imports of food soared by 50.6% or U.S.\$11.47 billion, producing a deficit of U.S.\$780 million during that period.<sup>262</sup>

China may likely become the first country feeding its population mainly with genetically modified rice. It has already authorized the cultivation of genetically modified cotton since 1997 and intends to permit the commercialization of genetically modified rice by 2007. This unprecedentedly rapid development is due to the Chinese government's decision to make the cultivation of genetically modified rice the principal topic of its agricultural policy. The fact that Chinese consumers have hardly any other choice than to accept the decision of their government facilitates the implementation of this policy. In contrast to the Western world, in China, research in genetically modified rice is exclusively financed by the public sector. China has invested the equivalent of more than €155 million in research in agricultural biotechnology, of which 20% are for rice only.<sup>263</sup>

The increasing industrialization of the food sector, as well as enormous investments in new technologies, combined with a constantly rising number of patent applications for food-related inventions, indicate that the patentability of food had rather a positive than a negative effect on the food sector in China.

##### 5. Development of the food sector and food prices in India

India's economy and its food sector have made remarkable progress since 1947. Nevertheless, India is often characterized as a "lumbering elephant compared with the tigers such as Malaysia and Thailand and the dragon China of Southeast and East Asia."<sup>264</sup> India's food sector is characterized by governmental protectionism and is currently considered non-competitive. The annual costs of India's subsidies for food production totaled U.S.\$14.5 billion in 2003-2004 and were about U.S.\$12.3 billion over the last 5 years. This is at least 12% of the GDP of Indian's food sector and amounts to 15% of all governmental expenditures.<sup>265</sup>

---

262 Wang Wenzhe, cited in: People's Daily Online, September 12, 2004, available at [www.english.people.com.cn/200409/12/eng20040912\\_156701.html](http://www.english.people.com.cn/200409/12/eng20040912_156701.html).

263 Huang, Center for Chinese Agricultural Policy, Chinese Academy of Sciences, Beijing, cited in: *Cuchet&Masingue*, OGM - Le coup de tonnerre chinois, *Science&Vie* N° 1054, July 2005, 126, 133.

264 Landes, The Elephant is Jogging: New Pressures for Agricultural Reform in India, USDA, Economic Research Service 2004, available at [www.ers.usda.gov/amberwaves/February04/Features/ElephantJogs.htm](http://www.ers.usda.gov/amberwaves/February04/Features/ElephantJogs.htm).

265 Including outlays of food grain procurement, storage and distribution, electrical power, fertilizer, and irrigation water. Indirect subsidies such as subsidized credit are not included. *Lands&Govindan*, USDA, Foreign Agricultural Services, Global Agricultural Information Network Report Number IN-4089, India Agricultural Situation – Indian Agriculture: Status and Reform Potential, 2004, 6, 11, available at [www.fas.usda.gov/gainfiles/200408/146107265.pdf](http://www.fas.usda.gov/gainfiles/200408/146107265.pdf).

Though the food sector has recently been liberalized, there has been only little investment in this sector. There are two reasons for this: the lack of infrastructure and government disincentives:

"The cost of getting goods to market is very high because of the large number of middlemen, prohibitions on land consolidation, and lack of investment in transportation and refrigerated delivery networks."<sup>266</sup>

Though the per capita calorie consumption increased by 20% during the period from 1980 to 2000 in India, a remarkable share of India's population still has not enough food. A third of the population is still living below the poverty line. In the 1990s, the prices for staple food increased, being a principal constraint to access to food.<sup>267</sup> The average Indian household spends about 55% of its income on food.<sup>268</sup>

Also, the Indian food sector has witnessed fast growth in most segments, with a turnover of the total food market of U.S.\$69.4 billion in 2000. Processed food amounted to U.S.\$22.2 billion. Export of processed food brought in U.S.\$3.2 billion in 1998-99. Rice accounted for 46% of these exports, whereas marine products accounted for over 34%. India is the world's second-largest producer of fruits and vegetables, but only 2% thereof is processed. India produces many spice varieties worth over U.S.\$900 million, amounting to 25-30% of the world's production, which are processed for value-addition and export. It grows 22 million tons of oilseeds. Additionally, other important plantation products are tea, coffee, cocoa and cashew. India's livestock population is the largest in the world with 50% of the world's buffaloes and 20% of cattle. In contrast to this, only 1% of meat production is converted to value-added products. India is also the largest milk producer in the world. The semi-processed and ready-to-eat packaged food industry is valued at U.S.\$1 billion and grew by 20% in 2000.<sup>269</sup>

A prospering food sector combined with a constantly increasing number of patent applications for food-related inventions indicate that the patentability of food will have rather a positive than a negative effect on the food sector in India.

---

266 *Lands&Govindan*, USDA, Foreign Agricultural Services, Global Agricultural Information Network Report Number IN4089, India Agricultural Situation – Indian Agriculture: Status and Reform Potential, 2004, 6, available at [www.fas.usda.gov/gainfiles/200408/146107265.pdf](http://www.fas.usda.gov/gainfiles/200408/146107265.pdf).

267 *Persaud&Rosen*, Price Policies: India's Consumer and Producer Price Policies: Implications for Food Security, USDA, Economic Research Service, 2003, 1, available at [www.ers.usda.gov/publications/gfa14/GFA14-i.pdf](http://www.ers.usda.gov/publications/gfa14/GFA14-i.pdf).

268 *Landes*, The Elephant is Jogging: New pressures for Agricultural Reform in India, USDA, Economic Research Service 2004, available at [www.ers.usda.gov/amberwaves/February04/Features/ElephantJogs.htm](http://www.ers.usda.gov/amberwaves/February04/Features/ElephantJogs.htm).

269 Indian Ministry of food production Industries 2000, using data from Source - APEDA Export Statistics and Annual Report 1999-2000 of the Indian Ministry of food production Industries, available at [www.mofpi.nic.in/industry-specific-information/index.htm](http://www.mofpi.nic.in/industry-specific-information/index.htm).

## D. Nestlé and patentability of food

The impacts of the patentability of food due to the TRIPs Agreement are exemplified by the largest international food company, Nestlé. Nestlé is a conservative food company. It focuses on classical food products, especially convenience products. Nestlé has just started investing in R&D of functional food. It is active in Germany, in China, and in Brazil to a large extent and only to a smaller extent in India.

The philosophy of Nestlé regarding developing countries can be summarized by the statement of its Chief Executive Officer *Brabeck-Letmathe*:

"When we talk about long-term responsibility and development, we do it with nearly 100 years of experience in manufacturing in the developing world and an even longer history of the company overall. Our basic business principle is to favor long-term development over short-term profit. We aim to build companies over decades, which we expect to last for centuries, industrializing the developing world in the process."<sup>270</sup>

Nestlé's greatest social impact is not in funding projects, but in poverty reduction by means of its basic business development. A recent survey in 16 countries asked the public to name a socially responsible company and then to mention a company that they assume to be socially irresponsible. Nestlé is one of the companies that ranked top of the list of responsible companies. Eight nationals of developing countries spontaneously mentioned Nestlé as a socially responsible company for every 1 who listed Nestlé as irresponsible.<sup>271</sup> This would seem to reflect the fact that Nestlé firmly supports the principles of the United Nations Global Compact and is committed to reflecting these in its business principles and practices. In January 1999, former United Nations Secretary-General *Annan* announced the Global Compact initiative under the mission statement:

"Let us choose to unite the power of markets with the authority of universal ideals. Let us choose to reconcile the creative forces of private entrepreneurship with the needs of the disadvantaged and the requirements of future generations."<sup>272</sup>

The patenting activity of Nestlé is rather low compared to its trademark activities. Currently Nestlé holds 340 strategic brands protected by 75,000 trademark registrations. Additionally Nestlé holds 6,000 local brands protected by 28,000 trademark registrations.<sup>273</sup> Nestlé owns 9,018 granted national patents as well as 6,127 pending patents.<sup>274</sup> This clearly shows that the main intellectual property focus of Nestlé lies within the field of trademarks.

---

270 The UN Global Compact and Nestlé's Experience in Corporate Responsibility for Development, United Nations Global Compact Symposium, Geneva, October 29, 2003, available at [www.r0.un-ctad.org/gcandswissbusiness/presentations/Brabeck.pdf](http://www.r0.un-ctad.org/gcandswissbusiness/presentations/Brabeck.pdf).

271 *Brabeck-Letmathe*, The UN Global Compact and Nestlé's Experience in Corporate Responsibility for Development, United Nations Global Compact Symposium, Geneva, October 29, 2003, 9.

272 Available at [www.unglobalcompact.org/Portal/Default.asp](http://www.unglobalcompact.org/Portal/Default.asp).

273 WIPO, Nestlé: Streamlining IP to stay on top, WIPO Magazine/Nov.-Dec. 2005, 19.

274 WIPO, Nestlé: Streamlining IP to stay on top, WIPO Magazine/Nov.-Dec. 2005, 19.