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Persistence of family farming, learning from its dynamics

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Abstract of the paper

Traditionally, the family farm has always been seen as a cornerstone of the agricultural production system. Given social, economic and political evidence (Calus, 2009), this organisational form might still continue to shape agricultural development. However, important changes in social and economic environment (e.g. industrialisation of agriculture, increased risk level and public vision on agriculture) become threats to the traditional model.

A SWOT analysis of the family farms indicates the various intrinsic characteristics that make family farms resilient to changing conditions. Even in a changing economic and social landscape these aspects provide them with building blocks for creating new organisational forms or institutional arrangements. This paper shows these building blocks, and is only, prudentially, indicative for possible new institutional arrangements. Creativity may produce numerous outcomes from building blocks. Land tenure is only one example from past and present to show how institutions can deal with a potential threat, such as the large demand for land as production factor. Similar creativity is needed to the exploding capital demand in agriculture. One of the major challenges will be to provide family farms with low-costing capital. Food security and local community viability is the social price for this low cost supply.

Keywords

family farm, corporate farm, peasant, SWOT

1 INTRODUCTION

Traditionally, the family farm has always been seen as a cornerstone of the agricultural production system. Given social, economic and political evidence (Calus, 2009), this organisational form might still continue to shape agricultural development. However, important changes in social and economic environment (e.g. industrialisation of agriculture, increased risk level and public vision on agriculture) become threats to the traditional model. The question arises whether the traditional family farm model can persist, or whether some crucial strengths of this model can feed institutional change that still allows for competitive and sustainable agricultural systems.

The aim of the paper is to provide supportive insights for a discussion on persistence of family farms, or family farms characteristics in new organisational forms. In order to come to such insights, there is a first reflexive analysis on the positioning of family farms within a conceptual multidimensional framework of possible agricultural organisation forms. Second, a SWOT analysis of family farms is performed in order to validate and further fine-tune the framework. Through literature research evidence, and building further on own findings from the analysis of intergenerational farms transfers (Calus, 2009), the multidimensional framework is then used to derive starting points for recommendations on competitive and resilient organisation forms.

The paper is elaborated as follows: section 2 focuses on the place of the family farm in current developments, and discusses its evolution as organisational form with respect to a “peasants – corporate farm” model as differentiating concept of farming typology. The outcome is a conceptual multidimensional framework of possible agricultural organisation forms. Section 3 analyses the strengths and weaknesses of family farms and links them with the opportunities and threats of the future. This analysis is done according to the various dimensions of the framework developed in previous section. In section 4, the scope is enlarged to learn from the dynamics of the family farm: what must be done in order to combine the strengths of the family farm with new institutions to have a sustainable competitive agricultural production. Finally, section 5 gives some major conclusions.

2 PLACE OF THE FAMILY FARM IN CURRENT DEVELOPMENT

2.1 Family farm dynamics

Based on a literature review (among others Loyns and Kraut, 1992; De Haan, 1993; Gasson and Errington, 1993; Knutson, Penn et al., 1998; Small, 2005; Brandth and Haugen, 2007), Calus (2009) derived following elements that define family farming within the current development:

- Both business ownership and managerial control are in the hands of family or near-family members;
- Business ownership and managerial control are transferred within the family over different generations;
- A majority of the labour is provided by the operator and his/her family;
- A substantial part of the capital is furnished by the operator and his/her family;
- The family obtains a major share of its income from farming;
- The principals are related by kinship or marriage;
- The family lives on the farm.

Although the overall number of farms is still in decline – a bit more than one third disappeared between 1990 and 2005 in continental West-European countries –, the share of family farms remains high (Table 1). Except for France, where alternative institutional forms based on family farms exist, the percentage of family farms is far above 90%. However, these statistics are often difficult to interpret when more details on the types of family and corporate farming are missing. For example information on limited resources, retirement, residential or life style farming may be hidden. From USDA statistics, we learn that the rather non-professional farms may account for more than two thirds of the total farm number. But still omitting these from statistics and analysis result in a share of family farms above 90%. The non-family share in production capacity is, however, tremendously increasing at the expense of family farms resources.

Table 1 Importance of family farms in Western Europe agriculture

	2005		Change in the period 1990-2005 (%)			
	Total number of farms	% of family farms	Number of farms	Utilised agricultural area per farm	Economic size per farm	Labour input per farm
Belgium	51540	93	-39	56	83	23
Denmark	51680	99	-36	100	115	0
France	567140	76	n.a.	144	101	n.a.
Germany	389880	94	-40	62	140	5
Ireland	132670	100	-22	1	9	-22
Italy	1728530	98	-35	55	129	10
Portugal	323920	98	-46	94	126	-13
Spain	1079420	95	-32	45	140	28
The Netherlands	81830	93	-34	48	68	18
United Kingdom	286750	96	18	31	69	-39

Source: Eurostat, 2007

The fact that the family farm is still a cornerstone of the European agriculture, became an important point of departure of the so-called European agricultural mode on which the present Common Agricultural Policy is based. Despite of the variation in size, outputs and production methods, Western family farming apparently represents some characteristics, linked to availability of space, the common needs and preferences, and the historical and cultural background of local communities, which were until now important enough to preserve.

Moreover, family farms are seen as indispensable pillars for maintaining viability within local communities. As such, family farms are not the only stakeholders within the countryside producing commodity and non-commodity outputs. In general, family farms, corporate farms, and peasants all encounter opportunities within the countryside and there is a dynamic interaction between the different stakeholders.

Family farms can be distinguished from family-owned business and corporate farms based on the fact that both the management and entrepreneurship are in the hands of the farming family and not shared with other persons (Table 2). The management refers to the organization and coordination of all activities on the farm, while entrepreneurship is seen at the more strategic

level and refers to the capacity and willingness to undertake conception, organization and management with all attendant risk, while seeking for profit as reward. The family owners also mainly provide labour, land and capital. Additional labour may be hired, most often on a seasonal basis (Gasson and Errington, 1993), while land may be rented for expansion of the operation (Table 3). Further extra capital may be borrowed for supplies, machinery, and improvements. Important is, however, that the (financial) risks are taken by the family owning the farm even if others deliver part of the production factors. This is not the case in the family-owned business and industrial forms of farming where risks are shared among shareholders whether they have family ties or not. Besides the three models mentioned in Table 2, other farming structures exist, such as cooperative farming (in which different families work together within a co-operative structure), collective farming and state farming. However, these farm types are seldom in contemporary West European agriculture, although they might provide opportunities for farming in the future, as is already shown by the French example.

Table 2 Different forms of agrarian production

	Labour	Management	Entrepreneurship
Family farm	Family	Family	Family
Family business	Family or hired labour	Family or hired manager	Family shareholders
Industrial farm	Hired labour	Hired manager	Shareholders

Source: own compilation based on Gasson and Errington, 1993

Table 3 Proportion of agricultural land farmed by owners (%) in 2000

Belgium	33
Denmark	75
France	37
Germany	37
Ireland	81
Italy	77
Portugal	74
Spain	73
The Netherlands	72
United Kingdom	66

Source: European Communities, 2003

Family farms can to some extent also be catalogued as peasants. Peasants can be defined as ‘members of rural, agricultural households, who control the land they work, either as tenants or as smallholders, who are organised generally in households and in village communities that meet most of their subsistence needs (production, exchange, credit), who pool different forms of income, and who are ruled by other social groups, which extract a surplus either directly via rents, via (non-balanced) markets, or through control of state power (taxation) (Vanhaute, 2008) Besides common elements in both peasant and family farm definitions, the link with local communities is important. Nowadays, subsistence needs might become of minor importance in West European agriculture, but other socially ruled objectives largely come into place. As farmers more and more take care of the production of non-commodities, they

value the multifunctional aspects of the rural areas. This may restore the link with local communities and therefore farmers contributing to this can also be seen as peasants.

Although peasantry is a loosely defined concept, it shows characteristics that refer to local embeddedness in communities, independency and family-based farming. The peasant dimension of family farms clearly shows linkages with other stakeholders in the countryside. The concepts of both corporate farms and peasantries are used to further analyse family farms in order to position them in future developments.

2.2 Conceptual framework of possible agricultural organisation forms

In order to visualise the interrelationship between family farms, corporate farms and peasants, this paper proposes 3 kinds of conceptual frameworks to explain current and possible future agricultural organisation forms benchmarked against the “peasant- corporate farming” poles of production typology.

Figure 1 shows a one-dimensional relationship between family farms, corporate farms, and peasants. Seemingly independent forces may drive family farms towards one of these extremes. The shift from an agriculture that is focussed on production, to a more multifunctional agriculture makes that the farmer becomes more and more a peasant: farmers take care of the landscape and related functions. However, the increasing capital needs of the contemporary family farms makes that there is a need for corporate farms that can provide the necessary financial means, which might imply a shift towards corporate farms.

The main question is whether there might be an interaction between these two movements. Will there be a conflict, is the family farm the ideal institutional form to combine these dynamics, or do we need new institutional forms to overcome this problem? The tearing effect of push-and-pull forces may be an explanation for the current uncertainties about the family farms future, but is insufficient for our objective to analyse potentialities for family farms in future agricultural organisation.

The problem of this model is that there might be a one-directional movement in some cases, but in other situations, a shift towards more peasant agriculture (e.g. the case of farm tourism) might imply an increase of capital intensity, i.e. a shift towards more capital intensive production and thus towards family owned businesses. As a consequence of this linkage, the one-dimensional framework is not withhold to represent the relationships between family farms, corporate farms, and peasants.

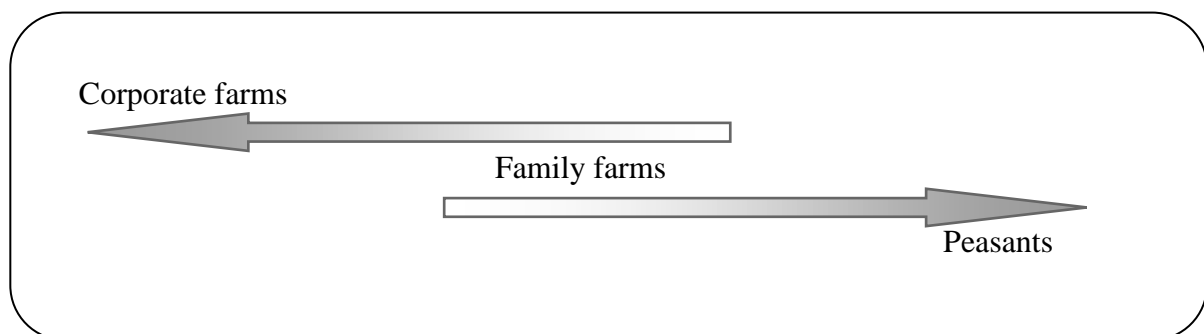


Figure 1 One-dimensional relationship between family farms, corporate farms and peasants

A second approach might be the triangle approach, in which family farms, corporate farms and peasants interact with each other in a two-dimensional way. Within this representation, farms might be situated in the corners if their activities are purely seen as family farm, peasant, or corporate farm. This type of representation is to some extent similar to the one from Van der Ploeg (2008), who confronts entrepreneurial farming to capitalist farming and peasant farming. The framework in figure 2 is family-farm centric. The different way of seeing is motivated by our objective to unravel mechanisms of the dominating and long lasting family farms such as intergenerational farm transfer and family supply of production factors. As such, family farms will combine some characteristics of both extremes, both cannot be seen as a mere recombination of both. Typical family farms aspects make them different from both peasant, corporate or any recombination of them. This suggest intermediates forms situated within the triangle: the closeness to one of the corners indicates the relative importance of that group within the characteristics of a given farm. The advantage of this model is that it allows us to explore the continuum within the family farms.

Another way of seeing would be a pyramidal form instead of a recombining triangle, with family farms on top of it, and with social forces pushing them to the “peasant” socle and economic forces to the corporate socle.

One of the main criticisms to this model is that the location of the farm within the triangle might be known, but the underlying reasons for the location or shift in location cannot be derived from this model. As the categorization of a farm will depend on the scale, the differentiation or specialization, the intensification, external dependence, the management, the farm transfer, ... the second model is not sufficient for an in-depth analysis of these relations and a third model is developed that gives the opportunity of a clear diagnosis on the peasant – family farm – corporate farm continuum. A further elaboration of the pyramidal way of looking is more helpful to detect various categorizing dimension. This will be done in future research.

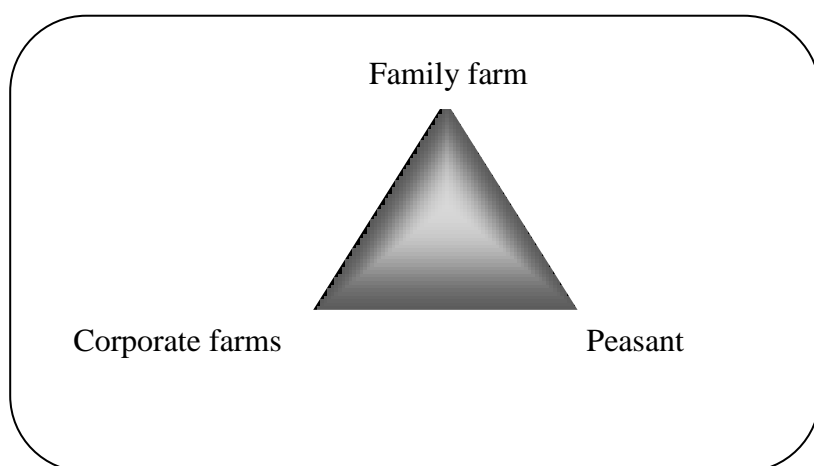


Figure 2 Triangle model of the peasant – family farm – corporate farm continuum

The cobweb model as given in Figure 3 has the possibility to scale multiple aspects of agricultural organisation forms into a single graph. The advantage is that (1) both qualitative and quantitative aspects can be taken into account and be recalculated on a scale from 0 to 1

and (2) the visualisation can also be used for new kinds of agricultural organisation. It enables a rapid appraisal of the different production systems related to the following aspects:

- Farm size
- Intensity of production
- External capital: percentage of provision of capital from external sources such as financial institutions or other capital providers, in relation to the total farm capital
- Specialisation
- Differentiation
- Production of commodities: importance of the production of commodities in the management of the farm
- Production of non-commodities: importance of the production of non-commodities in the management of the farm
- Family labour: percentage of family labour related to the total labour force on the farm
- Intergenerational farm transfer: likelihood of the availability of a successor within the core family, in order to come to an intergenerational farm transfer and guarantee the persistence of the farm within the same family
- Management by the family: percentage of farm management in the hands of the core family

The cobweb in figure 3 is a first preliminary step and can be further extended, finetuned and validated after the SWOT analysis. SWOT will allow to consider those dimensions that matter.

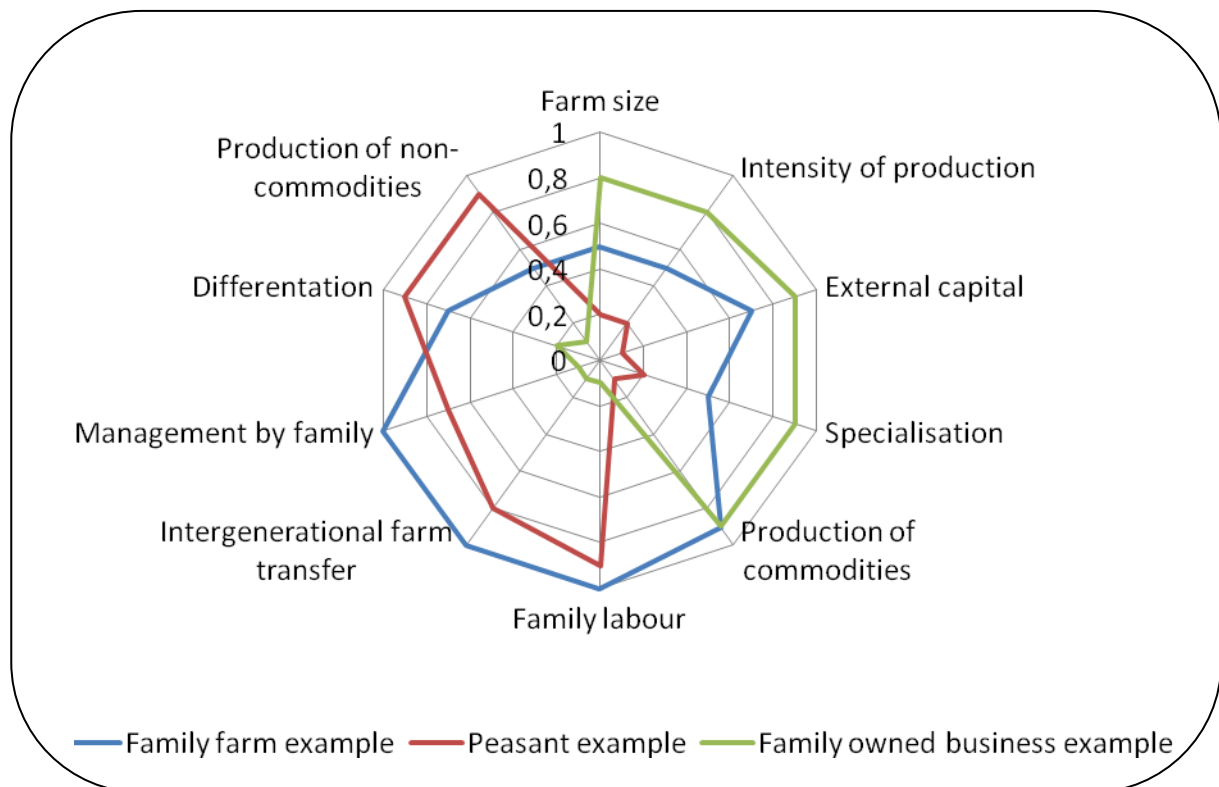


Figure 3 Cobweb model of agricultural organisation

3 SWOT ANALYSIS OF THE FAMILY FARM

Each agricultural production system has its specific strengths and weaknesses within the contemporary agricultural landscape and will face new threats and opportunities when landscape changes. Strengths, weaknesses, opportunities and threats (SWOT) explain the various factors of current and future persistence. In order to derive persistence factors from the SWOT, they will be retrieved and analysed according to the above-described cobweb dimensions. We start with labour, discuss SWOT according to this dimension. Then through this discussion, related dimensions will be detected. This allows the cobweb to get incrementally be completed validated and better structured.

Within this paper, we discuss the strengths and weaknesses related to the main production factor labour, land and capital. Further research will increase the link with the cobweb and validate the model.

3.1 Strengths of the family farm

3.1.1 Labour

One of the main characteristics of the family farm, the availability of family labour, is also the main strength of this form of agricultural production. The advantage of using family labour (supplemented by unpaid labour provided by neighbours) is that family labour can adjust to changes in labour demand resulting from (seasonally) changes in production. This provides an essential buffering system that is not available to non-family farm businesses (Wallace, Dunkerley et al., 1994). By doing so, family labour overcomes the structural requirements for surplus production, and at the same time, it increases flexibility in personal consumption.

In agricultural production, labour contracting is more difficult because effort is harder to observe, while outcome is not directly linked. The strengths of family labour are situated in the fields of time, place and knowledge:

- The outcome of the production process is seen at a later stage than the effort itself. Employers will rely on the 'reputation' of the employee, and this is facilitated when there are close links (e.g. family) or loyalty between farm worker and farmer (Wiggins, 1991). Over time, workers become more socially dependent from the farmer, and loyalty and reputation decline as motivating factors, but due to technological innovations, the output per worker has increased (Swinnen, Christiaensen et al., 1993).
- Due to technical reasons, the workers cannot be gathered in a single location and be easily supervised. Family labour does not need supervision, since family members are involved in the income it provides (Corsi, 2004). According to Pollak (1985) the family farm is seen as the organisational solution to the difficulty of monitoring and supervising hired workers. This implies that transaction costs are increasing with rising farm sizes and greater numbers of hired workers per farm.
- Although farming skills are based on scientific knowledge, they are still very location and crop specific: the scientific knowledge has to be adapted to heterogeneity of soils, weather conditions... Beside education, the family members acquired this specific knowledge during childhood and it is a by-product of growing up on the farm.

3.1.2 Land

Land is one of the major production factors for agricultural production, making the distinction with industrial production. Family farms have in general a relative small farm size, and benefit only to a limited extent to the economies of scale resulting from an increase in land. The strength of family farms in the majority of West-European countries is the relative high percentage of land in ownership, entailing that land security (Table 3). In countries where land ownership is not that common (e.g. Belgium, France), the tenant farmers are protected by law, bringing them also to a high level of land security.

3.1.3 Capital

Within the family farm, wages are not fully paid out or at least only for short periods of the family life cycle, enabling the family farm to reduce fixed costs (Winter, 1984; Gray, 1998). Therefore, the internal resources of the family farm are not valued at the prevailing market prices, but at an internal price leaving a surplus that can be used for the remuneration of family labour, but also for reproduction or expansion investments of the farm or savings (Friedmann, 1978; van der Ploeg, 2000). Farmers have a greater flexibility than other structures to distribute the net returns of the family farm among (1) expansion of production, (2) family consumption or (3) investment in production factors, allowing them to compete successfully with industrial forms of farming focussed on returning a profit. In this way, the balance between labour costs and consumable income is more in favour of family labour compared to hired labour and family farms have a higher ability to withstand less prosperous times. When the family members are getting older, it is also more rational to remain in the agricultural sector, as the marginal benefit of the off-farm employment will be lower than the marginal benefit of the on-farm employment.

A second strategy used by family farms is the possibility to survive in adverse financial conditions through difference between economic lifetime and technical lifetime of machinery. Farmers use machinery often longer than the economic lifetime, increasing the buffer capacity of the farm.

In general, family farms use highly flexible and different strategies to survive under changing market and production conditions. Attention has been drawn to the capacity of the small family farm to survive under adverse conditions by supplementing farm income or simply by tightening belts and accepting a lower income (Gasson, Crow et al., 1988). However at the present, cheap family labour, willingness to accept a low standard of living in return for unremitting hard work, acceptance of traditional authority, lack of clear division between work and leisure and an emphasis on values like independence, may be less appropriate for survival than they were in the first half of the twentieth century (Gasson, Crow et al., 1988).

3.2 Weaknesses of the family farm

3.2.1 Labour

The fact that labour is mainly provided by family members is a major characteristic of family farms. With modernisation of farms, the prevalence of family farming has been strengthened due to the greater substitution of the hired labour input by machinery relative to family labour input by machinery (Schmitt, 1991). This contraction of hired work-forces has been a

function of the cost-price squeeze in agriculture, the increasing cost of labour, and the technological advance in the farming industry where expansion of individual firms is highly limited by availability of land (Winter, 1984), but also of the higher transaction cost of hired versus family labour: hired workers have to be considered as an imperfect substitute for family labour and family farms are a response to the difficulty of supervising workers who, for obvious physical and geographical reasons, cannot be gathered in a single location (Schmitt, 1991). These evolution made that agriculture has been gradually more dominated by family farms in terms of labour input (Hill, 1993).

3.2.2 Land

In general, the average farm size of family farms is smaller than the average farm size of corporate farms, while the agricultural area of peasant is in average less than the average size of family farms. Within the context of family farming, we cannot assume that ‘small’ and ‘family’ are interchangeable labels (Hill, 1993), but we do observe that family farms are mostly of sub optimal size as compared to sizes providing maximum profits, and the economies of scale cannot be neglected. Family farms profit of scale effects compared to peasants, but not compared to corporate farms: family farms encounter difficulties to compete with highly technological industrial production.

The economies of scale in European agriculture are reflected in the increase of the average economic size unit, the average utilised agricultural area per farm, in combination with a limited increase of the average labour input per farm (Table 1). When looking at European statistics in the period 1990-2005, the number of farms decreased in most of the countries, but there was an increase in the average agricultural area per farm. This process of reducing the number of productive units has fuelled an increase of professional businesses. Due to labour saving technologies, the increase in farm size and economic size is not always reflected in a similar increase in labour units per farm. Scale effects push family farms towards corporate farms, although the importance of multifunctional agriculture increases the link with peasants.

According to Schmitt (1991), the gains achieved by increasing farm size due to economies of scale are relatively small compared to the size that can be achieved by optimal use of farm household labour as labour efficiency has increased enormously over the twentieth century due to technological innovations.

3.2.3 Capital

The increased capitalisation of the family farm, related to the increased scale of the farms, entails that especially at the moment of farm transfer high amounts of capital are needed to continue the family farm

Since the 1950s, there has been a strong increase in capital-intensive farm technology. Within the framework of a limited budget, the farmer has been able to improve returns to farming by investments in the efficient application of technology rather than by acquiring more land (Swinnen, Christiaensen et al., 1993; Blanc, 1994). Although, some weaknesses are related to the capital increase in agriculture:

- The increase in income related to the technological improvements was limited or even non-existing for the average farmer, referred to as the treadmill theory of Cochrane (Cochrane, 1958): at moment of introduction of a new technology, the first few farmers who adapt it, can benefit by lowering their production costs, and the overall

production does not increase to that extent that the selling prices lower. Early adopters can benefit from these technological improvements. When more farmers take up the new technology, the total production increases and the selling prices fall. The average farmer is forced to adopt the technology in order to survive, but not necessarily to increase his profitability.

- The capital increase in agriculture increases the capital risk of the farmer. This risk is fuelled by high changes in prices of agricultural produce, the higher incidence of natural disasters...
- Higher capital needs for agricultural production make that there is an increased need of capital input by financial institutes: problems can arise when there is limited access to capital because of economic crises, too high risk level...
- Due to the high capital increase of investments, the technical life time of investment can be more decisive for family farms instead of the economic life time, entailing that farmers do not use the highest level of technology and the technological gap between family owned businesses and family farms increases.

3.3 Opportunities of the family farm

One of the opportunities of family farms is their capacity to anticipate the changing consumer demands due to their flexibility and the close connection with the agricultural output:

- At the moment that the consumer demand is changing, the agricultural producer has to adapt the production process to remain competitive. The flexible family farm structure can effectively anticipate the changing consumer demands.
- In the last decades market trends tend to push towards an increasing quality diversification of food. Diversification of agricultural products requires location-specific technical skills.

Within the increasing awareness of green energy, family farms have a major capacity of providing green energy through solar cells, wind energy, or biomass energy. This evolution increases the multifunctionality of family farms although high financial input is necessary and capital can limited this opportunity.

3.4 Threats of the family farm

The analysis of social drivers (Calus, 2009) shows that family farming cannot any more be seen as a traditional way of living, but over time, threats arise. Aspects that question the future of family farms, but also feed the persistence discussion, are: a lack of family minded attitude to continue the family farm, farm growth limitations, high capital need for future investments and a shift from labour to capital.

One of the threats of the family farm is their limited advantage of economies of scale compared to other kinds of businesses. Within the family farm, seasonal parameters (e.g. production cycles) limit gains from specialisation and cause timing problems between stages of production. Greater efficiency due to economies of scale is therefore limited. When the production cycle is relatively short or when the seasonal factors can be reduced by means of controlled environments, and when the production process can be easily monitored in terms of input and output, other forms of agricultural organisations often overshadow family farms (e.g. industrial pig and poultry production, greenhouse production).

The emigration movement from rural areas towards cities is another threat for agricultural production: there might be a lack of labour (family and hired labour) in general, but also skilled successors might take off-farm job opportunities, through which farm succession is also threatened.

Next, the globalisation of the agricultural production brings along higher changes in product prices, which may put a burden on the relative guaranteed income of the family farm. This increases the uncertainty about income.

4 REFLECTIONS TOWARDS NEW INSTITUTIONS

The SWOT analysis indicates that the family farm in West-European agriculture has both advantages and disadvantages. The advantages support the survival of the family farm within the 21st century. Although at this moment, new characteristics arise such as the capital intensive technology, the low number of farm transfers, and the decreased amount of available labour. These elements make that the persistence of the family farm can be questioned, and new institutions have to be taken into account: in Figure 3, there might be a shift from family farm to corporate farms, while there might be a need for a shift towards peasants. Within this scenario, the question arises whether a general increase of multiple parameters in the cobweb model is within the possibilities of a single family farm? The analysis provides building blocks for discussing the persistence of farms, and for proposing new institutional arrangements that reinforce the strengths of family farms, exploit opportunities and counteract threats.

These reflections are focussed towards two directions: the first one maintains the family farm as main production unit within European agriculture; the second one enlarges the scope and focuses on non-family based possibilities related to agricultural production. In the end, the definition of the family farm might be questioned: is a family farm a farm that is transferred intergenerational within a single family, or is a farm that is transferred between different families still a family farm?

The lack of capital within the family farm can be overcome by cooperation or contracts with external capital providers, who are not only banks, but also people (family, citizens...) who want to invest in multifunctional agriculture. The strength of the family farm is the ability to take care of non-commodities, and this can be taken as an opportunity for non-agricultural capital providers who want to invest in both commodities and non-commodities. This can be placed in the context of the trend of increasing capital needs of family farms: high financial needs have to be covered by more than only the core family, broader family or citizens can be involved through shares. Although it can be discussed if shareholders have to be involved in some kind of management or not. On the one hand, involvement can increase the awareness about the value of agricultural production and increase the status of agriculture within the broader society, on the other hand, the lack of knowledge of non-agricultural shareholders within some kind of management can lead to non-scientific agricultural decision making.

The persistence of the family farm depends on the transfer of the farm within the family. The timely designation of a successor is crucial for the survival of the family farm, and the number of designated successors decreases over time (Calus, 2009). On the one hand, there is the movement towards increasing farm size: the economies of scale are used to develop high capital intensive family farms. On the other hand, there are motivated and skilled young

people who are willing to take over the family farm, but there is no viable (family) farm available to take over. New institutions should focus on the combination of viable farms in combination with motivated and skilled successors to develop competitive farms both on the level of farm size and management. Cooperation with external capital providers might be necessary to have a positive development of these kinds of interactions. In order to bring land, management and capital together, a successor bank can be developed.

Economies of scale open perspectives to non-family based agricultural production systems, e.g. agricultural cooperatives or business entities with separate legal personality. But these production forms are not of major importance in Western European agricultural production as the economic rationale of these non-family based agricultural production systems seems to be solely due to economies of scale and important factors like management and human resources are omitted in this traditional view (Levay, 1983; Johnson and Ruttan, 1994; Gorton and Davidova, 2004; Jambor, 2007).

In agricultural cooperatives, producers can better exploit potential economies of scale from their shared use of pooled factors of production, than if they remained individual farmers. But the major difficulties in the production cooperatives are problems of performance motivation and free-rider behaviour – which are generally not faced by family farms – and the conflict between individual interest and group interest.

Business entities with separate legal personality on the other hand, can attract external capital to expand the production and skilled and motivated people for the management in order to produce in an efficient way. The availability of shares limits the problem of a high capital intensive farm transfer.

5 CONCLUSIONS

Family farms contains various intrinsic characteristics that make them resilient to changing conditions. Even in a changing economic and social landscape these aspects provide them with building blocks for creating new organisational forms or institutional arrangements. This paper shows these building blocks, and is only, prudentially, indicative for possible new institutional arrangements. Creativity may produce numerous outcomes from building blocks. Tenure ship is only one example from past and present to show how institutions can deal with a potential threat, such as the large demand for land a production factor. Similar creativity is needed to the exploding capital demand in agriculture.

Indeed , one of the major challenges will be to provide family farms with low-costing capital. Food security and local community viability is the social price for this low cost supply.

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