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When Growth Obliges: Social Responsibility of Farms in Light of the Technological Treadmill

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Abstract

The agricultural sector in Germany, in the EU, and other industrialised countries remains in the spotlight of controversial societal debates that testify to an advancing alienation between modern agriculture and society. Key issues include animal welfare, environmental externalities, industrialisation of agricultural production, and extinction of family farms. As higher animal welfare or environmental standards are requested by society, the respective agricultural debates take on ideological tenors. The present paper addresses the legitimacy of and the need for supporting the agricultural sector. We ask to what extent the existing economic conditions allow the agricultural sector on the one hand to benefit from agricultural innovations and on the other hand to meet societal expectations. The analysis builds on two concepts: the agricultural treadmill theory, which assumes the agricultural sector to be under a permanent economic pressure, and the concept of corporate social responsibility, which presumes that firms have an interest to comply with societal expectations. We describe and analyse the internal mechanisms of these concepts theoretically and conceptually. We then discuss opportunities which may help to overcome the increasing alienation of agriculture and society.

1. Introduction: The Technological Treadmill and the Responsibility Issue

For quite some time now, agricultural producers in Germany, in the EU, and in many other industrialised countries is the subject of conflicts, which suggest a growing alienation between society and agricultural producers (Balmann et al., 2016). There are obvious reasons for some of the conflicts, such as lapses in judgment with regard to animal and environmental protection. What strikes us most in these disputes is the scarcity of attempts to find solutions. Instead, ideologically tainted rallying shouts like 'mass-produced livestock', 'virtual farming', farm factories and 'the end of family farms' increase the distance between the parties. The urgent need for showing more consideration for animal welfare and environmental protection in individual areas notwithstanding, the ideological undertones in the public discussion is an obvious issue. There are some signs that farmers now begin to realize that their public image does not match their own perceived reality. In response, farmers started actions like open farm days.

However, there are indeed more and deeper-rooted problems, which relate to the privileged position of farming enterprises in our economic system. By comparison with commercial enterprises, farming enterprises enjoy quite a few privileges not only in the political arena (EU agricultural politics) but also in terms of laws regulating taxes, social burdens, inheritance and construction. There are even legal exceptions within agricultural enterprises following the special classifications of commercial livestock enterprises and their differences in legal company structure. Many of the privileges are justifiable where the local agriculture deserves particular protection and where the local agriculture would not survive without protection. Protective measures are justifiable if they are required to provide important crops and food in the desired quality. In such cases, agricultural enterprises would help to ensure proper nutrition for the population and preserve the environment. Protection is also in order when any essential sector faces particular disadvantages.

Below, we will discuss whether agricultural enterprises deserve or need protection in terms of the characteristics, which are unique to agriculture. We are particularly interested in

finding out whether the current economic fundamentals allow agricultural enterprises to thrive and fulfil public demands. An important side aspect in this context is the public image of modern agriculture versus the image insiders in the agricultural sector have of themselves (Balmann, 1995). This is significant because public expectations with regard to agriculture must be measured in terms of their relevance to today's reality (Valentinov, 2013). In many debates and media reports, perceptions seem to have their roots in the myths of traditional family farms. Ignored is the fact that for the most part, the agricultural production takes place in enterprises using today's technologies and industrial principles. Such myths would not only create an increasingly implausible agriculture but it would also ignite moralising political debates about 'good' and 'bad' agriculture. In the final analysis, public discussions mired in ideologies, myths and morals are a sign of the increasing alienation between agriculture and society.

2. The Technological Treadmill and the Special Status of Agriculture

In his book *Farm Prices: Myth and Reality* (1958), US American economist Willard Cochran referred to a treadmill when he described the special competitive situation in agriculture. By and large, he sees productivity gains in agriculture benefitting only a few innovative agricultural producers while the majority of producers suffers the consequences of the following drop in prices. In the final analysis, agricultural enterprises using outdated technologies as well as suboptimal economy of scale and management will no longer be able to achieve profits. Especially small farms will have incomes, which are clearly lower than the costs of doing business. This leaves small farmers few choices. Either small farming enterprises work on becoming more productive to keep the treadmill moving or they sell the farm. This necessity and the never-ending stream of innovation make the economic treadmill a permanent presence in agriculture.

The mechanism of this treadmill is the common driver of economic progress in all industries and endeavours. The core principle is the 'creative destruction' described by the Austrian economist Joseph A. Schumpeter (2005 [1942]) for the economy of nations in his book *Capitalism, Socialism and Democracy*. Schumpeter realized that innovations destroy old structures and allows new ones to emerge (Schumpeter, 2005). This process never stops. It is the basis for all technical and economic progress for the benefit of society. Individual companies or even entire industries must adapt or perish.

However, agricultural enterprises face special circumstances when it comes to absorbing the consequences of productivity increases. Food items are subject to saturation and have little income and price elasticity. Demand for food increases less than proportional with increasing income and falling prices. Consequently, people spend smaller and smaller portions of their rising incomes on food. Therefore, poor members of society profit more from agricultural progress than affluent ones. This makes agricultural productivity increases a special service to society. In turn, the low elasticity and high productivity will lead to disproportionately lower prices and lower profits. Of course, innovative and highly productive agricultural enterprises may realize short-term windfalls. However, producers who cannot keep up with the innovations suffer.

Since the treadmill theory was published, politicians, economists and scientists discussed ways for farmers to escape the technological treadmill. Attempts at a solution were price policies, ceilings on produced amounts as well as subsidies. From the beginning, scientists

criticized these attempts and thought of them as dead-end streets. After all, the EU Agricultural Policies proved convincingly that all these measures went nowhere. EU pricing policies caused tremendous overproduction in the 1970s. The EU paid high export subsidies to 'dispose' of these excesses. The restrictions on produced amounts of sugar and milk turned out to be unsustainable because they suppressed innovation, created hardship for consumers and in the long term, stalled the agricultural development. Even today's enormous direct subsidies will not halt the treadmill for any length of time. It simply delays the dilemma for a while. At the same time, the payment of additional income creates expectations of entitlement, hinder adaptation and development and create dependency. Not the least problem is the created greed and jealousies about the distribution of funds.

3. Corporate Social Responsibility

The indirect but grave consequence of the unstoppable treadmill forces agricultural enterprises not only to live with the constant pressure to adapt and make due but also to keep looking for new cost-lowering measures. This may have the result that the taxpayer has to bear certain costs and that agricultural producers can no longer afford to perform services in the public interest, which will reduce profits because the consumer will not pay higher prices.

In this context, we must recognize that the pressure to reduce costs is intimately related to the desire to achieve profits. Incentives to assume public responsibility are equally important. Even though this problematic is not unique to agriculture, the small agricultural enterprise structures introduce unique characteristics. This structuration into small units prevents agricultural producer from assuming social responsibility to the same degree as large corporate enterprises. Large enterprises are always in the public eye and therefore have a vital interest in keeping up appearances as part of their brand image and customer relations work.

Large enterprises upstream and downstream of agricultural producers will never fail to put their best foot forward in public. Their internet pages will illustrate their social engagement in prominent internet presentations. Assuming responsibility in the interest of society has become the norm under the flag of Corporate Social Responsibility (CSR). Without doubt, not all that glitters is gold. Still, CSR is part of creating a brand image and it may even help to keep government regulators at bay. As a side or advertising effect, assuming CSR polishes the corporate profile in the competitive field and helps to increase the market share.

Farming enterprises in the treadmill are not even visible in CSR. This creates a gap between agriculture and society. Not closing this gap will lead to the alienation between agriculture and society. The treadmill interferes with the assumption of responsibility because of two main reasons: The treadmill leads up to an ideologisation of the public discourse and impedes the formation of company groups or industrialisation. Below, we analyse these reasons but first we will elaborate on the preconditions for CSR.

3.1. Components of Corporate Social Responsibility

Today, the term CSR is a fixed part of the corporate ethics vocabulary. There are many definitions and classifications of CSR. They are too numerous for a systematic presentation in this paper. In principle, CSR is a corporate policy in favour of assuming social responsibility. In this context, we explicitly refer to three components.

Firstly, CSR is about balancing the different stakeholder interests. In 2010, R. Edward Freeman inspired the corporate stakeholder theory. The theory acknowledges that corporations are not only dependent on shareholders but also on a much wider circle of stakeholders, which includes the staff, suppliers, creditors as well as the local and global public. Ignoring the interests of these stakeholders may jeopardize the standing of the corporation. According to the stakeholder theory, the CSR is the balanced consideration of the interests of all relevant stakeholders, which constitute the societal environment. In this theory, corporations have moral obligations toward this societal environment.

Secondly, there are various levels of CSR, which range from compliance with legal regulations to nonactionable acts of good will. Archie B. Carroll (1991) created a well-known CSR classification. His pyramid model comprises economic, legal, ethical and philanthropic levels of responsibility (Figure 1).

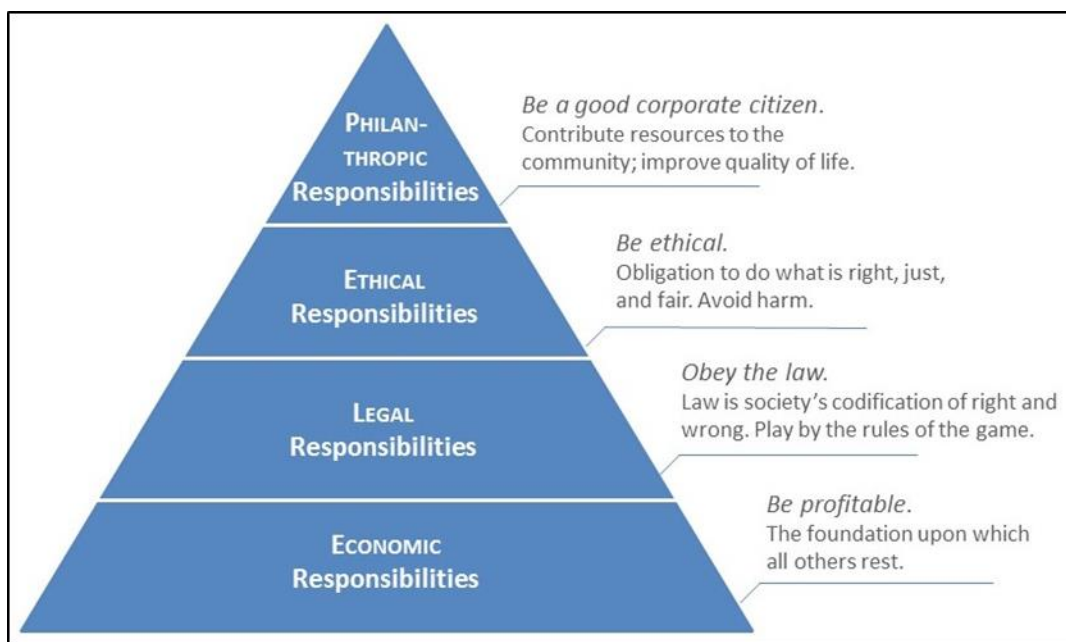


Figure 1: Carroll's pyramid model of corporate social responsibility (Carroll, 1991).

The central assumption in this model is that the value of CSR acts grows with increasing inability to enforce such actions through the court system, i.e. the higher up in the pyramid they appear. CSR as marketing strategy also fits into the pyramid model. In this case, the moral value of CSR is inversely proportional to the strategic value. Enterprises, in which CSR practices are mostly acts of compliance with legal standards or acts in the company's immediate interest, can hardly reference these acts as moral deeds of an ethical enterprise or expect them to establish bonds with stakeholders.

Thirdly, the CSR relates to the size of enterprises. As for the majority of current papers on corporate ethics, the authors regard CSR as everyday common practice. The aspect is important in the agricultural context because with a few exceptions farming enterprises (in Germany or worldwide) are small by comparison with industrial enterprises. The few large enterprises and agricultural holdings do not change the overall picture. In 1960, the US

American management theorist Keith Davis formulated the famous *Iron Law of Responsibility*, which states that enterprises tend to lose their power if they fail to use their power responsibly (Davis, 1960). This explains why CSR has become imperative for corporations. Powerful enterprises are under public pressure to use their power responsibly. In short: Corporate power comes with obligations.

3.2. The First Effect of the Treadmill: The Ideologisation of Debates

The US American Philosopher and Ethicist on Agriculture Paul Thompson (2010) describes the agricultural treadmill as follows: In the long run, farmers are unable to profit from the introduction of innovative technologies. Instead, they must put in more and more effort to stay in the same place as Lewis Carroll (1871) described in the allegory of the Red Queen's Race in *Through the Looking Glass*¹. According to Thompson, the technological treadmill will end in a social dilemma, i.e. in a commons-like unintended collective self-impairment, which now serves as justification for agricultural subsidies. In this sense, it is possible to determine a correlation between the treadmill and the discussion about the special status of the agriculture in our economic system. The treadmill spurs on discussions about the pros and cons of traditional farming versus industrialised agriculture.

Traditional farming philosophies are for example fuelled by works of Russian agrarian economist Alexander W. Tschajanow (cf. Tschajanow, 1923). Proponents see a special superiority in traditional farming based on the self-exploitation of family-run enterprises. Traditional farming philosophies also have their roots in romanticised reports about life on the farm by Thomas Jefferson, the third president of the United States of America. We ascribe the latter position to the US American agrarian economist Michael Boehlje for example. Boehlje (1999) argued that the modern agricultural enterprise increasingly looks like biological factories and are based more on science than art. The increasing integration into the value chains and the increasing use of foreign or immigrant workers underscore this observation. Proponents of traditional farming have contrary opinions. They give traditional farming a special moral status, which the treadmill will jeopardize. Therefore, they propose subsidies via agrarian policies.

The treadmill fosters the ideologisation of the public discourse about agriculture. This in turn leads to conflicts between the participants in the discourses. It also spurs an emotionally controlled inflation of public expectations and demands on agricultural enterprises. Other societal conflicts (e.g. poor population groups versus environmental protection) add yet more fire to the flaming conflict between agriculture and society. Still, more conflicts have their origins within agriculture (e.g. small versus large farming enterprises, conventional versus ecological farming and traditional versus industrial). The conflicts smother the effective assumption of social responsibility by agricultural enterprises.

The conflicts between stakeholders exacerbate the balancing of their interest through the CSR functions of agricultural enterprises. While the stakeholder theory of CSR does not presume that the stakeholder views and interests are on a collision course, it is safe to assume that finding a balance will be much easier without conflicts of interest among stakeholders. In cases of conflict, agricultural enterprises can only use their CSR activities to

¹ "Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!" (Lewis Carroll, 1871).

secure a position in the conflict. However, this does not resolve conflicts and agricultural enterprises will keep failing to make friends with the public.

Add to this the constantly growing public demands on agricultural CSR, which press the relative value of the agricultural CSR down in the pyramid model according to Carroll (1991). This means, agricultural enterprises never meet the desired standards. Instead, farmers can only manage to comply with the laws. This dampens the moral value and public effect of CSR activities. Even though the CSR activities take place, they are ineffective in counteracting the alienation between agriculture and the public.

3.3. The Second Effect of the Treadmill: Restrained Corporate Growth

Economists Schumpeter, Galbraith and Williamson each described in his own way how technological advancements contribute to the formation of large corporate groups. The agricultural treadmill disrupts this correlation and absorbs the effects of progress. According to Thompson (2010), farmers need more and more advanced technologies just to stay in place. This is not unlike the Red Queens Race in the allegory 'Through the Looking Glass' by Lewis Carroll or the proverbial hamster wheel.

Add to this that the EU and German farm subsidies in response to the treadmill effects caused the preservation of existing structures. These subsidies only delay the consequences of the treadmill, which require growing or getting out of the way. It is quite likely that the well-intentioned subsidies as well as the tax relief and the special considerations in the inheritance laws provide considerable incentives to keep unprofitable farms in the family despite the lack of economic prospects. This restricts the development opportunities for other, in particular for neighbouring farm enterprises, which may be far more likely to become profitable.

The restrained formation of larger agricultural enterprises prevents Davis' *Iron Law of Responsibility* (1960) from being effective. When agricultural enterprises cannot build powerful structures due to their small size, they will not be pressured into taking social responsibility (Figure 2). In light of the barely present power and the relatively scarce resources, the individual contributions of agricultural enterprises are hardly significant enough to solve the problems on the societal level. Even large agricultural enterprises are not big enough for this task.

There is also a free-rider problem. Individual services are almost never free. Therefore, performing these services may diminish the individual competitiveness and future development opportunities. Besides, due to existing economic pressures only a portion of the enterprises must bear the costs of the increased social responsibility. Farmers running the treadmill also have very different perspectives. While some of the farmers see new development perspectives in using innovations, other farmers will ignore that these innovations even exist. Accordingly, the outlooks for the enterprises are different and so are the incentives to assume social responsibility.

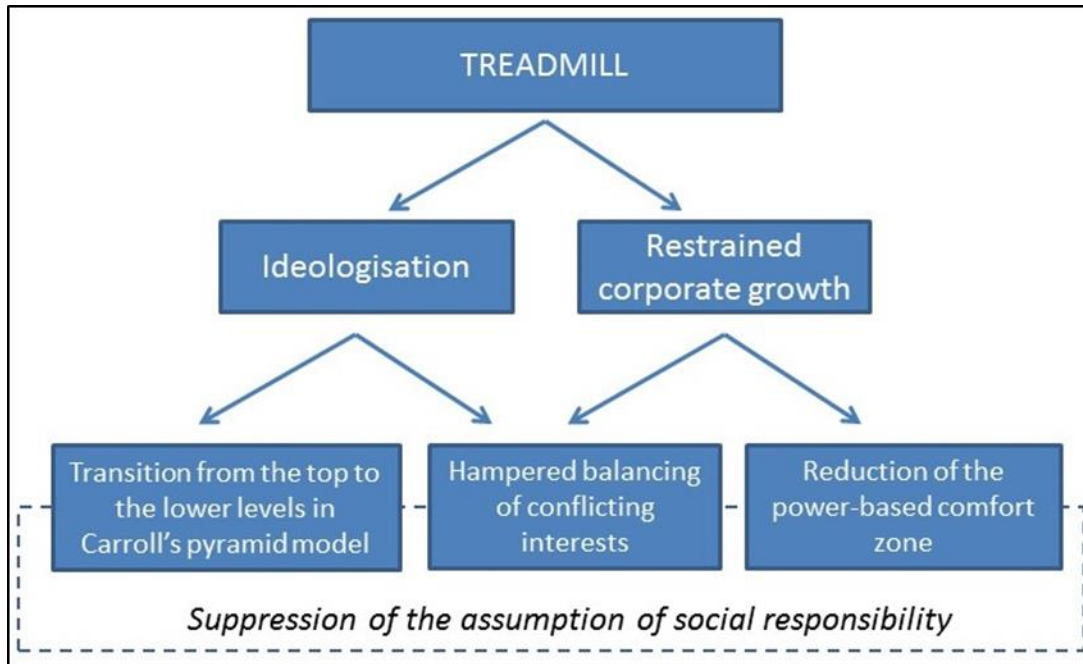


Figure 2: Effects of the agricultural treadmill on corporate social responsibility.

3.4. Chain Captains: When Power Obligates

The restrained corporate growth is characteristic of the agricultural sector but not obligatory for entire value chains. Quite frequently, considerable consolidation occurs upstream and downstream of these value chains. This gives Davis' *Iron Law of Responsibility* a fair chance to work. Consumers demand excellent quality of agricultural products, influence the regional origin, demand fair and environmentally sustainable production conditions, want gluten-free products and require adjustments along the entire value chain. The consolidated chains can meet these demands. The chain captains control these adaptations.

The chain captain is an enterprise inside the network of enterprises or within a supply chain. Chain captains have leadership functions with the necessary power to gather and coordinate the available resources and services of the network members (Gagalyuk, 2013 ff.). From the perspective of the chain captain, the value is created inside the logistics chain. The effectivity of this process depends on the prudent and targeted coordination. This is important because for the consumer the chain captain is the face of the enterprise, which takes responsibility for the products in the value chain (Hanf and Köhl, 2005). As already discussed above, this responsibility is instrumental in character and derives from the trivial concern for the success of the product brand. Usually, the chain captain creates this brand. It follows that the person owning the rights to the brand assumes the role of chain captain.

The 'iron law of responsibility' has the effect that these companies owning the rights to well-known brands take over the instrumental dimension of the corporate social responsibility and combine it with the ethical dimension. This forces the leading enterprises in agricultural value chains to take their positions in the responsibility dilemma of agriculture. They perform their external CSR activities, such as providing the public with information on products and the process quality, and they perform internal CSR activities through the

introduction of quality standards in the value chain. In this way, they assume social responsibility, although not completely. It is their way to escape the alienation from society.

4. The Role of the Civil Society

The continuing alienation of the agricultural production from its social and ecological environment has the result that the pressures caused by the agricultural treadmill and the associated social costs are not solved but shifted elsewhere. To the extent that political measures and scientific approaches offer no satisfactory solutions, representatives of the civil society may influence the assumption of social responsibility. In reality, the increasing presence of agricultural associations, agrarian partnerships and all kinds of social initiatives shows that rural supply deficits including failures to safeguard the quality of life and human dignity frequently cannot be alleviated through government regulations or the activities of private enterprises.

According to the latest survey of the community project *Civil Society in Numbers*, today, 18 million private persons in Germany engage in more than 600,000 organizations in the civil realm such as citizens' networks, cooperatives, associations, collectives, foundations, non-profit companies and other initiatives (Krimmer and Priemer, 2013, p. 4). They perform economically unprofitable social and production-related services in the form of local volunteer work. Their work includes in particular improvements in the productivity of agricultural enterprises through cooperation, strengthening of the market power of small agricultural enterprises in the form of political representation, the provision of cultural and athletic facilities, ecological services as well as the promotion and diversification of the regional infrastructure development (Valentinov und Chatalova, 2014). Private persons also try to contain and reduce social costs, i.e. the part of the production costs, which the person responsible for the condition will not bear (Kapp, 1977). Such costs are for example the landscape destruction caused by using large amounts of fertilizer, the adverse effects on animal welfare through mass animal management but also the scarcity of work opportunities, physicians, public transportation, lack of shopping opportunities, rural flight, loss of biological diversity, regional traditions and disintegration.

Private persons do not spring to action because they can offer certain goods and services for the market or the government with more efficiency. They do it because private initiative is often the only option. Therefore, the actual role of the civil population is the sensitization of the economic and political system to the needs of their social and ecological environment and less in the improvement of economic performance figures. In terms of the sustainable and orderly organization of modern society, this function is as important as efficiency (Valentinov and Chatalova, 2014).

At the same time, these attempts at fixing problems reflect the conflicting expectations on agricultural enterprises (Valentinov, 2013). On the one side, people desire a modern, high-performance agriculture, which must be able to provide food and energy for growing populations in the world, aside from adapting agrarian practices to the climate changes. On the other hand, the society also demands better and responsibly produced goods, wants to cover settlements and vacation areas, maintain the biodiversity and expects the sustainable handling of production factors.

Through regular public discussions of structural change or appropriate methods of animal husbandry private persons have assumed an important democratic and integrative - although not always an expedient - role (Habermas, 1992). As public communications structures (ibid. p. 443), they counteract the masking of the negative impact of producing goods and promote alternative development concepts. As medium for social disapproval, they deliver crucial impulses for the improvement of production methods, the quality of life in rural areas and they have positive cumulative effects on the regional value chains.

Despite the enormous contribution of organized private persons in the reduction of social costs, civil society cannot be the guarantor of sustainable business practices and the solution of the agricultural dilemma. Instead, private persons are able to incite public emotions and turn topics like mass animal keeping into scandals. Other such problem topics are the use of certain pesticides or agricultural speculations. There are also the emotional debates about 'good' versus 'bad' agriculture. Some conflicts cannot be completely resolved. Public demands turn these problem targets into overdrawn ideological comfort zones, in which private persons can take positions without ever suggesting a single productive solution. Instead of solutions, emotional arguments and unrealistic demands dominate agricultural debates. The consequences of these distorted debates, ideologies and myths may be policies which preserve existing structures such as unprofitable family farms (Collier, 2008) or result in more privileges for agricultural enterprises, the misjudgement of innovations (such as the green gene technology), or the introduction of derivatives to secure financing for the food supply (e. g. Prehn et al., 2015).

5. Concluding Remarks

Technological progress is responsible for the comfortable faith in technology as solution for virtually all of society's problems. The latest update will take care of everything. Every additional innovation makes it harder to challenge this trend and scrutinize the impact of innovations on society. Technological change also alters society, aside from increasing the speed of change continuously. In the agricultural reality, this problem appears as so-called technological treadmill. Farmers are pressured into keeping up with the most advanced technology even though it does not increase profits but is simply necessary to stay in business. In the already mentioned quotations of Lewis Carroll and Paul Thompson: Run as fast as you can so that you will not fall back.

In this faster and faster race for economic survival, the social responsibility of agriculture becomes a subordinate issue. Recognizing opportunities to overcome the alienation between agriculture and society in its complex interwoven societal-ecological context requires the contextual embedding of agricultural decisions and systems thinking. Already existing approaches to dampen the negative consequences of running in the technological treadmill have resulted in supportive political measures and the growing involvement of private persons in the rural and agricultural developments. The parallel involvements and the partial networking of these approaches (e.g. in the EU Initiative LEADER) seem to allow for the growing demand for social responsibility. They direct the attention to the parity of public expectations concerning agriculture as economic system and as general value worth keeping in our society.

A possible contribution of agricultural enterprises could be the active examination of the myths and ideologies in context with life on the farm. This should include a critical discussion of agricultural privileges, which come with demands to dance to everybody's whistle. Agricultural enterprises have started to recognize the roots of its distorted public image. Farmers reacted with online information and other actions. In addition, as the case of the chain captains shows, the public pressure relating to the treadmill can be partially absorbed through the formation of consolidated structures providing chain captains assume individual responsibility for the sustainable network cohesion. Nevertheless, without feedback and communication from and between all involved parties as well as a paradigmatic shift of guiding economic maxims sporadic solutions can only partially and temporarily compensate for the undesirable consequences of the ever accelerating treadmill.

Finally, the re-orientation in government policies is also essential. Attempts to put the brakes on the treadmill through market interventions and subsidies have created a high subsidy dependencies instead of prospects for the agriculture. They also burdened the taxpayer with many billion Euros in costs and blurred the vision of the actual challenge of assuming social responsibility.

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