„SUSTAINABILITY – SUPPLY SECURITY – DISTRIBUTIVE JUSTICE: A GLOBAL AREA OF CONFLICT“

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Abstract: Cooperative arrangements or cooperation is clearly a good way to achieve win-win partnerships, which means to guarantee supply security in an ethically acceptable way. Longterm sourcing contracts, based on fair trade arrangements, combined with the transfer of knowledge and expertise to the countries of origin lead to wealth in these countries and in the same time contribute to the development of entrepreneurial capabilities in contrast to pure “land grapping”.

Keywords: corporate social responsibility, Internalisation vs. externalization, Sustainability

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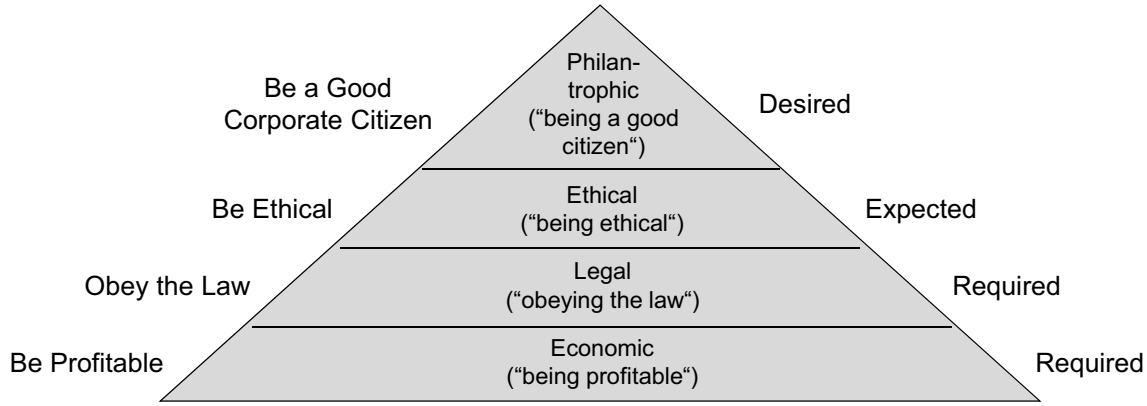
1. Sustainability in the context of corporate social responsibility

The concept of corporate social responsibility (CSR) has gained in importance in the last few years (Morschett/Schramm-Klein/Zentes 2010, pp. 221-230). In academic discussion, however, it is by no means a new idea: the concept itself and the debate about CSR dates back to the 1930s. For example, Dodd (1932, p. 1149) argues that managers are not only responsible to their shareholders but they are also responsible to the public as a whole because a company is "permitted and encouraged by the law primarily because it is a service to the community rather than because it is a source of profit to its owners". Since then, the concept has developed and many more facets of responsiveness have been added to the under-standing of CSR.

According to Mohr, Webb and Harris (2001, p. 47), corporate social responsibility relates to "a company's commitment to minimizing or eliminating any harmful effects and maximizing its long-run beneficial impact on society" and according to the European Commission (2001, p. 7) "corporate social responsibility is the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life".
Carroll (1979; 1991) developed the concept that has been widely used: the "pyramid of corporate social responsibility" (see Figure 1).

Figure 1: Pyramid of Corporate Social Responsibility

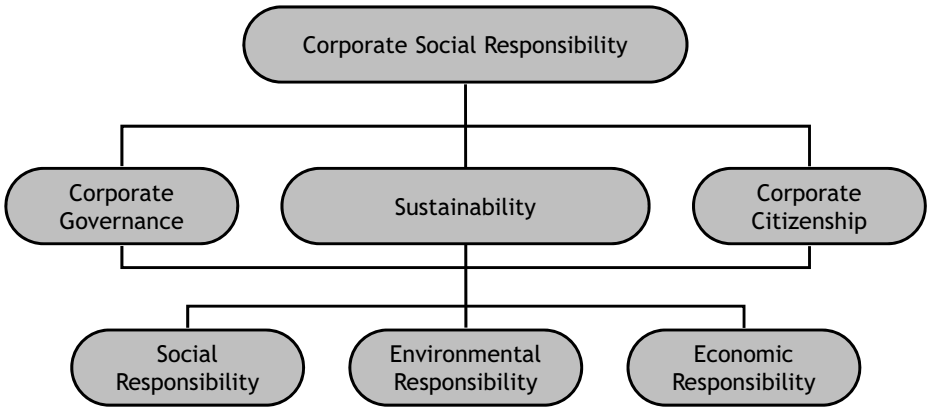


Source: Carroll 1991.

The concept of corporate social responsibility is based on three distinct foundations:

- Corporate Governance
- Corporate Citizenship
- Sustainability (see Figure 2).

Figure 2: Dimensions of Corporate Social Responsibility



Source: Bassen/Jastram/Meyer/Meyer 2005, p. 235.

Corporate governance rules clarify the rights of shareholders with regard to the general meeting (of stockholders), the supervisory board, and the management board, they establish guidelines for transparency and the treatment of conflicts of interest in order to promote the trust of investors, customers, employees and the general public in the company's management and supervision. Corporate citizenship refers to the philantrophic dimension of the "CSR pyramid" and means to be a "good corporate citizen". Sustainability refers to the following:

- social responsibility
- environmental responsibility
- economic responsibility.

Based on this approach, firms are becoming responsible for their social and environmental effects on society, in addition to generating profits. On the most

basic level, the triple bottom line concept (TBL) “states that companies should simultaneously be held accountable for their social, environmental, and financial performances” (Mellahi/Frynas/Finlay 2005, p. 109; see Elkington 1997). In a catchy phrase, the triple bottom line concept refers to “profit, people, planet” and hence can be seen as the “PPP approach”.

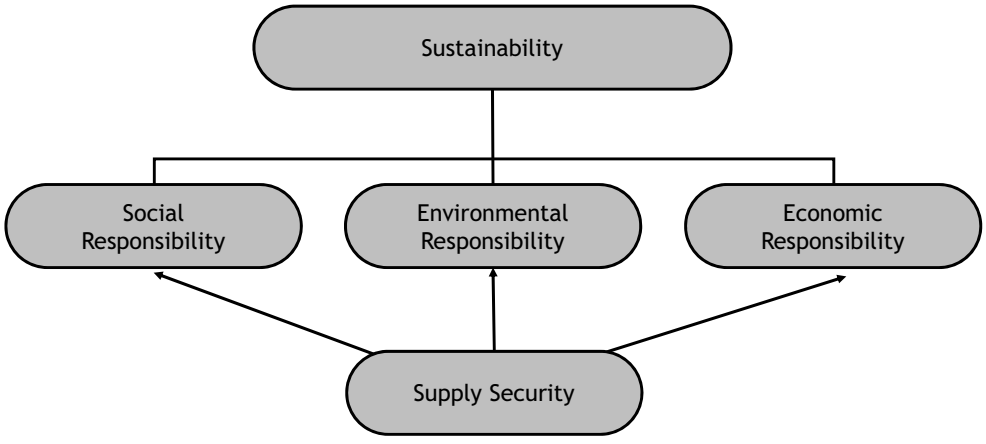
Sustainability is an important aspect in the field of business ethics. Besides the responsibility towards the environment and the observance of human rights, other ethical issues refer to the appropriate moral behaviour with regard to bribery (corruption), especially in the international arena of competition (see e.g. Deresky 2008, pp. 41-47).

2. Sustainability and supply security

2.1 Supply security as a new aspect

Presently, sustainability is being supplemented by another aspect, namely sustainable supply or supply security (PwC/H.I.MA. 2010; Zentes/Bastian/Lehnert 2010). This is a dimension that will become of central importance in the medium and particularly the long term. Supply security concerns all dimensions of sustainability, the social dimension, the environmental dimension and, of course, the economic dimension (see Figure 3).

Figure 3: Sustainability and Supply Security



2.2 Forces for supply security

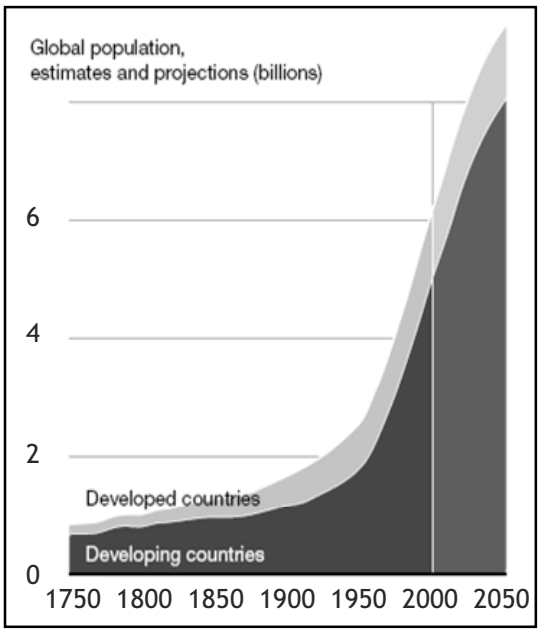
In the first instance, the world-wide population explosion is driving this development. Accordingly, the world population is expected to rise from its current 7.0 billion to over 8 billion by 2025, and then to over 9 billion by 2050. With an anticipated 1.6 billion, India seems to overtake China as the most densely populated country (see Figures 4 and 5).

Figure 4: Global Population Development from 1950 to 2050

Population development in million							
	1950	1975	2000	2005	2010	2025	2050
World	2,529	4,061	6,115	6,512	6,909	8,012	9,150
China	545	911	1,267	1,312	1,354	1,453	1,417
India	372	617	1,043	1,131	1,214	1,431	1,614

Source: United Nations 2008.

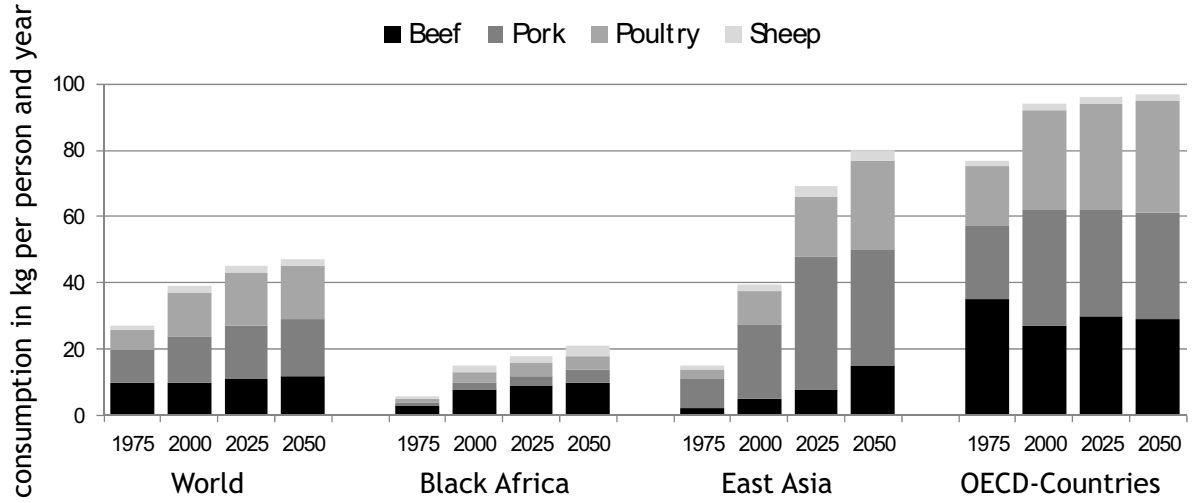
Figure 5: Global Population Development from 1750 to 2050



Source: UNEP 2009; CIA Factbook 2006.

Various qualitative trends are associated with the quantitative population development. For example, changes in eating patterns are associated with increasing affluence and wealth. For this reason, the per capita consumption of meat in Asia can be expected to double from the present approximately 40 kilograms to 80 kilograms per annum in 2050 (see Figure 6). And this value has to be multiplied by the increasing population count. The consequences are an enormous demand for animal feeding resources such as grain and water.

Figure 6: Change in Food Consumption



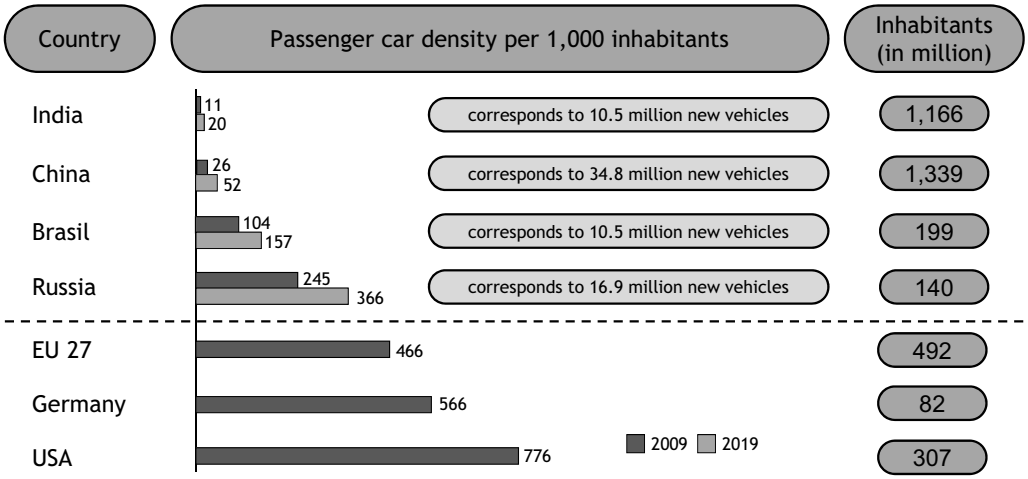
Source: FAOSTAT; IWMI 2007.

With the industrial development in the emerging countries, which naturally opens up very positive opportunities for the industrialised nations, there is also the issue of the enormously increasing need for energy - and this in the emerging countries which are presently not particularly energy efficient.

If, for instance, we consider the automobile density (or vehicle density) in the so-called BRIC countries of India, China, Brazil and Russia, we can see the emerging problem. India presently has an automobile density of 11 cars per 1000 inhabitants, compared with 566 for Germany and 776 for the USA. By 2019, an increase to 20 cars per 1000 inhabitants is expected, which

corresponds to 10.5 million new automobiles. China has an automobile density of 26 right now, which is expected to double by 2019. This corresponds to about 35 million new cars (see Figure 7). It is not easy to envisage just what the implications of all this will be for the demand for energy and for the prices.

Figure 7: Change in Individual Mobility

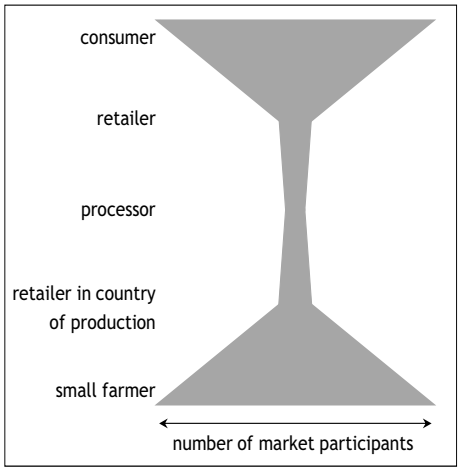


Source: Management Engineers 2009.

Apart from the demand side, the supply side also impacts simultaneously on the supply security. There is increasing concentration in many raw material markets. This can be demonstrated using the example of the market for seeds. The top 10 seed producers have a market share of 67%, and the top 3 over 47%, that is, almost half (see Figure 8).

Figure 8: Structure of Seed Markets

Commodity chain



World's largest seed companies

Rank by sales	Company (country of origin)	Seed sales in million USD	Share of global proprietary seed market
1.	Monsanto (US)	4,964	23%
2.	DuPont (US)	3,300	15%
3.	Syngenta (Switzerland)	2,018	9%
4.	Groupe Limagrain (France)	1,226	6%
5.	Land O' Lakes (US)	917	4%
6.	KWS AG (Germany)	702	3%
7.	Bayer Crop Science (Germany)	524	2%
8.	Sakata (Japan)	396	<2%
9.	DLF-Trifolium (Denmark)	391	<2%
10.	Takii (Japan)	347	<2%
Total		14,785	67%

Source: ETC Group 2009.

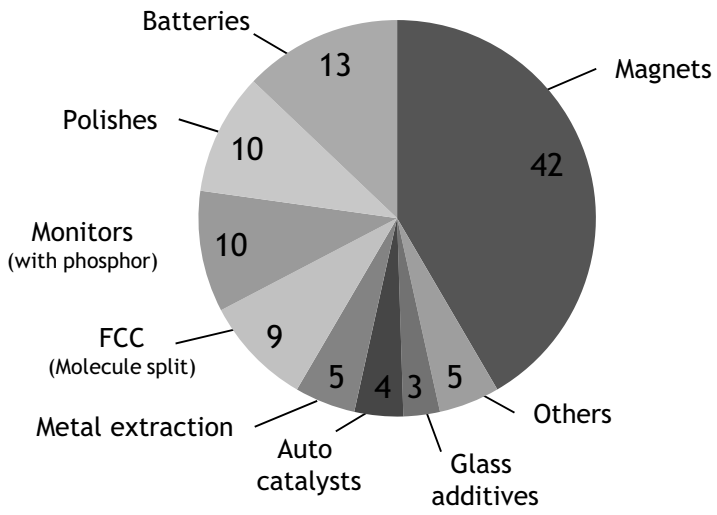
Alternatively, we can consider the regions that produce rare earth (resources), which are important raw materials for all high-tech products: 95% of the presently harvested or mined rare earth comes from China (see Figure 9). The country totally dominates one of the most important raw materials markets for the future (see Figure 10).

Figure 9: Structure of Production Regions "rare earth elements"

China	95 %
USA	2 %
India	2 %

Source: World Mining Data.

Figure 10: Usage "rare earth elements" (predicted demand 2014, in per cent)



Source: Lynas Cop. 2011.

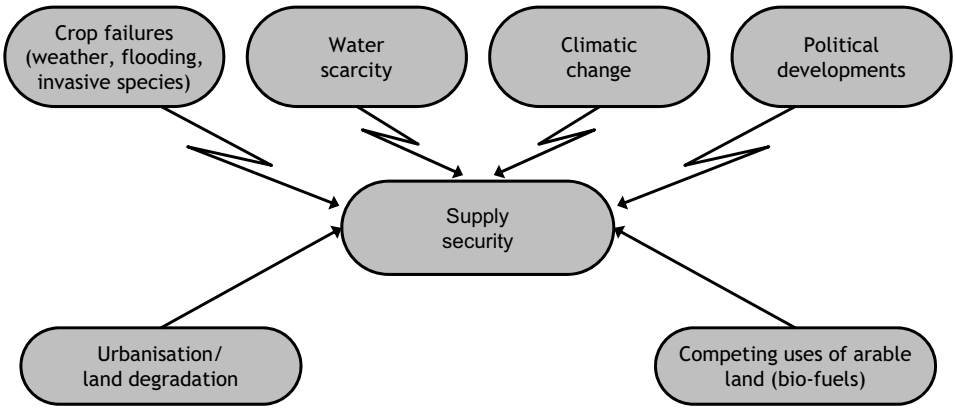
The supply security will continue to be influenced substantially by so-called extreme events, in the form of natural disasters. The following extreme events from the last few years come to mind:

- volcanic ash (2010)
- oil disaster in Louisiana (2010)
- floods in Australia (2010/2011)
- earthquake, tsunami, Fukushima (2011).

Overall, a variety of factors impact on supply security (see Figure 11):

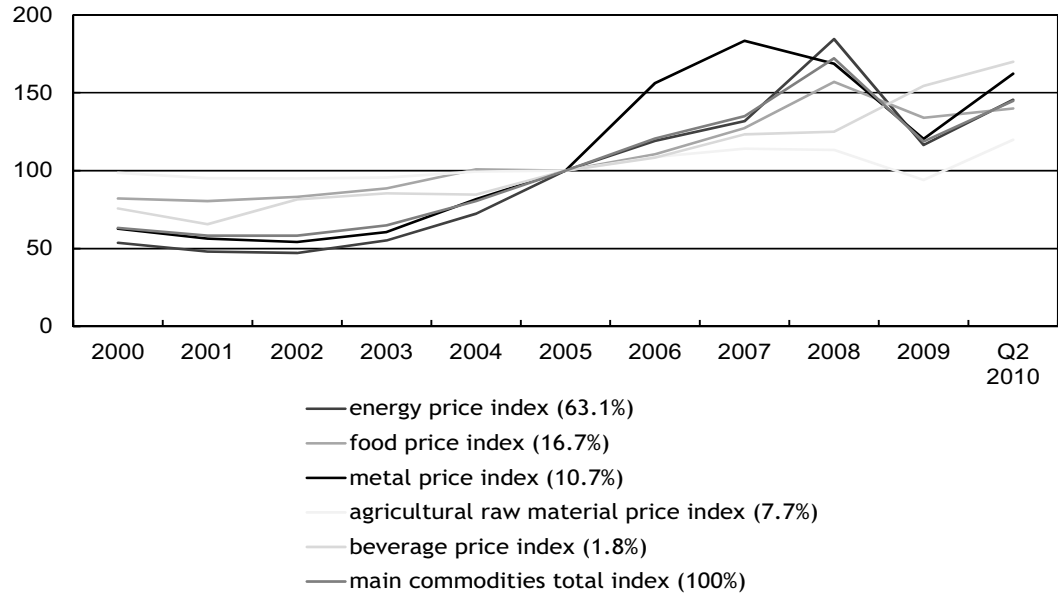
- crop failure caused by weather, floods, pests etc.
- water shortages
- climatic change
- political developments, such as those in the Arab states or in North Africa
- increasing urbanisation and land degradation
- competition for the use of arable land: food or bio-fuel.

Figure 11: Disruptive Factors in Summary



All this leads to a situation of chronically rising raw material prices, as shown in Figure 12. Only in the economic crisis year of 2009 did the prices decline due to demand factors. Rising raw material prices are by no means neutral in terms of competition: Companies that have access to raw materials thus have an important competitive advantage. With rising prices, profit margins rise, often substantially, or the company can convert its cost-leadership into aggressive pricing strategies, in turn driving other firms from the market – to name just one aspect of this scenario.

Figure 12: Development of Commodity Prices



Source: FAO 2010.

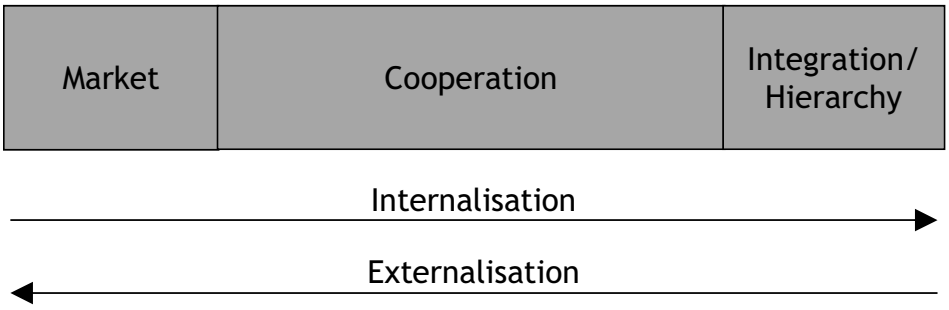
2.3 Supply strategies of manufacturing and retailing companies

2.3.1 Internalisation vs. externalisation

This aspect leads logically to the supply strategies of manufacturing and retailing companies. With regard to new institutional economics (for theoretical explanations, see Morschett/Schramm-Klein/Zentes 2010, pp. 246-252, and the cited literature)[1] two polar options exist in order to realise activities: A value chain activity can be done internally, i.e., controlled or coordinated by hierarchy/integration, or externally, i.e., by other firms. Externalisation always means buying goods or services. In this case, the market mechanism is taking up the role or task of coordination (see Figure 13). These two basic alternatives are also called in a more practitioner-oriented terminology: make or buy.

If an activity that is currently being realised internally is transferred to an external firm, this process is called outsourcing, i.e., outside resource using. In contrast, if an activity is integrated in the internal value chain (intra-firm transaction), this process is called insourcing.

Figure 13: Transaction Modes



[1] The dominant theory to explain transaction modes has been the transaction cost approach (Williamson 1985).

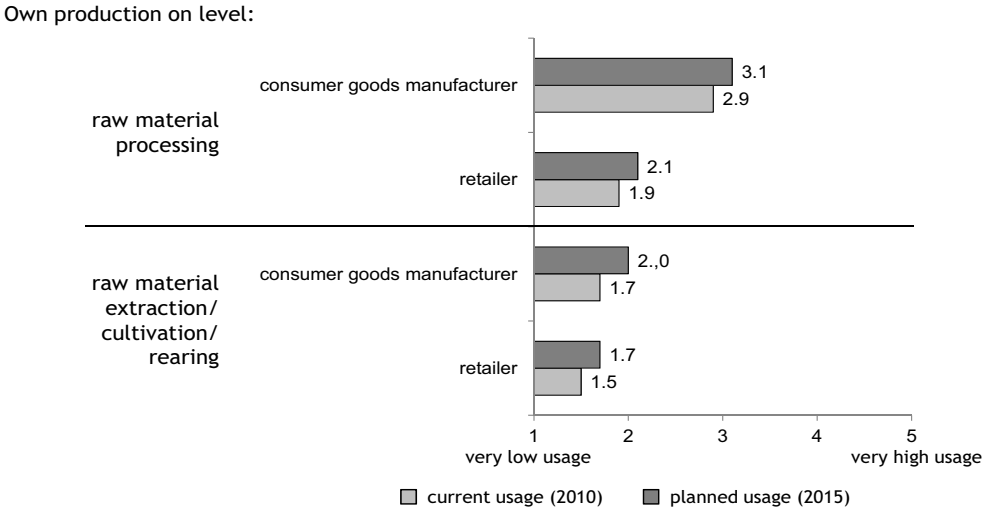
Between these two polar alternatives a wide range of cooperative agreements exists with fuzzy delimitations between externalisation and internalisation, such as contract buying or contract manufacturing, dis-cussed later in this section. Cooperative arrangements enlarge the basic alternatives: make, buy or ally (Geyskens/Steenkamp/Kumar 2006).

2.3.2 Backward integration and distributive justice

Backward integration or upstream integration is a possible supply strategy of manufacturing and retailing companies. This means, that companies will integrate raw material processing as well as raw material extraction, cultivation/farming or breeding into their value chains.[2]

The recent PwC/H.I.MA. study (PwC/H.I.MA. 2010) shows, that companies in the German-speaking consumer goods industry, that is, manufacturers and retailers, will pursue backward integration over the next few years, but only in a moderate way (see Figure 14).

Figure 14: Elimination and Integration of Upstream Activities



[2] Since the publication of Williamson's „Market and Hierarchies" many theoretical and empirical articles have investigated the advantages and disadvantages of backward or upstream integration, see for example Siemer 2004, Das/Narasimhan/Talluri 2006, Jacobides/Billinger 2006, Wand/Liu/Wang 2007, Grüger 2007, Kolloge 2007, Gulbrandsen/Sandvik/Haugland 2008, Laussel 2008, Cho 2009, Giovanni 2009, Dvoracek 2009.

Source: PwC/H.I.MA. 2010, p. 64.

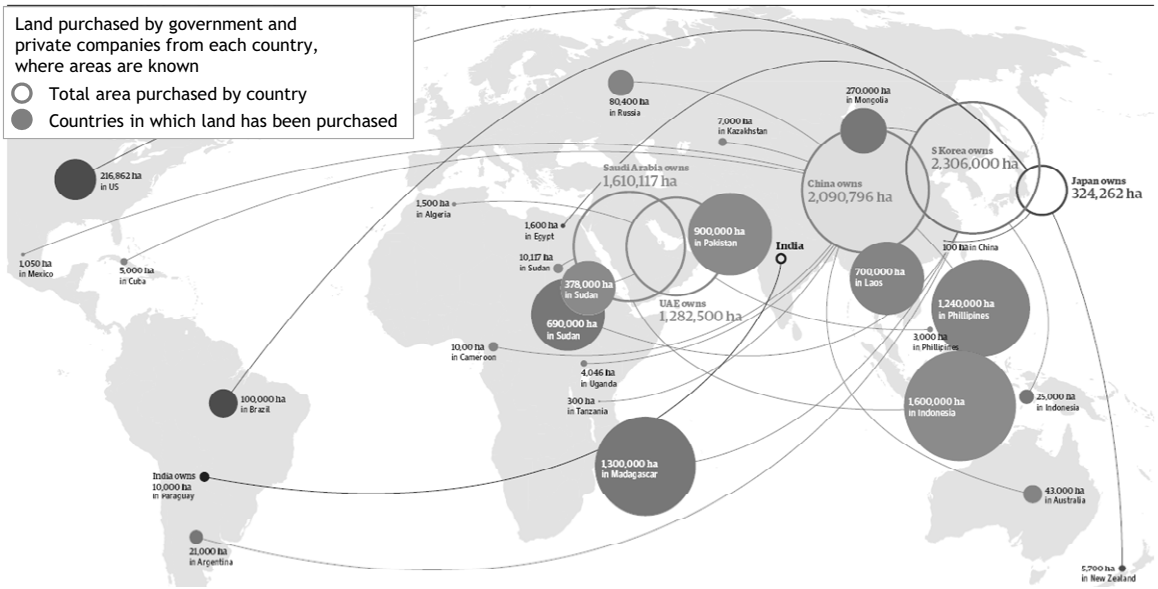
While the backward integration (purchasing of farming land etc.) remains relatively limited in the German-speaking area and in Europe, Asian and Arabic enterprises or their governments are considerably more active in this respect. Since 2006, between 15 and 20 million hectares of arable land have been sold or are the subject of negotiation. Particularly the Asian and Arabic countries are increasingly leasing foreign arable land. Furthermore, some of these leasing contracts have a duration of 50 or even 99 years (see Figure 15).

Figure 15: Current Examples of Commodity Hedging through Acquisition/Leasing

- In 2009, Saudi-Arabia rents 10,000 ha in Sudan for the cultivation of wheat, vegetables and for cattle breeding.
- In 2009, Bahrain secures an 10,000 ha area in the Philippines for fish farming.
- In 2009, Bahrain concludes a contract for agricultural collaboration with Turkey in the range of 500 million USD.
- In 2008, Qatar rents 40,000 ha in Kenya for the cultivation of fruits and vegetables and finances a harbour amounting to 2.3 billion USD in return.
- In 2008 Libya invests in 247,000 ha land in the Ukraine.
- In 2009, Vietnam secures 100,000 ha in Laos for the cultivation of rubber.

Figure 16 demonstrates the so-called “world land grabbing”. Specifically, huge tracts of Madagascar, the Sudan or Mongolia already belong to South Korea. Laos and the Philippines are being bought up by China. Even arable land in Russia now belongs to China. The United Arab Emirates possesses large areas in Sudan and Pakistan.

Figure 16: World Land Grab



Source: Guardian 2008.

This form of “land grabbing”, as it is called by NGOs (Non-Governmental Organizations), raises an ethical problem, namely that of distributive justice. Arable land is purchased in precisely those countries that are poorest, thus exacerbating their poverty and hunger.

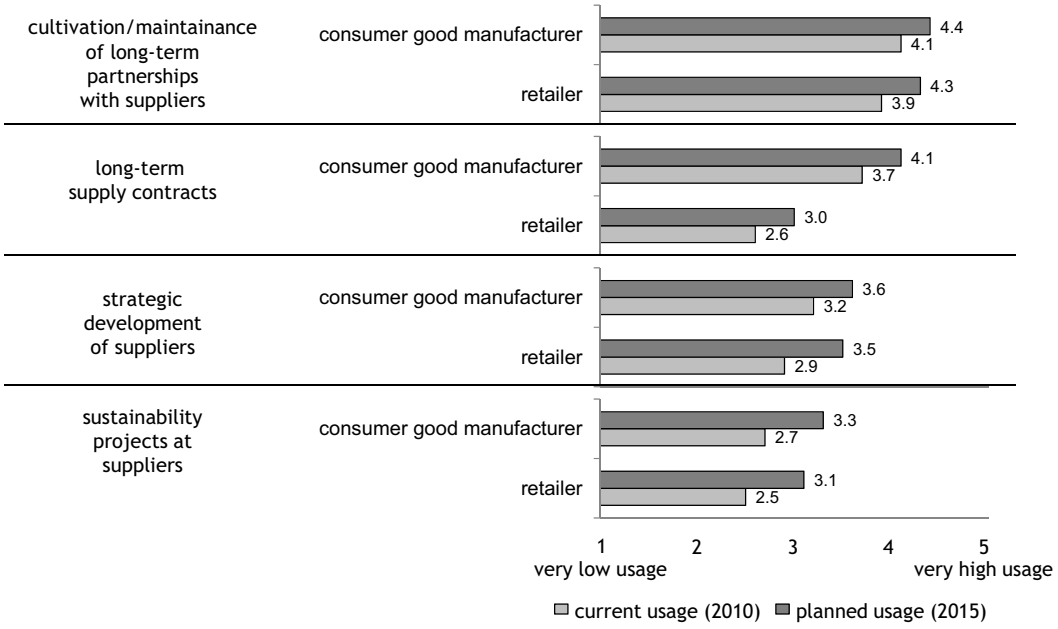
2.3.3 Cooperation and distributive justice

Therefore, it is necessary to consider whether partnership solutions can be found that lead to a win-win situation. In other words, we need solutions which will lead to supply security in the industrial nations and at the same time, contribute to better conditions in the countries of origin.

The PwC/H.I.MA. study in the German-speaking region has demonstrated that the companies, which have been analysed, actually prefer such cooperative strategies. Accordingly, long-term partnerships already play an important role for manufacturing and retailing enterprises – as Figure 17 shows. And their significance should rise over time. The targeted development of suppliers, as well as the implementation of sustainability projects will become increasingly important, as Figure 17 indicates. Through long-term sourcing contracts,

farmers obtain secure investments or will be financed by European companies, with this funding being repaid over time through exports. At the same time, the enterprises transfer knowledge and expertise to the countries of origin, leading to energy-efficient production, increases in productivity, efficient logistics and so on.

Figure 17: Long-term Partnerships as Win-Win-Solutions



Source: PwC/H.I.MA. 2010, p. 60.

A good example of this both strategic and ethical orientation is provided by a particular retailing enterprise, namely the bio-cotton project of the Swiss Coop. This is a project in which Indian farmers are supported not only financially, but particularly in terms of knowledge. Long-term contracts guarantee the Coop access to bio-cotton, a product that is already in short supply in the world markets, not just in 20 years time, and it ensures a good income for Indian farmers on the basis of fair prices. The vertically integrated procurement systems of the German retailing enterprise Rewe are moving in the same direction (see Figure 18).

Figure 18: Vertically integrated Supply Systems: Example Rewe (D)

Source: Rewe Group 2010.

3. Conclusion

Cooperative arrangements or cooperation is clearly a good way to achieve win-win partnerships, which means to guarantee supply security in an ethically acceptable way. Longterm sourcing contracts, based on fair trade arrangements, combined with the transfer of knowledge and expertise to the countries of origin lead to wealth in these countries and in the same time contribute to the development of entrepreneurial capabilities in contrast to pure “land grapping”.

However, this depends on fair play by both partners. Failing this fundamental condition, there will be no win-win situation, but a zero-sum game.

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