Stela VALCHOVSKA, Mariya PENEVA

University of National and World Economy, Bulgaria
valchovska@yahoo.com; peneva_mm@yahoo.co.uk

POLICY SUPPORTED ROBUSTNESS AND ADAPTATION: IMPLICATIONS FOR THE RESILIENCE OF GRAIN FARMING IN BULGARIA

ABSTRACT

Agricultural policy attracts research interest in terms of forecasts and results. However, it can also be useful to analyse the institutionally designed policy goals and instruments in view of their application in practice. This research investigates whether the agricultural policy in Bulgaria, as implemented within the Common Agricultural Policy of the European Union, contributes towards the robustness and / or adaptation of grain farms to current and future challenges. Policy documents from the 2014–2020 program period have been examined through the Resilience Assessment Tool (ResAT). The analysis showed that the currently implemented agricultural policy provides relatively strong support to the robustness of the grain farming sector. It facilitates the perseverance of these farms both in the short and long run. However, available policy support aimed at enhancing adaptation and change in response to challenges is less relevant to grain farmers. Nevertheless, it does not have negative impact on their resilience.

Keywords: grain farmers; farm sustainability; policy support; Resilience Assessment Tool (ResAT).

JEL Code: Q18.

1. INTRODUCTION

Farm viability is dependent on environmental and natural factors, as well as location to a great extent. Thus, the farming activity can be seen as a socio-ecological system (Folke *et al.*, 2005). It includes multiple farming actors in a certain area who are embedded in connections with stakeholders at the micro- and macro-level (Meuwissen *et al.*, 2019). Furthermore, agricultural policy in Bulgaria is determined by the Common Agricultural Policy (CAP) of the European Union (EU) and the national policy that is in line with it. Historically, the CAP is based on the assumption that farmers need protection from external changes (Lovec, 2016). In more recent years, the policy also aims for increasing

competitiveness and enhancing the environmental and socio-economic sustainability of agriculture (OECD, 2017). These aims have expanded the idea of achieving resilient farming systems beyond the persistence to external changes. This paper assesses the extent to which Bulgarian agricultural policy during 2014–2020, including associated implementation schemes under pillar 1 and 2 of the CAP, affect the resilience of the grain farming system in the North-East (NE) region of the country.

2. STATE OF KNOWLEDGE

Grain farming in NE Bulgaria is a priority economic sector in the region, producing about 50% of the national grain output (MAFF, 2019). Grain farmers tend to be of large-scale. About 22% of the largest scale grain farmers with economic size above EUR 50000 are situated in the NE (MAFF, 2016a). One fifth of the total utilised agricultural area is in that region (MAFF, 2016b). Grain output is traded both on the national and international market and represents a quarter of the agricultural exports (MAFF, 2019). Respectively, grain farmers in the NE represent a relatively well-defined farming system with key connections with stakeholders in the region and beyond it.

This research uses an analytic framework developed as part of a research project: 'Sustainable Resilient EU farming Systems (SURE-Farm)' (See Acknowledgements for more detail). The Resilience Assessment Tool (ResAT) helps evaluating the influence of policy formulations on the resilience of farming systems (Buitenhuis *et al.*, 2020). It draws on concepts from ecology and systems theory. They provide a basis for examining the capacity of a socio-ecological production system to deal with changes in its environment (Ge *et al.*, 2016). The system can experience various pressures that hinder its functionality and require responses from the farming actors (Ge *et al.*, 2016). These responses have been framed through the concept of resilience, which is concerned with the recovery and adaptation of the socio-ecological system.

One way of understanding resilience is through the three types of response to changes in the environment – robustness, adaptability, and transformability. These have been conceptualised as resilience capacities (Meuwissen *et al.*, 2019). Each capacity reflects the different extent of adjustment implemented by the farming system in response to the changes. Robustness represents the ability to persist external change, while adaptability includes small changes. Both capacities aim to help the system maintain the same functionalities. Transformability represents major changes that lead to rearranging the farming system towards a new form and new functionalities.

Table 1

ResAT framework

Resilience capacities	Robustness	Adaptability	Transformability
Resilience characteristics	Short-term focus	Medium- to long-term focus	Long-term focus
	Protecting the status quo	Flexibility	Dismantling incentives that support the status quo
	Buffer resources	Variety and tailor-made responses	In-depth learning
	Other modes of risk management	Social learning	Enhancing and accelerating niche innovations

Source: Based on Meuwissen *et al.* (2019) and Buitenhuis *et al.* (2020)

Respectively, each type of resilience capacity is examined through four characteristics presented in Table 1. Evidence for these characteristics has been investigated in the analysis.

3. MATERIALS AND METHODS

The empirical analysis started by selecting the most relevant policy documents to the activities of grain farmers. They provided data on the Bulgarian policy practice as well as the CAP framework. Some of these were legislative documents and others were outputs that described and clarified policy goals and instruments. They represented official communication between relevant institutions, both at national and EU level, or between institutions and stakeholders. The texts are analysed through qualitative techniques that help connecting the policy documents with the concepts and categories from the framework (Creswell, 2014).

ResAT assessed whether policy goals and instruments enabled or constrained farmers' resilience enhancing strategies and resources (Buitenhuis *et al.*, 2020). The assessment was done by assigning scores to the twelve key characteristics of the resilience-enhancing capacities of policies (Table 2). The scoring facilitated assessing the extent, to which the national and EU policies applied in Bulgaria have been supporting or inhibiting the resilience of the grain farming system.

Table 2

Assessment of the extent that policy goals and instruments enable or constrain resilience characteristics

Relation to resilience characteristics	**Score**
Not clear	0
Not enabling / Very constraining	1
Slightly enabling / Constraining	2
Fairly enabling / Fairly constraining	3
Enabling / Slightly constraining	4
Very enabling / Not constraining	5

Source: Based on Buitenhuis *et al.* (2020)

The conceptual framework, methodology, and results were triangulated through consultations with stakeholders who have expert knowledge of agricultural policy matters. Their feedback was obtained through face-to-face interviews. The stakeholders included: employees of the Agricultural Academy as well as universities. Their comments were included in the analysis.

4. RESULTS AND DISCUSSION

Policy goals and instruments during the 2014–2020 programming period were analysed by considering both their enabling and constraining role. However, the narrative did not offer much explicit evidence of the constraining aspect. Respectively, the evidence has been interpreted predominantly through the 'enabling – not enabling' lens of the framework. The analysis below has been organised around the three resilience capacities and their characteristics.

4.1. ROBUSTNESS

Short-term focus
(goals – score 2; instruments – score 5)

Policy documents did not generate much data representing policy **goals** that support the short-term aspect of robustness. Similarly, the short-term characteristic of instruments has rarely been emphasised. Nevertheless, there have been identified goals that link incomes in agriculture with the direct payments (DP) instruments and these have been interpreted as short-term (MAFF, 2014a).

Several DP **instruments** had annual effect and required farmers to apply for support each year – for example, the single area payment scheme (SAPS) and the fuel support payments (MAFF, 2014b). Furthermore, the capping of DP could affect grain farmers by the limitations on the maximum amount of support (MAFF, 2014c). However, the policy considered that support beyond the maximum amount was excessive and the incomes of farmers were sufficiently supported within that constraint. Thus, the constraint did not have significant negative impact on the enabling role of the DP.

Protect the status quo
(goals – score 5; instruments – score 5)

The analysis highlighted policy **goals** that provided very clear and strong support to the robustness of grain farmers in terms of the protection of their status quo. Substantial part of the policy aimed to support their income and had developed relevant instruments to do it (MAFF, 2014a). Policy goals also stated intentions to support agriculture in general by regulating exports and imports and undertaking market interventions (Law for support of agricultural producers, 2018). Both helped protecting the status quo by mitigating or removing the relevant external pressures

for change. A lot of policy **instruments** supported existing agricultural production and prioritised agricultural interests in such a way that was in favour of grain farmers. It can be argued that the available instruments were very enabling to robustness in terms of protecting the status quo. Among these instruments were the different forms of DP – SAPS, redistributive payment, green payments, less favoured areas payments (Law for support of agricultural producers, 2018).

The SAPS applied to the whole programming period 2014–2020 (EC, 2017). Fulfilling the requirements for this payment was a prerequisite for the other DP. Respectively, the redistributive payment and those for less favoured areas did not require grain farmers to do anything particularly different in order to get them apart from requesting them in the annual application. These payments mostly depended on the size of tenured land and the geographical location of the farm. The introduction of green payments represented some small change with respect to the status quo of the 2007–2013 programming period. They can be considered as an instrument for changing agricultural practices towards more environmentally sustainable ones. Thus, they can also be considered as an adaptability instrument.

Buffer resources
(goals – score 4; instruments – score 4)

Buffer resources had limited presence within the policy **goals**. There has been a clear mentioning of such resources in the goals of the Rural Development Programme (RDP): *'the program aims to improve risk management in agriculture through supporting the creation of mutual fund for help in case of unfavourable weather events, livestock and crop diseases, pest infestations, and ecological incidents, which has been planned to start-up in 2017 (MAFF, 2015).'* The quote demonstrates that policy aimed to cover common unforeseen risks that pose threat to the viability of the affected farmers (including grain farmers) in a more tangible way. The policy also aimed to protect the genetic resources in grain farming (Law for support of agricultural producers, 2018). As a buffer resource, it aimed to ensure that the same varieties are available to farmers in the future. However, the policy instruments that facilitated the preservation of genetic resources, offered detailed solutions mostly for livestock and aquaculture (ibid.).

Robustness has been enabled through buffer resources mainly through different compensatory **instruments**. These instruments could also be interpreted as protecting the status quo. Nevertheless, they have been considered here because they have been designed to support grain farmers by replacing inadvertently lost resources, as a result of severe weather events, for example (MAFF, 2014b).

Other modes of risk management
(goals – score 4; instruments – score 2)

Risk management in the agricultural sector as a whole is among the main policy **goals**, in the context of the Government's views on sustainable development

(MAFF, 2014a). This has been detailed in the RDP as support and prevention of risk management through increasing the knowledge of farmers on the issue (MAFF, 2015). Furthermore, the farmers who initiate investment in their enterprises through policy measures also benefit from corporate tax relief (MAFF, 2014b). Nevertheless, the policy does not extend as far as to aim to cover risks from unsuccessful business decisions: *'Undertakings active in the agricultural and forestry sectors should themselves bear the consequences of imprudent choices of production methods or products.'* (EC, 2014).

The analysis did not reveal any policy **instruments** relevant to the short-term risk management of grain farmers, apart from opportunities for trainings in risk management (MAFF, 2015). Other farming systems, like fruit and vegetable growing, received support towards insurance costs. However, such support was not available to grain farmers, although the policy at the EU level gave such opportunities (EC, 2014).

4.2. ADAPTABILITY

Medium- to long-term focus
(goals – score 4; instruments – score 4)

Policy **goals** do not tend to specify explicitly a medium- to long-term time span. Nevertheless, goals towards efficiency and competitiveness of agricultural operations (Law for support of agricultural producers, 2018) as well as social and economic development of rural areas (MAFF, 2015) have inherent medium- to long-term span. In addition, they are formulated broadly to include all farming systems in the country. Thus, they inherently apply to grain farmers and enable their resilience. Some of the goals aimed to tackle land ownership and tenure issues that have been associated with negative effects on farm efficiency (MAFF, 2014a). Solving these issues facilitated medium- to long-term focus of grain farming. These goals have further been related with goals for farm restructuring and modernisation (MAFF, 2015).

A number of policy **instruments** have been formulated with medium- to long-term intended impact. These included, for example: the agri-environmental instruments like organic farming support; the instruments for creation of producer organisations; or the instruments for investment support (Law for support of agricultural producers, 2018). They were strong enablers of adaptability. Nevertheless, the time span of these instruments was not as important as their relevance within the flexibility characteristic discussed later. Some instruments could be constraining long-term adaptability due to the increased complexity of the requirements associated with them. I.e. different agri-environmental instruments required additional knowledge in order to maintain the necessary practices supported by the policy. This can be inferred from the more detailed and lengthy descriptions of these instruments in the policy documents (MAFF, 2015), but it was also pointed out by the stakeholders.

Flexibility
(goals – score 4; instruments – score 3)

Some of the relevant enabling **goals** here have already been mentioned in the previous characteristic as there was an overlap of the boundaries of different characteristics in the analysis. Other relevant goals included: improving the sustainability and adaptability of agriculture in relation to climate change (MAFF, 2014a), facilitating the development of irrigation, improving the levels of knowledge and information among farmers, support to environmentally friendly agricultural productions and practices. There also were various goals aiming at improving the market performance of farmers either by encouraging the formation of producer groups or without any specified ways to empowerment (MAFF, 2014a). These goals were highly relevant for enabling the resilience of grain farmers. However, as a result of some drawbacks discussed below, they are not very enabling, and this has been reflected in the score. Goals related to development of competitiveness through value creation and innovation could be marginally enabling the resilience of grain farmers. These farmers are focused on primary agricultural production and their outputs are commodities where value can be added through increasing the quality of output. Thus, there is a very limited scope for adding value. Furthermore, the innovations that can support grain farmers within their existing practices are at the technical and technological level – machines, crop varieties.

Many **instruments** focused on desired outcomes rather than the means for achieving them, and some of these are relevant to grain farmers. This characteristic has included instruments that supported change which was more as an adjustment rather than radical and required relatively small amount of additional knowledge. Such example were the instruments encouraging investment in agricultural holdings. They allowed for the enterprise to grow in scale or implement new technologies without changing it significantly in terms of main outputs and markets (MAFF, 2015).

Other instruments were related to the different agri-environmental priorities. The 2014–2020 policy formulations placed these instruments in the adaptability – flexibility category, because their period for implementation in Bulgaria was five years. However, the environmental measures were meant by design to support long-term transformability, because they could take up to seven years at the EU policy level (EC, 2014). In addition, it can be argued that they required a radically different mindset (i.e. organic farming). This has been attributed to the transformability type of resilience. Stakeholder interviews highlighted the coupled annual support for protein crops that was relevant for improving the flexibility type of resilience by diversifying the outputs of grain farmers. It has remained outside the initial analysis as the type of crops were not considered among those grown by grain farmers. However, the subsidies for areas with protein crops were specified in

Regulation no. 3 from 17.02.2015 for the requirements and implementation of the direct payments' schemes (2018). They were dependent on the SAPS and represented an opportunity for additional income by using the farm resources to produce output for different markets. A common characteristic for all flexibility instruments was that the policy required farmers to adhere to relatively strict rules for application and receipt of funding. This can be considered slightly constraining. For example, the eligible costs within the investment instruments excluded second-hand machines, contributions in kind, additional costs of leasing contracts, and the costs of the preparation of the application (MAFF, 2015).

Variety and tailor-made responses
(goals – score 4; instruments – score 3)

Policy **goals** as a whole were in line with this category of resilience. They aimed to cover a broad range of actors in the agriculture, forestry and rural areas. They also aimed to support the socio-economic system as a whole. However, when broken down to different **instruments**, the policy was compartmentalised and the complementarity and intended synergies between instruments were reduced. More information on this category can be obtained through further analysis where the implementation and outcomes of policy were taken into consideration. The diversity of lower-level goals and policy instruments in relation to environmental sustainability were relevant to this category of resilience as well (MAFF, 2015). However, this variety was not related to a broader range of opportunities for the grain farmers. It expanded the opportunities of different types of farmers / farming systems to contribute to environmental sustainability.

Social learning
(goals – score 1; instruments – score 1)

Social learning was not explicitly supported or constrained by policy **goals** and **instruments**. The 'co-operation' instrument, aiming to support innovation development, had some characteristics that could be related to social learning. However, its development in the policy documents was relatively generic and did not provide sufficiently clear framework for social learning. For example, at the goal level in the RDP the policy suggested that: *'Encouraging innovations requires facilitation of interaction between the organisations that develop or transfer innovations and the end users of the information – farmers and forestry managers, food processors, local action groups, vocational organisations, local authorities, etc. It also requires the development of ways for finding solutions to problems at the local level, including problems derived from the policy goals and applicable at the farm level (MAFF, 2015).'* This showed that the form and processes of the anticipated interactions were not sufficiently specified to assess their potential for enabling social learning.

4.3. TRANSFORMABILITY

Long-term focus
(goals – score 2; instruments – score 1)

This analysis did not identify policy **goals** and **instruments** that explicitly planned for time span over decades. Nevertheless, it can be argued that the overarching policy goals inherently assumed change over the long-term. For example, the strategic view of the Bulgarian government with respect to agriculture included an overarching goal for *'supporting the development of balanced, modern, sustainable, and adapted to climate change agriculture; market-oriented, competitive agricultural holdings and guaranteed food security for the population (MAFF, 2014a)'*. This goal assumed both long-term and continuous change of the sector, but it did not suggest the extent of the change. One of the lower-level goals, supporting the above, included *'overcoming the structural imbalance and supporting uniform development of the different types of livestock and crop farming (MAFF, 2014a).'* Achieving the necessary structural change in the agricultural sector can happen only over the long-term. This suggested that policy goals are relatively less enabling long-term transformability and the related score was below average.

Two policy **instruments** that had the potential to enable long-term transformability were identified. These were related to agri-environmental agricultural practices and to the entry of young farmers in the sector. However, stakeholder consultations suggested that the young farmers instruments were unsuitable for grain farmers, because of two reasons. First, young farmers typically started-up with relatively small-scale enterprises. Secondly, the regulation for the implementation of the instrument specified fruit and vegetables as priority crop (Regulation no.14 from 28.05.2015 for the application of sub-measure 6.1 "Start-up support for young farmers", 2015). These were not among the main crops produced by grain farmers.

Regarding agri-environmental instruments, the policy at the EU level required application of at least five to seven years, and provided opportunities for longer time, if required (EC, 2014). However, this has not been reflected in any of the agri-environment instruments applied in Bulgaria. This limited the possibility for continuation. Furthermore, the history of application of the CAP in the country was relatively short. Thus, there cannot be expected policy-created conditions for continuation of the agri-environmental support for farmers who had completed one period of support and were ready to start another.

Dismantling incentives that support the status quo
(goals – score 1; instruments – score 2)

The data did not provide evidence for explicit policy planning towards dismantling the status quo for grain farmers through appropriate **goals** and

instruments. Furthermore, the continuing receipt of SAPS and related DP was a constraint to dismantling the status quo (EC, 2017).

Business diversification **goals** stated a focus on moving into non-agricultural business activities as suggested by the following quote: *'the development of non-agricultural activities supports the restructuring and viability of the agricultural enterprises (objective 1) by giving opportunities for additional incomes outside of agriculture (MAFF, 2015).'* For grain farmers these may stimulate transformability because they would require development of a different type of business as well as handling different outputs and markets. Diversification was supported by investment **instruments** and it did not limit the types of farmers who could apply for support. However, there was a regional limitation to the North-West region of Bulgaria (MAFF, 2015). The grain farmers from the NE remained outside the scope of the measures.

The strongest **instruments** for the dismantling the status quo were the green payments. They facilitated adaptive change of the behaviour of grain farmers who were incentivised to change or adjust their usual agricultural practices. In addition, the green payments promoted stronger consideration of the protection of natural resources, like soil (MAFF, 2014d). They aimed to introduce technological change for grain farmers without changing any other major parameters.

In-depth learning
(goals – score 1; instruments – score 1)

Similar to social learning, this form of learning was not considered in policy **goals** and **instruments**. Thus, they did not enable or constrain it. The existing focus was on knowledge and information transfer that has been well supported by both policy goals and a range of instruments (MAFF, 2014a; EC, 2014). However, they were not concerned with the quality and type of the resulting learning.

Enhancing and accelerating niche innovations
(goals – score 1; instruments – score 1)

Innovations were not considered in sufficient detail in the policy documents to make it possible to argue that niche innovations are enabled or constrained by **goals** and **instruments**. Policy documents do not tend to differentiate between different types of innovations, or any characteristics that would allow assigning types to them. Respectively, innovations are considered in general. Furthermore, the policy view on the concept of innovation is vague. In addition, the innovations considered by policy instruments also are part of an individualistic perspective on farmers and their enterprises. They aim to support a decision-maker at the farm level in his or her aspirations for developing the enterprise. This is in contrast to the grass roots view of niche innovations (Termeer *et al.*, 2017).

The policy provides some differentiation between adoption and development, where for the development of innovation have been designed special policy instruments. These instruments are meant to be applicable across the whole country and for all types of agriculture (MAFF, 2015). The adoption of innovation has been assumed to happen with knowledge transfer and the investments in new technology. Neither of these is facilitated bottom-up. Furthermore, it is focused on product innovations that are not expected to be of interest to grain farmers who typically produce commodities.

The support to co-operation activities is related to the initiatives concerning agricultural products and activities (EC, 2014). Respectively, this finding shows that at the EU level there is planned policy support to innovations that could also be niche innovations and that it is strictly focused on agricultural products and activities. The specific implementation of this instrument in Bulgaria has been put into practice through the measure 'Co-operation' (MAFF, 2015). It has been designed in accordance with the aims of the European Innovation Partnership for development of interactive innovation models. Furthermore, niche innovations have institutionalised foundations and are goal-oriented towards achieving innovation (Kivimaa and Kern, 2016). This has been covered only by the 'co-operation' instrument.

Another part of the policy, the LEADER approach, includes notions of self-organising, decentralised decision-making, and a context for social learning. One of the stated lower level goals of LEADER in the Bulgarian policy is focused on innovations support (MAFF, 2015). It is related to the co-operation instrument discussed in the previous paragraph. However, LEADER has been planned by policy for the rural actors in general, without targeting specific groups. This allows for relevant actors to emerge and take on the available opportunities, but it does not suggest whether grain farmers will be among them. Furthermore, the adaptability and transformability potential of LEADER cannot be explicitly related to the farming system of the grain farmers in Bulgaria. The policy sources have stated that it aims to support local regional development (MAFF, 2014a). In addition, there is an overall tendency for the LEADER conditions and stipulations to be oriented towards activities away from agriculture (MAFF, 2015).

4.4. SUMMARY OF SCORES OF THE IMPACT OF POLICY ON RESILIENCE

The analysis resulted in strong representation of some of the concepts within the data while others have been limitedly supported. It also suggests that some concepts are not supported at all by the considered agricultural policies.

Table 3

Resilience capacities as illustrated by the scores of their characteristics

Robustness	Short-term focus	Protect the status quo	Buffer resources	Other modes of risk management
Goals	2	5	4	4
Instruments	5	5	4	2
Adaptability	Medium- to long-term focus	Flexibility	Variety and tailor-made responses	Social learning
Goals	4	4	4	1
Instruments	4	3	3	1
Transformability	Long-term focus	Dismantle status quo incentives	In-depth learning	Enhancing and accelerating niche innovations
Goals	2	1	1	1
Instruments	1	2	1	1

Source: Authors' analysis

Table 3 summarises the scores for all categories according to the extent each of them enables or constrains the resilience of grain farmers. They consider the feedback from the expert consultations.

5. CONCLUSIONS

Grain farming is among the best supported activities within the CAP as applied in Bulgaria, and the national policies. They ensure its perpetuation through time. It is not considered vulnerable. Policy goals are general and directed towards several economic sectors or geographic regions at the same time. Therefore, they apply to grain farmers at an abstract level, as much as they apply to any other farming system.

Robustness. The policy has scored highest in terms of enabling robustness. All four categories of robustness are above average in terms of enabling resilience. This means that short-term impact is prevailing within the Bulgarian agriculture and rural development policy. There is strong support to the status quo through policy goals and instruments. Furthermore, there are available mechanisms for mitigating short-term risks like buffer resources and other risk management tools.

Policy also aims to support the current actors in agriculture as they are (including grain farmers). This suggests presence of contradictory goals and considering the related instruments, the support of the current status quo prevails over adaptation and change. In addition, the instruments that support robustness are widely available and larger number of grain farmers can be expected to benefit from them. They are not distributed on the basis of competitive criteria and farmers only need to fulfil eligibility criteria. This is a strength of the policy in favour of robustness, because it makes the short-term resilience instruments relatively more

accessible to the grain farmers. The policy has the ability to support the robustness of the farming system as whole.

Furthermore, the DP, and especially the SAPS, are annual, and have been available for two programming periods of the CAP. This facilitates perpetuation of the short-term effects. This can be expected to have effect on grain farmers' planning and strategic orientation. Nevertheless, as the size of the income support received through the DP depends on the amount of tenured land, the large-scale grain farmers are in a favourable position with respect to the policy support compared to the other subsectors. They receive the largest possible subsidy support through these instruments among all types of farmers.

Adaptability. The adaptability characteristic of the policy scored lower than robustness. Nevertheless, three of the four categories – medium- to long-term focus, flexibility and variety and tailor-made responses scored above average in enabling resilience. This means that the policy has a relatively strong potential for supporting the adaptation of large-scale grain farmers towards desired directions of development. It provides a good range of flexibility instruments that aim to benefit either the farmers (irrigation, knowledge, producer groups) or achieve positive externalities for the environment and natural resources (agri-environment).

A weakness of this characteristic of the policy is that it is selective. For example, flexibility instruments may be hard to access because of the complexity of administrative procedures for application and implementation of the support. In addition, they are aimed at a limited number of farmers. The selectivity feature of the agriculture and rural development policy can be associated with further weaknesses that can have long-term impact, because they tend to perpetuate over different programming periods. First, the policy may be accessible only to the farmers with the strongest business skills who may be in less need of support than other farmers. As grain farmers have among the largest scale enterprises, they may also have relatively better business skills to the smaller scale farmers and be in a favourable position. Secondly, such policy does not encourage the development of a diversity of actors in agriculture and rural areas. Thirdly, the adaptability features of policy can reach only a relatively small number of grain farmers. Thus, they may not be able to contribute to a system change in the medium- to long-term.

One category of adaptability, social learning, achieved very low score suggesting that the policy does not support it at present. There is a potential for connecting this category better with existing instruments like LEADER and the creation of producer groups. These instruments can facilitate social learning, but it has not been considered important enough to be part of the current policy.

Transformability. Transformability received the lowest scores among the three resilience capacities suggesting that the policy is weakest at supporting substantial change of the farming system over the long run. The scores for all categories are below average. Such result suggests that the policy is not strongly committed to radical change of the farming system.

Two out of the four categories – in-depth learning and niche innovations are not enabled. The analysis showed that the policy has a very narrow view of knowledge and learning. Furthermore, it is focused on creating institutional conditions for learning to occur, without differentiating between types of learning that have different effects on the related businesses and require different conditions in order to take place.

Similarly, the policy does not differentiate between types of innovations. The instruments supporting innovations may not necessarily create conditions for the development of niche innovations. Furthermore, the scale of the business of grain farmers can compensate for the disadvantage from selling products with low value added and reduce the incentive to innovate. These farmers would benefit more from support of the transfer and adoption of innovation. It is present to some extent through the existing investment instruments. However, other forms of support that can reach as many farmers as possible would be more beneficial for increasing innovation within the farming system.

The other two categories – long-term focus and dismantling the status quo also received relatively low scores. Some policy goals require long-term orientation. However, this has not been supported by the respective instruments that hardly extend over the five-year period. Dismantling the status quo is not among the stated goals, similar to the two other categories of transformability. This literary means that the policy has no intention to achieve such outcomes.

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