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ECONOMIC PERFORMANCES OF GERMAN AGRI-FOOD BUSINESSES: AN EXTENSION OF EXISTING DISCOURSES ON THE TOPIC

Vincent Berendes¹, Petr Blizkovsky²

¹ Goethe University Frankfurt, e-mail: vincent@derweg.com

² Council of the European Union, e-mail: petr.blizkovsky@consilium.europa.eu

Abstract: *Considering the circumstance that literature dealing with the economic performance of agri-food businesses in general, or particularly with the German agricultural sector, mainly deals with strictly agricultural-related theory in order to explain the economic success of agri-food businesses, the present paper aims to extend existing discourses to further areas of thought. Consequently, the characteristics: a) increased size of agribusiness, b) pull-strategies, c) the development of new markets and d) focus on the processing industry, that all correspond to the current picture of the German agricultural sector and are considered to be significantly responsible for recently managing to outpace the French agri-food sector, will be first explained in their success against the background of mainly non-agricultural-related literature. By doing so helpful and rather unnoted perspectives can be contributed to existing discourses. Second, the paper presents scatter plots which portray correlations between a) the added value of agriculture and the regular labor force, b) the added value of agriculture and the number of agricultural holdings and c) the added value of agriculture and the number of enterprises concerning milk consumption. Corresponding scatter plots which show different developments in Germany and France can be related to the findings of the first part of the paper and allow new perspectives in existing discourses as well.*

Keywords: *German Agribusiness, Profit, Theoretical Classification, Extending Discourses, Eu, Agriculture.*
(JEL Classification: Q10)

INTRODUCTION

Considering the fact that the EU encompasses 500 million consumers who want to be provided with both high quality but also affordable food and 66 million people working in the agricultural domain (European Commission, 2016: 4, 8), it only seems reasonable that agricultural policy appears to be a highly discussed and controversial topic in modern politics and science. Due to the value of agricultural production, from the perspective of consumption as well as employment, the high quantity of scientific contributions regarding questions of how to improve agricultural processes, from a procedural and not least economical perspective, does not appear to be surprising (among others: Reidsma et al. 2010; Oliver et al. 2010; Ponti et al. 2012).

Unlike rather general contributions which scientifically foster

improvements in the agricultural sector of the EU in general, the strong performance of German agri-food businesses in particular motivated researchers to concretely analyze the case of German agriculture (among others: Mathijs and Swinnen 2001; Schmidtner, 2013; Damave, 2017). Having doubled its exports in 2013 to 65 billion Euro in only one decade (Saltz and Mailliet 2014), Germany managed to outpace France, which was considered the leading agricultural producer in the EU as it lists not only 16% of the agricultural land of the EU but also 18% of the total value of the EU-agricultural production (Damave, 2017: 3). Considering the latest shifts in the considerations of agricultural enterprises, which are based on the growing success of German agri-food businesses, the comparison between economic strategies being pursued by German and French agri-food businesses seems to be a promising project and is increasingly being conducted in

context of academic works. Interestingly enough, the strong developments in the German agri-food sector are leading to shifts in the economic conditions of the European agricultural business. Whereas France, due to its economic orientation in the agricultural business, maintains economic strategies and practices over time, it is a promising project to compare opposing measures of German farms with French ones, which have brought great success in the past. Whereas, however, comparisons- but also Germany specific papers on the topic often remain on a rather agricultural-specific level by analyzing the economic success of German agriculture, the present paper aims to raise and generate rather general economic perspectives on the topic in order to extend existing discourses to further areas of thought. In the process of delivering new perspectives to existing discourses on the success of German agri-food businesses, the paper covers two focal points:

1. Willing to extend its perspective on the success of German agriculture the major point of the paper is to explain the success of German agri-food businesses not only by consulting agricultural-based literature and to relate

concrete German procedures to it, but primarily through setting corresponding actions in connection to other areas of economical literature¹. By doing so, pertinent and repeating patterns of economical thought and strategies, which pursue the aim of promoting economic performances and effectiveness, are being distilled from corresponding literature and are set in connection with concrete German agri-economical measurements which tend to differ from the French model². By means of this approach, the concrete economical measurements being conducted by German agri-food businesses in order to improve their economic performance will be made transparent against the background of differently rooted economic literature. Knowing about a selection of general economical concepts that Germany is adopting in its processes, shall lead to the awareness of a set of abstract economical approaches that at first glance might not have been set in context with agricultural business. As a result, the perspectives delivered can extend existing discourses³.

2. Secondly the paper presents a set of scatter plots which on an exemplarily basis compare the German and the French agricultural sector. By moving away from a rather process-oriented approach of theorizing and considering concrete German agricultural-actions, observing the result of general German agricultural-actions by comparing its influence on the net output of agriculture sector, can a) steer the comparison between German and French agriculture in new spheres of thought and therefore b) stimulate the corresponding discourse positively.

By delivering, thus, a theorization of German agricultural strategies and selected scatter plots the present paper provides information and thematic insights that can broaden existing discourses on the topic.

LITERATURE OVERVIEW

Despite the heterogeneity of economical literature in which economic improvement strategies for economical actors of different sizes and domains are suggested, corresponding literature reveals a set of repeating patterns and approaches, which are considered useful tools in the process of economic advancement. Having consulted pertinent literature the following part of the present paper is to present a selection of corresponding strategies, which aim to improve performances of economical actors.

a) The increased size of economical actors

With regards to economical performances pertinent literature correlates the factor of size of a company with its ability to act in economic terms. In order to differentiate between the different sizes of companies mainly the terms: micro enterprises (with less than 10 people employed), small enterprises (with 10-49 people employed), medium-sized enterprises (with 50-249 people employed), small and medium sized enterprises (SMEs) (with 1-249 people employed) and large enterprises (with 250 or more people employed), are being applied in corresponding discussions and contributions (Eurostat, 2018a)⁴. Small and medium-sized enterprises

1 It needs to be stressed at this point that due to the capacitive limits of a paper of the present format and its thematic focus, no highly needed ethical analysis of trading actions of economical actors is being conducted in the present paper. A short suggestion for corresponding research designs can be found in the context of the conclusion/outlook of the paper. For critical thoughts regarding ethical questions of trade as well as unfair trading practices within the food supply chain, which are being combined with suggestions towards possible improvements of corresponding procedures, see: Blizkovsky and Berendes (2016)

2 Due to the capacitive limits of a paper of the present format, contents being presented can only be selected on an exemplarily- and not on a representative or fully comprehensive level. As a result, the present paper merely understands itself as a medium, which provides ideas for existing discourses, and by no means as a work that asserts a claim of generality.

3 Besides the enrichment of the discourse and the consequent addition of topics which can be discussed and focused upon through the consultation of also non-agricultural based economic perspectives within the discourse(s), the connection between general and recurring economical approaches in the German agricultural sector also opens up a more contextualized insight in the German model of agriculturally related economic success and allows a better comprehensibility of corresponding procedures for economical actors or bodies who possibly aim to adopt certain measures.

4 Whereas certain characteristics of the three types mentioned can differ depending on the particular definition used to characterize them, besides the rather consistent defining variable of the number of people employed in context of a particular business, the quantity of people managing the data and IT-services of a company is also taken into account. While Small and Midsize businesses (SMB's) mostly employ part-time individuals, who manage the data and/or IT services (in some cases the organization even outsources this task to third party contractors), SME's have full-time employees who organize tasks such as managing backups, working with databases, new technology purchases etc.). Large enterprises, however, do need the service of full-time, experienced and specialized IT-staff, which is responsible for data processing due to the quantity of data being produced in context of a large enterprise (Wendt, 2011).

(SMEs), which mostly form part of an enterprise group, appear to be a focal point in shaping enterprise policy in the European Union⁵.

Besides the structural differentiations that are being conducted in terms of the size of companies in pertinent contributions a significant amount of publications state a correlation between the size of a company and its capacity to perform economically successful. Consulting corresponding contributions it can be observed that within diverse domains of modern economy the increased growth of a company is connected to a higher financial outcome. A key term in this context is the terminology of the resource.

“In the typical SME, money is tight. The result is that SME manufacturers often lack access to resources that large manufacturers routinely have at their disposal, and therefore the SME’s approach to implementing change needs to be altered to reflect this reality.” (McLean, 2015: 2)

Besides access to financial goods, which differs between smaller and bigger companies, putting them in unequal trading positions, the term resource encompasses several other elements. Consequently, resources are generally described as instruments that can be applied and activated by a certain actor in order to achieve certain goals (Coleman,

1973: 1; Preisendörfer, 2011: 28)⁶. Through processes of merging several resources which according to the renowned American sociologist James S. Coleman can be subdivided in both 1) transferable resources such as financial capital and 2) personal resources such as e.g. knowledge, contacts or several other capacities. Especially corporative actors like large businesses, are generally considered able to perform more effectively economically than actors, which possess fewer resources (for more information: Preisendörfer, 2011: 28-32). Following the argumentations being presented above the merger between different businesses or the increased growth of a single business, which increases the number of resources that can be activated in trading situations, can have the potential to influence the economic performance of a business positively⁷.

b) Push- and Pull strategies

The consultation of economically based literature reveals two major principles, which can be applied by economical actors in context of their performances: namely push- and pull strategies⁸.

An economical actor who applies push strategies within its economical performances proactively tries to sell its products to the customer and to push him to some extent into the market situation and the position of being interested in a product (Kleinaltenkamp and Rudolph 2002: 291). In order to increase its profit the selling company tries to provide the consumer with incentives (ibid. 292). By doing so the business sees itself confronted with the situation of both 1) building up distribution channels and 2) persuading retailers and middlemen to stock their products. In order to convince corresponding retailers to include a product in their product range direct promotional techniques like the establishment of rather personal relations with representatives of the retailers are often fostered. Following the push technique tends to work out particularly well when dealing with lower value items which can be obtained by consumers spontaneously without having to reflect too much about their decision of buying the product or not (Gibson, 2017)⁹. Whereas rather young businesses often adopt push strategies in the selling process of their products, as they economically need to generate a retail channel in order to promote their products, already established companies most likely adopt pull strategies in context of their economical performances. When adopting pull strategies an economical actor clearly reacts with its productions or services to the consumer’s demands (ibid.). Due to this demand, the step of deeply convincing a retailer of including a company’s product in their product range can be mainly left out. Considering the scenario which opens up when pull strategies are being adopted by economical actors the credo of supply and demand can be observed clearly. By investigating and observing market, developments and processes an economical actor orients its production to the consumer’s demands and ensures to a certain extent the potential acceptance of its products which shall be disposed (Rätsch and Bazing 2010: 664; Claßen, 2015: 27-28).

Considering the scope of pull strategies, it becomes clear that actors, which apply corresponding strategies mainly,

5 At this point, it is important to stress that enterprises, which belong to the category of SME’s, appear to be of a highly heterogeneous nature. Consequently, corresponding enterprises differ in terms of their ownership structures, their varying numbers of employees as well as their levels of economic activity (for more information consult e.g.: Airaksinen et al. 2015).

6 Pertinent literature reveals different forms of actors, which are considered capable of conducting actions. Whereas the differentiation between individual and supra-individual actors remains on a rather broad level (Matys, 2014; Raich, 2006: 14-15; Lotz, 2008) other works stress extensively the theoretical actor models of individual actors, aggregates as well as collective- and corporate actors (among others: Raich, 2006: 14; Dolata and Schrape 2013: 20, 26).

7 Besides the differences of the organization of different sized producing companies and their access to resources, their product range also tends to be different. Whereas SME’s rather focus on the production of both highly customized and engineered products which in turn are mainly delivered to local markets or leveraging local services, large enterprises within in manufacturing sector tend to concentrate on mass production within the field of low-cost economies. SME’s are principally not involved in the manufacturing domains of the automotive or aircraft sector (McLean, 2015: 2). Unsurprisingly it can be observed that large enterprises tend to create a higher proportion of value added within the ‘high and medium/low tech manufacturing’ sector, whereas SMEs create a higher proportion of value added in the sector of services (Airaksinen et al. 2015).

8 The following considerations remain due to the formal limits of the present paper on a rather broad level. As a result it will not be focused too much on the question when and in which context particular strategies can be applied. For more detailed information as well as for interesting insides in hybrid forms, consult: Claßen, (2015).

9 Besides the adoption of push strategies in terms of the sale of lower value items, push strategies often tend to be applied in the trading sector, the processing industry and the service industry (Kleinaltenkamp and Rudolph 2002: 292).

adjust their product range to already existing markets (Lindgreen et al. 2010). Fostering a strong market orientation companies adopting pull strategies, thus, need to bear in mind different market stages in which diverse clients/consumers of their products develop diverse expectations towards the company's products. As a result it appears to be of a great importance that economical actors analyze, depending on the particular market stage, their clients which in turn can range from suppliers and producers to other companies or single private consumers who eventually buy the end product. As further factors which are significantly being considered by market oriented companies applying pull strategies the offers and the product range of competing companies as well as the standards of regulatory authorities can be named (Dickson, 1992; Kohli et al. 1993). Summarizing finally the key actions being conducted by companies which act according to the market Kohli and Jaworski (1990) name the three aspects:

1. Generation of market-related knowledge about both customers and competitors
2. Distribution of corresponding knowledge inside the company
3. The ability to react on the basis of corresponding knowledge and be consistent with the market concept

c) *The development of new markets*

Observing companies on a global scale at times of globalized production flows and heavily interconnected business to business trading actions within the realm of heterogeneous economic sectors, the observation that especially highly ranked companies (or the ones with substantial economical aspirations) are willing to take advantage of global trading developments which had been developed successively in the last decades (for substantial information on the topic: Giese et al. 2011) can be made. Whereas the trend of crossing national borders in order to trade on a global scale seems to be almost subconsciously linked to enterprises performing in upper economical dimensions, the reasons why a certain company decides to trade on a global scale can be, from a strategic point of view at least, very different. Reasons why an economical actor decides to trade on a global scale, following pertinent literature, may range from 1) economical as opposed to non-economical motifs, 2) offensive as opposed to defensive motifs and 3) corporate strategy motifs. Corporate strategy motifs in turn also tend to be subdivided in 3a) procurement-oriented motifs (resources strategies), 3b) marketing-oriented motifs (market strategies), 3c) cost- and return oriented motifs (efficiency strategies) and 3d) knowledge based motifs (network strategies) (Koopmann and Franzmeyer 2003; Haas and Neumair 2006; Giese et al. 2011: 43-46).

1) Economical motifs encompass the company's interest to maximize the own financial outcome by means of an increase in sales or the market share. Negative economic developments shall also be compensated. Non-economical motifs, however, encompass the interest to develop a certain business image and/or forms of power and influence.

10 Due to the capacitive limits and the focus of the paper a necessary discussion about the quality of processed food in connection with possible health implications when consumers tend to consume corresponding products only, cannot be provided in context of the present paper.

2) Offensive motifs can be diagnosed if a company is willing to make use of competitive advantages as well as advantageous differences between the home- and the host country. Because of offensive motifs, foreign markets can be opened up successively. If a company, however, is for some reasons forced to trade on a global scale, for example due to a partner business, which expands its trade and asks a supply business to do the same, it follows defensive motifs.

3) Whereas 3a) Procurement-oriented motifs rather focus on a sustainable procurement of raw materials which are needed to maintain their own production (e.g. China tends to import raw materials from abroad in order to continue with its expanding economic growth as an industrial nation (Heinrich, 2009)), 3b) marketing-oriented motifs concentrate on an economic penetration of foreign markets by stabilizing sales quota and market shares. Furthermore 3b) tries to protect employment in the home country by means of successful deals being made abroad (Nuhn, 2007). Of a growing importance especially 3c) cost- and return oriented motifs as well as 3d) knowledge based motifs can be considered. While 3c) target on price reductions of a company's production process which shall be reached e.g. by outsourcing the production to foreign countries, 3d) stresses the importance of Tacit knowledge which describes locally bound knowledge that can only be accessed when being present in person at a particular place. As a result it can be observed that a growing number of multinational companies invest in research- and development activities in order to get useful insights in regional market structures and procedures (Koopmann and Franzmeyer 2003).

d) *The processing industry*

Considering modern economic actions and literature the processing sector seems to be of an unchanged important kind in contemporary economics, too. In contrast, however, to bygone times when the processing sector was considered important because raw materials could not be stored for extended periods of time without getting rotten, modern food processing is not too much limited to the conservation of food, due to a spread of conservation technologies in industrialized countries households. It "[...] now has [,however,] increasingly sophisticated levels of microprocessor control to reduce processing costs, enable[d] rapid change-over between shorter production runs [and] improve[d] product quality and to provide improved records in management decisions." (ibid. 4). As a result of the technological progress in industrialized countries and accompanying consumer's expectations towards the 1) availability and 2) time-saving preparation of qualitative food, food processing companies seem to deeply meet the consumers' needs as they are able to produce food of highly different kinds by means of steadily improving processing technology (ibid. 4; Bhattacharya 2014). By doing so the processing sector enables a diversification of the economy by moving away from relying only on primary products. Processing companies do have the advantage of rather easily getting specialized: a circumstance, which helps them together with the conduct of market analysis to react to grown and diverse expectations of modern consumers (Pettinger, 2016)¹⁰.

Due to the technological improvements in the processing sector which allow companies to meet the expectations of contemporary consumers it does not come as a surprise that food processing has become a global industry (Fellows, 2009: 5)¹¹. Considering the high sales of processing factories on the global level interesting parallels between the EU and the U.S. Food Processing Industry, where the food processing industry is considered a major contributor to the “health of the [...] economy” (Myles, 2013: 103), could be drawn. The U.S. food processing industry produced more than \$1.08 trillion in economic output, including also \$812.26 billion direct economic impact and furthermore \$275.17 billion in indirect economic impact in 2010. The immense influence of the sector generated in this context about 1.93 million direct jobs within the food industry, as well as another 10.747 million indirect jobs which would not have existed without the activities of the U.S. food processing industry in 2010 (ibid. 103)¹².

COMPARING ECONOMIC STRATEGIES AND FINDINGS WITH ECONOMIC PROCEDURES OF GERMAN AGRI-FOOD BUSINESSES

Having worked out frequently mentioned economical trading actions being dealt with in pertinent literature or studies which suggests ways of improving economical performances of companies and enterprises, the following part of the present paper investigates, by means of empirical considerations and observations, to what extent selected German agricultural enterprises, the German agricultural sector in general and other German business programs act and work according to the strategies being extracted from the literature mentioned.

a) *The size of German agricultural companies*

Taking into account the German reunification in 1990 in context of the German performance in agricultural business

11 What has to be noted, however, is the critical situation in 2005 already when thirty companies accounted for a third of the world's processed food. Five companies controlled 75% of the international gain trade (Fellows, 2009: 5).

12 By generating a higher value added manufacturing has the potential to enable higher wages than the primary sector (Pettinger, 2016).

13 Measuring the competitive performance of EU countries through the trade indices: Export and Import Market Share, Revealed Comparative Advantage, Net Export Index and Vollrath indices Carraresi/Banterle (2013) revealed that among the big EU countries especially France and Spain record a continuous worsening competitive performance. Germany shows a significant difference concerning competitive trends between agriculture and food industry. Whereas Germany became the leading power in the food industry of EU it is not considered to record corresponding achievements in the agricultural domain only (Carraresi and Banterle 2013).

14 As the other side of the coin the great decrease of people, working on the farms must be mentioned. The number of regularly working people on farms decreased by approximately one fourth (ibid. 2018).

it can be noted that despite of all the challenges related to the merger of West and East, Germany registered immense comparative cost advantages compared with France through the reunification. As one key factor the successive growing of single agricultural businesses in Germany can be mentioned (Damave, 2017: 3). Considering especially the milk sector in Germany and France the economic importance for businesses to grow in size which above was being investigated from a theoretical point of view can be approached practically on an exemplarily basis. French milk businesses seem to be in a position where it is important to change their marketing strategies more towards German agri-food businesses in order to 1) recognize conducive markets, 2) increase their profit margins and 3) reduce their production costs. The three changes mentioned are in this context linked to structural changes of many single businesses which following argumentations in literature need to find ways of growing in size. According to corresponding suggestions it does not come as a surprise that the number of French milk businesses is already only half as high than in was twenty years ago, even though the amount of milk produced by each business has been doubled (ibid. 5)¹³.

Moving away from historical or product specific perspectives in context of an comparison between Germany and France, the latest German agricultural development in an isolated manner, reveals further trends of a decrease of single and small agri-food businesses in times of increasing financial outcomes for larger or collaborating companies. A promising insight here serves the observation of the decreasing number of agricultural holdings in Germany while the utilized agricultural area (UAA) remains relatively stable. Counting in the year 2000 still 399 350 agricultural holdings in Germany, in 2010 the number of holdings had been reduced to 299 100. Interestingly enough in this context is the fact that while the number of holdings had been reduced successively, the UAA only decreased by 1.4 %. Consequently, the average area per farm grew remarkably (+31.6 %) in Germany, namely from 42.4 hectares per holding in 2000 to 55.8 ha in 2010. By implication, this development “means that Germany, whose agricultural structure had already proven to be characterised by large area farms in 2000, recorded one of the highest average UAA within the EU-27 in 2010.” (Eurostat, 2018b)¹⁴. Considering in this context also the average size of German agricultural holdings, a clear tendency towards the emergence of more predominantly grown agricultural holdings in contrast to enterprises, which dispose of smaller areas of land, is revealed. Hence farms with 10 to 19.9 hectares of UAA appear to be the most common as they represented 21 % of the entire population of agricultural holdings (63 160). The second highest share was reported by farms with 50 to 99.9 hectares (51 620), which represented in turn 17 % of the German agricultural holdings in 2010. Quite a similar share was registered by holdings with 5 to 9.9 hectares of agricultural area (16 %) (ibid.).

Speaking about revenues of large agricultural enterprises which are based in the EU, COGECA (now called: the

General Confederation of Agricultural Cooperatives in the European Union)¹⁵, released a report which corresponds to theoretical assumptions which underline the advantages of rather large enterprises. Consequently, the report revealed that the Top 10 corporately organized agricultural businesses once more could increase their revenues in 2013 in comparison to 2012 by 14 % on average (Agrarheute, 2015). Among the Top 10 businesses, three German agricultural enterprises can be found. Namely: BayWa AG with a revenue of 15 957 billion Euro, Agravis with a revenue of 7 844 billion Euro and DMK with a revenue of 5 310 billion Euro¹⁶.

b) Pull strategies

Looking at German agri-food businesses on a broader scale it can be observed that unlike French businesses an increased number of German agri-food businesses pursue pull- and not push strategies in context of their production. Consequently, German agri-food businesses tend to focus primarily on consumer's or other food-chain actor's needs. In contrast to the German market orientation the focus of France principally lies on regional planning/development, the preservation of an ideally high number of farmers and finally on the high quality of regional products (Damave, 2017: 4). The rather pragmatic and market oriented focus of German agri-food businesses can be illustrated on an exemplarily basis by means of the BRÖRING Group which was founded in 1891 in Dinklage (Northern Germany) and is considered to be one of the leading feed production companies in its region¹⁷.

Even though the company fosters a rather traditional commodity-based production it produces 1.2 million tons of feed depending on detailed customer consulting. Consequently, the BRÖRING Group heavily adjusts its

production towards different key actors among the food supply chain, namely: farmers, retailers and consumers (Bröring, 2010: 63). As key tasks in context of the acquisition of market related knowledge, the BRÖRING Group tries to both establish and keep deep customer relationships, which undergo multilayered structures inside the company itself in order to transfer the knowledge being gained into economically relevant information that is being included in the production process. By doing so, the BRÖRING Group follows to some extent Grunert et al. (1996) who in their lines of argumentation can be considered as one of the first advocates and connectors of market research approaches and agricultural food supply chains. Following the logic of the authors, a higher market orientation offers great potentials not only in terms of a financially reasonable production process itself but also concerning advantages over competitors in the field (Grunert et al. 1996). As another source of information which is considered important in production processes the BRÖRING Group which is a member of the German feed producers association (DVT) the business group follows legal developments which can have influences on the feed production sector. Considering finally the actions being conducted by the BRÖRING Group in order to improve its economical performances with regards to its production the three dimensions of 1) the generation of market-related knowledge about customers and consumers, 2) the distribution of corresponding knowledge inside the company and 3) the ability to react on the basis of corresponding knowledge and be consistent with the market concept, by Kohli/Jaworski, (1990) which were being presented in the theoretical part of the present paper can be determined.

Moving away from concrete German agricultural businesses the focus and value of market orientation, which is being pursued by, pull strategies within wide parts of the German agricultural sector, can also be identified by means of the Market-Oriented Agriculture Programme in Ghana (MOAP) which is commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). In context of the program, which is co-financed through the EU, the focus lies on the value chains for mango, pineapple, citrus fruits, vegetables, rice, sorghum, soya beans, peanut and cashew. Advising and instructing political decision-makers and state agricultural advisors the program aims to make products correspond to market mechanisms and safety standards as the latter led to consumer's complaints in terms of exported food as well as goods sold within Ghana itself. Production according to the EU organic farming guidelines shall help in this context to sell products both nationally and internationally for higher prices. Furthermore, MOAP trains the staff of the responsible public authorities in the particular region on maintenance and is additionally willing to promote private investments in order to benefit the provision of agricultural infrastructure and services for farmers in Ghana. Entrepreneurs are also provided with further training on implementing inclusive business models like

15 COGECA currently represents the interests of approximately 40 000 farmers' cooperatives employing approximately 660 000 people. It serves as the main representative body for the entire agricultural and fisheries sector in the EU (COPA COGECA, 2018).

16 Widening the perspective towards businesses, in general economic advantages of rather grown enterprises can be observed analogously. Collating the theoretical assumption that a growing size of a company is to be set in connection with a higher financial outcome with statistical data, corresponding findings underline corresponding assumptions. Whereas micro enterprises register mainly an annual turnover of max. 2 Million Euro, small enterprises already register an annual turnover of max. 10 Million Euro. Medium-sized enterprises finally register an annual turnover of max. 43 Million Euro (European Commission, 2018). Comparing particularly SMEs with larger enterprises the stronger economic performance of the latter appears to be obvious when considering the variables of export and import intensity in particular. Whereas for example in Latvia the difference between the two variables mentioned does not appear to be as striking as for example in Germany or Denmark it can be observed that all large enterprises which were based in six different countries (Denmark, Germany, Latvia, Netherlands, Finland, Norway) perform significantly stronger when it comes to import and export actions than all SMEs that were analyzed do (for more information: Eurostat, 2015).

17 The BRÖRING Group consists of the three German agri-food businesses: 1) H. Bröring GmbH & Co. KG, 2) Haneberg und Leusing GmbH & Co. KG and 3) BEST 3 Geflügelernährung GmbH (BRÖRING, 2017).

for example forms of contract farming (GIZ, 2018)¹⁸.

c) The development of new markets by German agri-food businesses

Besides, several other conditions leading to changes of the food industry, especially in Germany the “growing internalization of markets” (Weindlmaier, 2000: 9) significantly changed the kind of marketing and sale of products (raw materials, processed food, agricultural technology etc.)¹⁹. As one of the main reasons why German agri-food businesses in particular tended to and still develop new markets, Weindlmaier mentions the growing number of competitors in the German agribusiness itself. In this context he eventually concludes that a) the size of the German population which encompasses about 80 million consumers as well as b) the high purchasing power of German consumers and finally c) the good infrastructure in the country lead to a growing number of national competitors within national markets and the decision of many agri-food businesses to develop foreign markets and to export their products.

Bearing in mind, thus, global food chains and markets, German agricultural and food industries appear to be well positioned. Besides the circumstance that Germany has for many years not only been the third largest overall exporter of agricultural goods but also the No. 1 exporter of confectionery, cheese, pork and agricultural technology, German agricultural exports continued to develop positively in 2015 by reaching a new peak (approximately 68.5 billion Euro) through the successive development of new markets and the achievement of growing sales markets in foreign countries. Besides supplying foreign markets with food, German agri-food businesses exporting agricultural technology significantly contributed with around 7.4 billion Euro to the high sales of the whole

German agri-sector. Even though the EU remained the most important sales market for German agricultural goods in 2015 with three quarters of all exports (also 67 % of all imports came from the other Member States) and a corresponding rise of around 2 % (49.2 billion Euro), German agricultural exports to third countries developed with a growth rate of 6 % even more dynamically than those to the EU Member States (Federal Ministry of Food and Agriculture, 2016; Graupner, 2018)²⁰. Whereas the observation of the German agricultural sector, thus, clearly indicates how important the development of foreign markets appears to be, French agri-food businesses mostly foster mid-market-strategies in combination with regional specialties (Damave, 2017: 5)²¹.

Besides the circumstance that German agriculture, as indicated by the numbers presented above, highly profits from its exports and the development of new markets where German products can be sold, the general interest of the German agricultural sector to access new markets can be illustrated by an export promotion program which was launched by the Federal Ministry of Food and Agriculture. The program aims to open up and nurture promising foreign markets for German products. In order to expand the number of exporting German agri-food businesses and to improve their competitiveness on foreign markets the program sets up lists of measures and training courses, which should lead to the desired outcome. Considering the focus areas of the program which range e.g. from helping the participants to reach a competence level where they are able to identify/contact potential partners, over to business-trips or setting up/expanding databases and internet portals etc., the focus of market oriented actions and the interest of developing new agricultural markets for German products becomes clear. Consequently, the program also encompasses education units towards market and product studies as well as separate market fact-finding trips which, just like the business-trips, take place outside of Germany (Federal Ministry of Food and Agriculture 2014). Concrete destinations of market-exploratory-tours being provided by the Federal Ministry of Food and Agriculture in this context are Russia (agricultural engineering or confectionery), USA (food in general), Canada (fruits and vegetables), France (food in general) and Taiwan (beverages) (Federal Ministry of Food and Agriculture, 2018).

d) The processing industry within the German agricultural sector

When comparing the German and French agricultural sector there appears to be a striking difference; whereas France significantly produces goods with protected designations of origins, German agri-food businesses often focus on the processing production of goods for the daily use. As a result, it can be observed that unlike the German agricultural sector the French sector is more oriented in its production towards rather high-ranked catering industries and not the daily consumption. Repeatedly France also put emphasis on the agricultural primary production (Damave, 2017: 3, 5). Due to the strong focus of the whole German agricultural sector on food processing it does not come as a surprise that this sector alone produced \$190 billion which

18 Even though the program is scheduled for 15 years (from 2004 until 2019), appreciable results can be observed already. Besides the fact, that since the project has started, 30 000 jobs have been secured in agriculture and processing companies, it can be observed that since 2016 alone, even more than 12 000 farmers have been trained in good agricultural practice, 2 000 have been certified according to internationally recognized sustainability standards and prices paid to producers have increased by up to 50 per cent due to 1) certification, 2) contract farming and 3) improved cultivation methods (GIZ, 2018). For further information: GIZ, (2018).

19 Apart from an internationalization of markets, Weindlmaier also mentions an a) harmonization of legal conditions, b) Changes of political conditions, c) changes in food demand and d) changes in the food trade. For more information, see Weindlmaier, (2000: 9).

20 In 2015, Switzerland (1.8 billion Euro), USA (1.7 billion Euro), Saudi Arabia (plus 57 %) and the People's Republic of China (45 %) were the most important non-EU target countries of German agricultural products. German agricultural exports saw particularly high growth rates in these countries (Federal Ministry of Food and Agriculture, 2016).

21 Comparing the export of agricultural products of France and Germany, the strong focus of German agri-food businesses which aim to export their products to foreign markets becomes clear. Whereas France exports agricultural products of a value of 62 244 million Euro to foreign markets, Germany gets 1 445 586 million Euro for agricultural products (Eurostat, 2018c; Eurostat, 2018d).

accounted for 5.4 % of the German GDP in 2016²². The in total 5,940 food processing companies that employ about 570, 000 people, only underpin the relevance of food processing within the German agricultural sector (Lieberz and Bielinska 2018: 1). Closely connected to the food processing industry is the aspect of food innovation. By being able to fall back on a great variety of highly heterogeneous products (either natural in a first step or already processed) food processing businesses have the strong potential of designing new types of products which can be placed on the market with or without previously conducted market/consumer analysis. Looking at annual surveys in this context, it becomes clear that managers of German industry already approximately twenty years ago tended to consider product innovation as the most important condition for the success of their company in a respective following year (Bergen et al. 2005: 307). Even though the evaluation of product innovation appeared to be positive in 1998, only a marginal amount of money was spent for research and development of food innovation. Resulting from the small investments being made in food innovation in the past a decreasing number of new products in 1998 had to be accounted (ibid. 307).

The wide product range of the food-processing sector in Germany covers various food ingredients. By acquiring highly different agricultural goods in the first bit of the food chain, food processing not only can valorize its own economic value and importance but also the businesses of a variety of differently specialized regional producers that have the possibility to sell their products to retailers or consumers directly as well as to food processing companies. Due to the circumstance that only particularly large processors tend to import ingredients directly from foreign suppliers, food processing has the potential to support and to strengthen national agriculture businesses as mainly products of local producers or local importers appear to be of interest for German food processing businesses (ibid. 4). Besides being one of the main customers for producers and consequently strengthening figures of the German agricultural market, food-processing enterprises serve as a driving force for an increase of products with a rather high value added within the German agricultural market²³. By acquiring in a first step agricultural commodities that in a subsequent step are processed, higher value products are produced by processing

businesses (Gonzalez, 2014). According to Weindlmaier, (2000: 1), the interest for higher valued products appears to be divided in two aspects:

1. Speaking about processed food the consumer's satisfaction concerning the processed products acquired derives not so much from the farmer's raw materials but from decisions being made by downstream elements of the food chain.
2. For farmers it is important that downstream subsectors of the food chain can manage to transform agricultural products into (high) value-added products which in turn can be sold at an appropriate price.

MATERIALS AND METHODS

In order to estimate the relationship of different bivariate measurement data and conclude whether there are associations between two variables in the case of both Germany and France, scatter plots are used. All of the data have been deducted from Eurostat (Eurostat, 2018c; Eurostat, 2018d), except the data representing the added value of agriculture (World Bank, 2018). The variables a) added value of agriculture and b) regular labour force as well as c) number of agricultural holdings are considered in the time period between 1995 – 2010 in the context Germany and between 2003-2010 in the context of France. The variables a) added value of agriculture and d) No. of enterprises of drinking milk are considered in the time period between 2003-2009²⁴.

The combined value of the two variables on both axes is a single data point that is displayed in the scatter plot. All the combined data points are presented in clusters and thus form a scatter plot, which serves only for identifying the trend and the correlation of each relationship. The correlation coefficient (r) of each relationship has been calculated. A scatter plot has been used as it demonstrates or refute cause-and-effect interactions, although it does not by itself show that one variable reasons the other. In fact, a scatter plot demonstrates that a relationship occurs (correlation exists) but it does not and cannot prove that one factor is causing the other²⁵. There could be a third influence involved, which is causing both or some other systematic source. However, the scatter plot can form the basis of future discussions on the topic and the promising start of further investigations in terms of particular research designs.

RESULTS

On the relation between the net output and the labour force, it can be concluded from Figure 1 that in Germany the net output of agriculture sector is nearly not correlated ($r = -0,1456$) to the labour force dedicated to the agricultural work while in France this is not the case, as there is a moderate positive correlation ($r = 0,4593$) between the two variables. Following the results from the scatter plots being observed it appears to be striking that an increasing number of people working in the German agricultural sector do not imply a rise

22 The largest subsectors in this context by value were meat, dairy, bakery, confectionary, ice cream as well as alcoholic beverages (Lieberz and Bielinska 2018: 1).

23 For detailed and comprehensive information about the value-added chain in general and in Germany particularly, consult Weindlmaier, (2000).

24 The reason for the lack of consistency in the range of years for each plot is that no data has been available for those years and for all the variables tested.

25 In context of future research on the topic, it would form an interesting basis of investigation to investigate in which way the variables considered within the paper are causing each other.

of the added value. Consequently it would form an interesting basis of investigation if possibly a particular or a set of the economic strategies being conducted by the German, in contrast to the French agribusiness or the state, lead to a rise of the added value without being dependent a rising number of workers. As it was indicated above that the rise of the added value which in the German case is not particularly related to an increasing number of workers the rise of the added value in Germany could be ascribed to its strong processing sector which generally has the strong potential to influence in turn the value added chain of a country. Regarding this possible observation, further investigations do seem reasonable in this context.

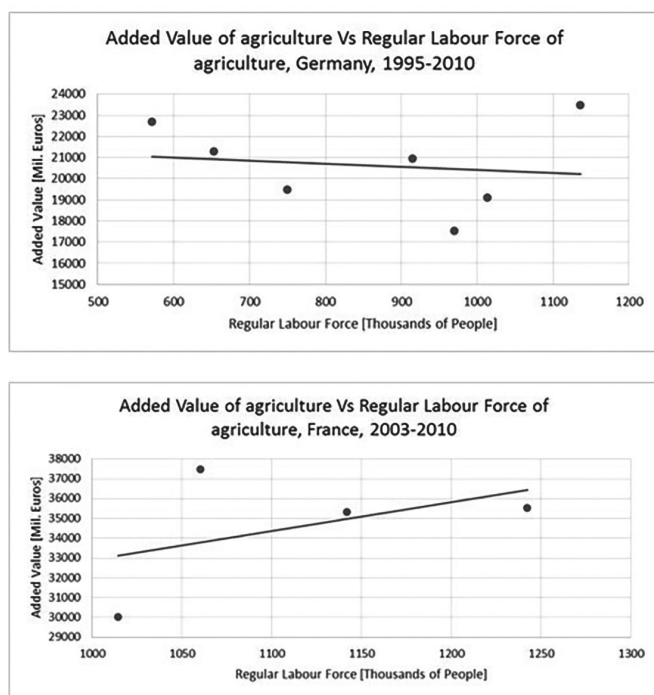


Figure 1: Added value of agriculture to labour force correlation in Germany and in France

On the output-number of holdings relation, both in Germany and in France exists a positive relationship between the net output of the agriculture sector and the number of agricultural holdings. In Germany the relationship is stronger than in France with a correlation coefficient of 0,5939, contrary to 0,3825 for the latter (Figure 2). Observing the results, it gives the impression that specifically the number of people working

in the German agricultural sector do not lead to an increase of the added value but the number of agricultural holdings²⁶. Consequently, it could be investigated how it is possible that obviously the inner structure or the institutional landscape in German holdings/economy seem to be so different to the ones in France that not the number of people appears to be of relevance concerning a rise of the added value but the number of agricultural holdings. Against the background of part one of the paper it seems again thinkable that this correlation is based on the strong processing focus of many German agri-food businesses.

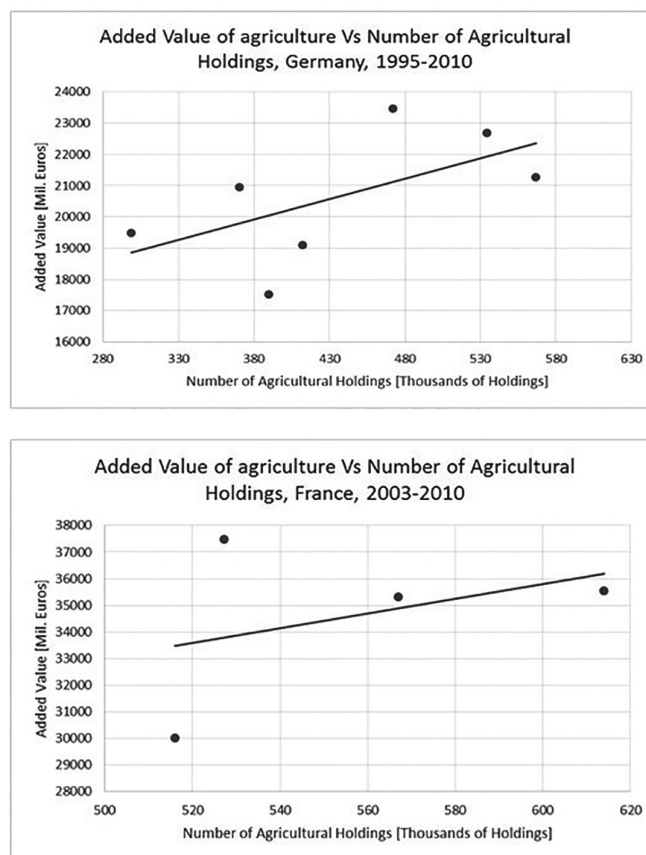


Figure 2: Added value of agriculture to number of agricultural holdings correlation in Germany and in France

Whereas both in Germany and France exists a positive relationship between the net output of the agriculture sector and the number of agricultural holdings, considering the net output of agricultural sector and the number of enterprises of drinking milk, it appears to be interesting that a controversial relationship for Germany and France can be found in this context. As Figure 3 shows, in the first case an almost perfectly linear relationship exists ($r = 0,9654$) while in the latter almost no correlation exists between the set of bivariate data ($r = -0,2235$). Considering especially the fact that meanwhile the number of French milk businesses is only half as high than it was twenty years ago while the amount of milk produced by each business has been doubled, appears to be an interesting field for further analysis in terms of existing discourses²⁷.

26 Based on the indicator Farm Net Value Added (FNVA) per Annual Work Unit (AWU) by Farm Accountancy Data Network (FADN), the agricultural holdings with the highest income per working unit were inter alia located in northern France and north-western Germany (European Commission, 2014: 9).

27 Another interesting element of investigation could be the role of technology within the dairy sector. Whereas studies revealed that in Germany, Ireland, Italy and Portugal technology is labor saving, in France, Bulgaria, Denmark, United Kingdom, Hungary, the Netherlands, Sweden and Serbia technology appears to be more labor using within the dairy sector as compared to other processing sectors (Čechura et al. 2014: 22).

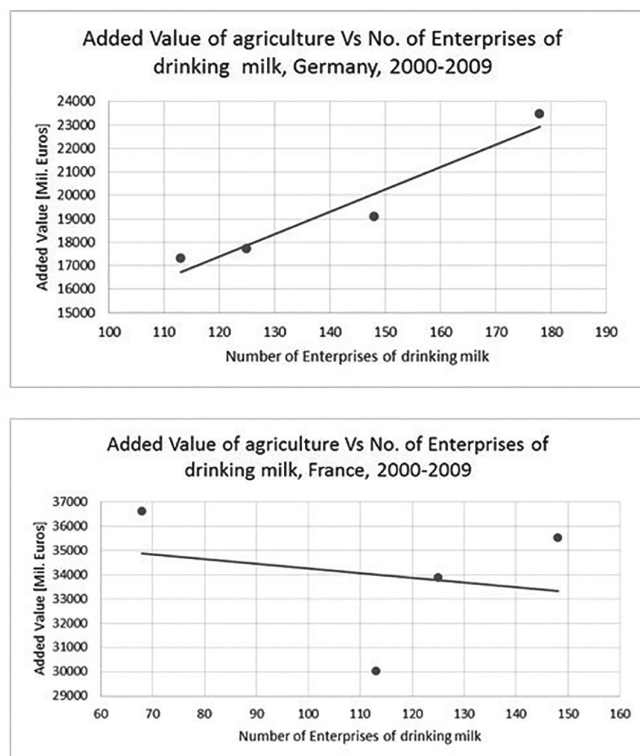


Figure 3: Added value of agriculture to number of milk processing companies correlation in Germany and in France

CONCLUSION AND DISCUSSION

The paper focused on two intertwined focal points:

Unlike a variety of academic contributions which deal with best-practices in the realm of agriculture business (e.g. in Germany or other country-specific contexts) the major topic of this paper was theoretically speaking, to look beyond the strong economic performance of the German agriculture sector by theorizing a selection of concrete economic procedures being conducted by German in comparison to French agriculture businesses. By analyzing the economic success of German agriculture from rather general economic perspectives and not only from agriculture-specific economic literature the paper aimed to extend existing discourses on the topic by means of economic perspectives which are not necessarily set in context with the agricultural domain. As a consequence the economic topics/procedures: a) increased size of economic actor, b) push and pull strategies, c) the development of new markets and d) the processing industry, were set in a broader theoretical context in order to not only enrich the existing discourse(s) by presenting non-agricultural based economic perspectives which can be discussed and analyzed in this context, but also because the theoretical contextualized classification of German agricultural procedures in a broader sense tend to make respective strategies more comprehensible and consumable for economical actors or bodies who might be willing to adapt certain strategies, themselves.

As a result the analysis revealed that German companies

are characterised by the fact that they are larger than French companies and could thus maximise their profits. French agricultural businesses are generally smaller, but also more numerous. If one looks at the trade strategy orientation of German companies, it is noticeable that they act more market-oriented, i.e. apply pull strategies. French companies tend to focus more on quality products and regional production. The German agricultural sector is also characterised by the fact that new markets are constantly being opened up and a focus is also placed on food processing and food innovation. French companies are not designed to produce for daily needs, but rather target rather high-ranked catering industries.

Secondly the paper presented a set of scatter plots which dealt with the German and the French agricultural sector in order to deliver further topics for existing discourses which could be set in context with findings being presented in the first part of the paper. The correlations between 1) the added value of agriculture and the regular labor force, 2) the added value of agriculture and the number of agricultural holdings and 3) the added value of agriculture and the number of enterprises of drinking milk, were considered. As a result the statistical comparison between Germany and France showed that: 1) unlike the French case, the rise of the added value of agriculture in Germany is not particularly related to an increasing number of workers, 2) the number of agricultural holdings has a stronger influence on the added value of agriculture than is the case in France, and 3) an increasing number of dairy farms in Germany correlates almost linearly with the added value of agriculture. In France exactly the opposite is the case.

Against the background of the major findings of the paper as well as its systematic approach towards the topic of trading/business practices of German agri-food businesses, it must be concluded that the interest to contribute new aspects to existing discourses which deal with economic improvements within the realm of agriculture being pursued in context of the present paper can only be seen as a beginning of a complex and long-term project. In context of further studies it would therefore form an interesting basis of investigation to observe further trading practices (not only practices being conducted by German agri-food businesses) in order to ensure and enable comparisons which can lead to economic improvements on a broader level. Theorizing and relating corresponding practices to different schools of theory, as done within the present paper, can help to analyze procedures rather abstractly and therefore more comparably. Extending topic-related discourses by means of ways of economic thoughts, which have not been considered in the past in content-related, works or discussions can help in this context to generate new perspectives on the topic. Following this idea it seems probable that through the addition of corresponding theoretical backgrounds to the debate, a great variety of not only advantages or disadvantages of trading actions in certain economic scenarios could be investigated, but also different forms/expressions of actions being conducted by agri-food businesses. Considering only 1) on a descriptive level concrete actions being conducted by agribusiness or 2) corresponding actions against the

background of only agricultural-related theory, seal further ways of discourse which in the end could play a beneficial role in the economic improvement of agri-food businesses. The additional considerations of topics, which have been raised, with the help of the scatter plots being performed in context of the paper play, in terms of the extending of existing discourses, an important part. Findings respective speculations drawn from corresponding scatter plots can be connected to theoretical assumptions in order to draw a more detailed picture concerning the identification of factors that (can) play significant roles in the economic success of an agribusiness.

Another continuation of the findings and the approach of the present paper could also encompass an ethical analysis of trading practices of agri-food businesses. In context of such an investigation, it would appear to be a promising and socially relevant methodical strategy to examine not only economical scopes of trading practices but of course also its implications on affected people's lives. In relation to that also state actions and measurements which are to promote not only the economic but also the ethical quality of agricultural work and businesses must be embedded in broader theoretical backgrounds in order to add highly important new thoughts and suggestions to existing discourses.

Regardless of the concrete continuation of the findings and the approach of the present paper, the general adding of new and diverse perspectives to existing discourses in order to extend the realm of discussions and works within them, seems to be especially against the background of a continually growing (complex) economic world more than necessary.

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