

# WHY CANNOT DIRECT PAYMENTS BE CAPPED IN SLOVAKIA? A POLITICAL ECONOMY PERSPECTIVE\*

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## Abstract

Annually the Common Agricultural Policy (CAP) provides support to the farming sector amounting to more than EUR 50 billion in the EU, of which direct payments (DPs) take around 70%. DPs are often argued to be granted unfairly to large farms. In this paper we analyse implications and the political economy of DP capping in Slovakia in the context of the ongoing negotiations about the future CAP reform. The simulation results for Slovakia show that if the 2018 Commission proposal was approved it would lead to losses of EUR 190.1 million (68% of total DPs) to large farms when labour costs are not subtracted. These losses would decrease to only EUR 12.2 million (4.4% of total DPs) when the labour costs are subtracted. Further, the results show that potentially affected large farms in Slovakia show lower performance and lower compliance with the agricultural policy objectives than farms unaffected by the DP capping. Similar to the past CAP reforms, the position of Slovakia against DP capping is expected to be maintained also in future, which could be explained by three main factors: the productivity argument, the political economy argument linked to the lobby pressure from large farms and low economic distortions caused by DPs.

**Keywords:** CAP, direct payments, capping, political economy, large farms, Slovakia

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## 1. Introduction

Direct payment (DP) is the main support instrument used under the Common Agricultural Policy (CAP) to support farming sector in the EU. Annually, CAP provides support amounting to more than EUR 50 billion and DPs represent around 70% of the total support (OJEU, 2018). The distribution of DPs between small a large farms is one of the most politically sensitive issue given that it is often argued that granting support to large farms is unnecessary given that these farms are able to generate sufficient income, and it is often perceived that the support could be allocated instead to better purposes such as for rural development and provision of public goods. Naturally, the most concerned Member States (MS) are particularly those with a large share of large farms such as Slovakia, Czechia or Germany.

Attempts to address this politically contentious issue of DP distribution go back to the MacSharry reform of 1992. The 1992 MacSharry reform tried to reduce DPs for large farms gradually but the proposal did not pass in the Council. A reduction of 5% for all farms receiving more than EUR 5,000 was implemented in 2005 and it became known as modulation. As part of the 2008 Health Check, the Commission proposed additional cuts to DPs for large farms. However, the coalition of countries with large farms opposed it and only a small increase in modulation rates was agreed upon from 2009 onwards (EC, 2008; Swinnen, 2015; Matthews, 2018a).

Currently the most advocated instruments promoted to address the distribution of DPs are the reduction (degressivity) and capping of DPs to large farms (referred to as “capping”) and granting additional payments to small farms (referred to as “redistributive payment”). In the last CAP reform from 2013, the capping of DPs was a hotly debated policy issue and raised attention particularly in MS with large farms. These MS were the strongest opponents of policies that would reduce DPs to large farms. The final agreement on the 2013 CAP reform allowed MS a relatively high flexibility on application of capping and obligatory was made only a small reduction of DPs to large farms (EU, 2013). This implies that pressures from opposing MS were successful in diminishing the relevance of capping. In particular, they downplayed the original proposal of the European Commission presented in October 2011, which was more ambitious in the level of capping compared to the final agreement (EC, 2011a).

Given the limited capping introduced by the 2013 CAP reform, the reduction of DPs to large farms still remains a contentious issue in the current debate about the new CAP for the financial period 2021–2027. In its 2017 Communication, the Commission showed preference to maintain DPs within the new CAP. However, the Commission argued that the distribution of DPs among farms needs to be “fairer”. The proposed measures

to ensure a “fairer” distribution of payments to farmers include those already considered in the previous CAP reform: degressivity, capping, and redistributive payments. Compared to the 2011 Commission proposal for the previous CAP reform, the 2018 proposal has higher ambition to rebalance DPs between small and large farms (EC, 2018a).

In this paper, we analyse implications and the political economy of DP capping in Slovakia in the context of the ongoing discussions and negotiations about the future CAP reform for the period 2020–2027. More specifically, we analyse the implications of DP capping and other measures for limiting DPs to large farms such as their distributive payment or degressivity. We attempt to simulate the amount of DPs that is at stake under different scenarios of DP capping for large farms which were considered in the current discussion on the future CAP for the period 2021–2027. Further, we discuss political economy pressures explaining the political preferences for capping in Slovakia. Slovakia is an interesting example because it is dominated by large corporate farms rather than small family farms, which dominate the farm structure in most other MS (particularly in Old MS).

This paper contributes to the literature on agricultural subsidies and their income distributional effects. One of the most debated issues of agricultural subsidies disbursement – in both EU and non-EU countries – relates to the issue of who benefits from them. Studies have analysed both direct and market-induced income distributional effects of agricultural subsidies. The direct effects refer to the problem of the distribution of subsidies among beneficiaries, how equally or unequally they are disbursed within the agricultural sector across farms, products and regions and how different reforms impact this distribution (*e.g.*, Kirwan, 2007; MacDonald *et al.*, 2006; Espinosa *et al.*, 2020). Studies on market-induced income distributional effects of subsidies consider changes in factor and output prices caused by subsidies and attempt to investigate to what extent the subsidies are benefited by farmers or whether they are leaked to non-agricultural sectors (*e.g.*, to landowners, consumers, food processing sector) (*e.g.*, Floyd, 1965; Gardner, 1987; Ciaian *et al.*, 2018; Kirwan, 2009; Michalek *et al.*, 2014). In the context of DPs granted under the CAP, studies have analysed the direct income distributional effects by analysing past CAP reforms covering either specific Member States or the whole EU (*e.g.*, Cionga *et al.*, 2008; EC, 2011b; Espinosa *et al.*, 2020). The literature on market-induced income distributional effects analyses in particular to what extent DPs are leaked to landowners (*i.e.*, to what extent DPs are capitalised into land prices) (*e.g.*, Ciaian *et al.*, 2018; Ciaian and Swinnen, 2009; Kilian and Salhofer, 2008; Patton *et al.*, 2008; Salhofer and Schmid, 2004; Michalek *et al.*, 2014; O’Neill and Hanrahan, 2016). This paper analyses the direct income distributional effects of DPs. Its main contribution to the literature is by focusing on the latest CAP reform and its comparison with different policy options (which is

analysed less in the literature) by covering specific measures targeting large beneficiaries (big farms) (studies often combine different measures or cover the whole CAP reform package, *e.g.*, EC, 2018b) and by using detailed farm-level data for commercial farms in Slovakia, which allows us to take into consideration all elements that affect the level and change of DPs to large farms (*i.e.*, degressivity, capping, redistributive payment).

## 2. DP Redistribution Between Small and Large Farms: Snapshot from Recent CAP Reform Proposals

The primary instruments used within CAP to redistribute DPs between small and large farms include degressivity, capping, and redistributive payments. The degressivity and capping aim to reduce the decoupled payments for the largest farms. The redistributive payments aims to increase the support for small and medium-sized farms by granting a higher payment for the first hectares. The redistributive payment is an additional payment to the first hectares up to 30 hectares or up to the average farm size in the MS where this average is greater than 30 hectares.

Under the EU political procedure, first the European Commission proposes legislation which then needs to be adopted by the Council and the European Parliament (Crombez and Swinnen, 2011). The 2011 initial proposal of the European Commission prepared for CAP for the financial period 2014–2020 was relatively ambitious in its attempt to reduce DPs to large farms. It considered a reduction of DPs by 20% starting from a EUR 150,000 threshold per farm and then progressively increasing the rate to 100% for payments above a EUR 300,000 threshold per farm, thus practically leading to a capping of payments (Table 1). The Commission proposal allowed subtracting labour costs in calculating these thresholds for DP reduction.

According to the European Commission estimations, the application of the proposal on degressivity and capping of DPs would have had heterogeneous impacts across MS (EC, 2011b). According to EC (2011b), the most affected MS in terms of the share of DP reduction to large farm as well as the percentage change of income of capped farms would be Bulgaria, Greece, Slovakia and Romania but also Czechia and Hungary, although with variation depending on the assumption on the labour costs deduction and the capping threshold. These are the countries with a significant share of large farms. Germany would have also been affected by capping mainly because of the importance of large farms in Eastern part of the country. Thirteen MS would have not been affected at all by the Commission proposal because there is not a significant share of large farms in these countries (and/or the labour costs bring the DPs below the threshold) (EC, 2011b).

**Table 1: Capping and degressivity in the 2011 and 2018 Commission proposals and 2013 CAP reform**

DP thresholds per farm (EUR)	2011 Commission proposal (%)	2013 CAP reform (%)	2018 Commission proposal (%)
60,000–75,000	0	0	25
75,000–90,000	0	0	50
90,000–100,000	0	0	75
100,000–150,000	0	0	100
150,000–200,000	20	5	100
200,000–250,000	40	5	100
250,000–300,000	70	5	100
More than 300,000	100	5	100

Sources: EC (2011a); EU (2013); EC (2018a)

Given a relatively significant share of DPs being potentially affected by the 2011 Commission proposal, the Council and the European Parliament slashed down the measure on capping within the final agreement on the 2013 CAP reform. According to the agreement, MS are required to reduce DPs by at least 5% for payments above EUR 150,000 per farm (Table 1). This is a radical softening from the initial Commission proposal which considered at least 20% cut in DPs. Further, the final agreement gave flexibility to MS in the application of degressivity, capping versus redistributive payments. MS are exempted from degressivity if they implement the redistributive payment accounting for more than 5% of the DPs.

In practice, most MS (19 MS) decided to apply DP reduction at the minimum required 5% rate or zero rate if applying redistributive payments. Eight MS have introduced redistributive payments. Only 9 MS have decided to introduce capping for DPs with most of them starting from the EUR 150,000 threshold per farm. As expected, MS with a significant share of large farms (e.g., Czechia, Slovakia) apply only the minimum 5% reduction rate of DPs required by the 2013 CAP reform. Interestingly, Czechia and Slovakia, two countries with the largest farms in the EU, opted not to introduce redistributive payments, which would benefit smaller and medium farms at the expense of large farms (Table 2).

**Table 2: Application of redistributive payment, capping, and degressivity in the CAP 2014–2020 by MS**

		Redistributive payment			Capping/Degressivity	
		First eligible hectares (ha)	EUR /ha	% of decoupled payments	Capping (1,000 EUR)	Rate (%)
<b>Belgium</b>	<b>WL/FL</b>	30	115	17	150/150	100/5
<b>Bulgaria</b>		30	77	7	150/300	5/100
<b>Germany</b>		1–30 /30–46	50/30	6.9		
<b>Ireland, Greece, Spain, Austria</b>		–	–	–	150	100
<b>France</b>		52	25	20	–	–
<b>Croatia</b>		20	34	10	–	–
<b>Italy</b>		–	–	–	150/500	50/100
<b>Cyprus, Latvia, Portugal, Slovenia, Slovakia, Finland, Sweden, Malta, Holland, Luxemburg, Czechia, Denmark, Estonia</b>		–	–	–	150	5
<b>Lithuania</b>		30	50	15	–	–
<b>Hungary</b>		–	–	–	150/176	5/100
<b>Poland</b>		0–3/3–30	0/41	8	150	100
<b>Romania</b>		0–5/5–30	5.45	5	–	–
<b>UK</b>	<b>NI/EN</b>	–	–	–	150/150	100/5
	<b>SC</b>	–	–	–	150/600	5/100
	<b>WA</b>	54	128	–	150/200/ 250/300	15/30/ 55/100

Notes: WL: Wallonia, FL: Flanders, NI: Northern Ireland, EN: England, SC: Scotland, WA: Wales

Source: European Commission

The 2018 Commission proposal for CAP for the period 2021–2027 is again relatively ambitious in the capping level by decreasing significantly the thresholds for DP reduction to large farms compared to both the final agreement on 2013 CAP reform and the initial

2011 Commission proposal. That is, this proposal aims to reduce DPs by 25% starting already at EUR 60,000 threshold per farm compared to the EUR 150,000 threshold and 20% reduction rate considered in the 2011 Commission proposal. The capping (*i.e.*, 100% cut) is proposed from the EUR 100,000 threshold compared to EUR 300,000 threshold considered in the 2011 Commission proposal (Table 1). Similar to the 2013 CAP reform, the 2018 Commission proposal allows subtracting labour costs from DPs to calculate the thresholds for DP reduction. The payments obtained from the application of the reduction of DPs are primarily proposed to be used to contribute to the financing of the redistributive payment.

### 3. Farm Structure and Distribution of DPs in Slovakia

Farm structure in Slovakia is strongly dominated by corporate farms (joint stock companies, cooperatives and limited liability companies), which are generally quite large. In 2016, their average size was 519 ha per farm and they accounted for around 15% of all farms but used around 80% of the total utilized agricultural land (UAA). In contrast, the average size of (small) family farms is 56 hectares and they use only around 16% of UAA (Table 3).

**Table 3: Farm structure in Slovakia in 2016**

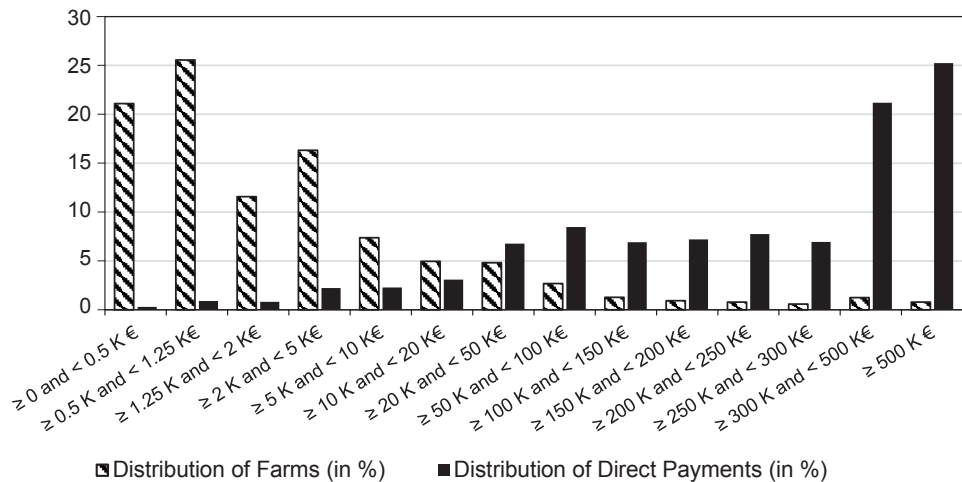
	Average farm size (ha per farm)	Share in all farms (%)	Share in UAA (%)
<b>Corporate farms</b>	519	15.2	80.0
<b>Cooperatives</b>	1,193	2.9	35.4
<b>Limited liability companies</b>	320	11.6	37.8
<b>Joint-stock companies</b>	1,042	0.6	6.8
<b>Family farms</b>	56	28.6	16.1
<b>Non-business, individuals</b>	6	55.1	3.1
<b>Others</b>	61	1.1	0.7
<b>Total</b>	99	100	100

Source: Agricultural Paying Agency of Slovakia

The dominance of large farms in Slovakia largely determines the distribution of DPs between farms. This is because the main bulk of DPs are granted in form of decoupled payments – the Single Area Payment Scheme (SAPS). The SAPS is a flat rate area-based payment which implies that the total DP per farm are proportional to the total land used

by the farm. This causes that DPs are highly unequally distributed in Slovakia towards few large beneficiaries. As much as 25% of total DPs (*i.e.*, EUR 104.3 million) allocated in Slovakia in 2016 were paid to farms which receive more than EUR 500 thousand per farm. These farms received on average EUR 740,880 per farm in 2016. Around 22% of total DPs (EUR 94.1 million) received DPs between 300 and EUR 500 thousand or on average EUR 387,259 per farm. As much as 76% of DPs were granted to 1,096 farms (5.8% of all farms) which received more than EUR 100 thousand per farm. While the remaining 17 798 small and medium size farms (94% of all farms) received only 24% of DPs (Figure 1). These figures suggest that the introduction of measures reducing DPs to large farms (*e.g.*, as in the 2018 Commission proposal) could affect a large share of DPs in Slovakia.

**Figure 1: Distribution of DPs by beneficiary size in Slovakia in 2017**



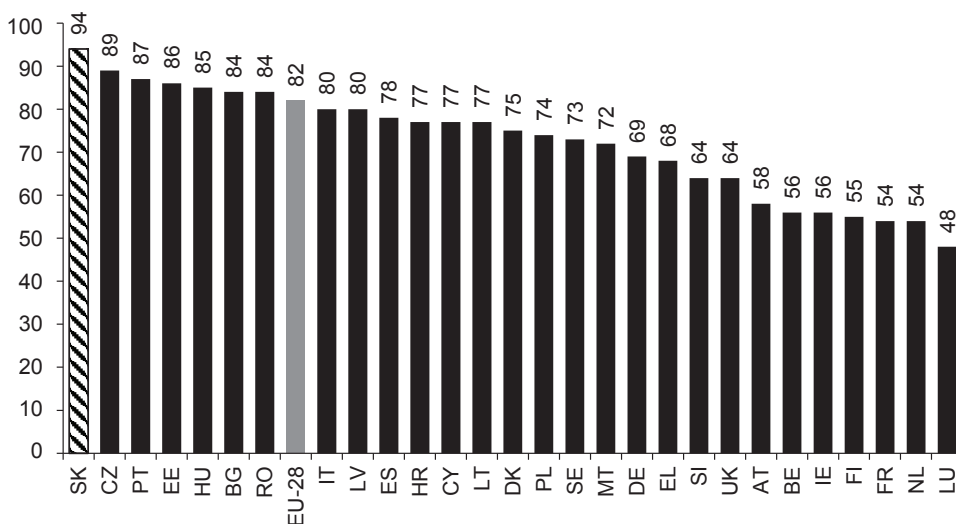
Note: The abbreviation K refers to EUR 1,000.

Source: European Commission, Statistical Factsheet 2018

Compared to other MS, Slovakia has the most unequal distribution of DPs in the EU. The top 20 percent largest beneficiaries in Slovakia receive 94% of total DPs (Figure 2). In Czechia, which also is dominated by large farms, this figure is 89% of total DPs, while in MS such as Austria, Finland and the Netherlands, which are dominated by small farms, it is less than 60%. On average in the EU, the top 20 percent largest beneficiaries receive 82% of total DPs (EC, 2017).



**Figure 2: Share of DPs received by 20% biggest beneficiaries by MS, 2015 (in %)**



Source: EC (2017)

#### 4. Capping scenarios and data

We simulate four scenarios to investigate the potential impact of different options for capping and degressivity on DP distribution in Slovakia (Table 4).

- Capping at EUR 60,000 (referred to as “Capping at EUR 60K”)
- Capping at EUR 100,000 (referred to as “Capping at EUR 100K”)
- Capping at EUR 150,000 (referred to as “Capping at EUR 150K”)
- 2018 Commission proposal (referred to as “2018 EC proposal”)

We consider all types of DPs granted to farms in Slovakia in these scenarios. The first three scenarios assume a 100% reduction of DPs for EUR 60,000, EUR 100,000 and at EUR 150,000 thresholds per farm, respectively. The last scenario simulates the 2018 Commission proposal (Table 4). For all four scenarios we consider simulations with and without subtracted labour costs from DPs before applying degressivity/capping.

The choice of the scenarios is based on the political discussions underpinning the CAP for the period 2020–2027 (Matthews, 2018a,b; EC, 2018b). Alongside the 2018 Commission proposal, we consider both less stringent capping (*i.e.*, capping at EUR 100K and capping at EUR 150K) and more stringent capping (*i.e.*, capping at EUR 60K). The aim is to investigate the potential variation of the effects across the considered capping levels.

Note that all four scenarios impose a stronger capping than both the 2011 Commission proposal and the 2013 CAP reform agreement.

**Table 4: Assumptions of simulated capping scenarios (%)**

DP thresholds per farm (EUR)	Capping at EUR 60,000	Capping at EUR 100,000	Capping at EUR 150,000	2018 Commission proposal
60,000–75,000	100	–	–	25
75,000–90,000	100	–	–	50
90,000–100,000	100	–	–	75
100,000–150,000	100	100	–	100
More than 150,000	100	100	100	100

To simulate the impacts of the scenarios, we use commercial farm database for Slovakia for 2017 available from the Slovak Ministry of Agriculture and Rural Development (referred to as Ministry of Agriculture). The farm database is a system of data collection that takes place each year and collects detailed accountancy data for commercial farms. The database covers large commercial farms (around 1,500 farms) in Slovakia.<sup>1</sup> The sample size is relatively sizable compared to total agricultural area in Slovakia. The sample of 1,500 farms (8% of all beneficiaries) used in this paper covers around 80% of agricultural area which is approximately equal to the total area commercial farms use in Slovakia (Table 3).

## 5. Simulation approach

The reduction of DPs to large farms (*i.e.*, degressivity, capping, redistributive payment) targets the subsidy level at farm level with the aim of reducing the payment size. The extent to what a particular farm is subject to these measures depends largely on farms specific characteristics particularly on its size (total land use, labour costs etc.) which requires the application of a micro approach. There is growing body of literature using (partial equilibrium) micro simulation approach to study the impacts of CAP reforms such as the impact of farms specific environmental measures introduced by the 2013 CAP reform (*e.g.*, Vanni and Cardillo, 2013; Solazzo *et al.*, 2014; Vosough-Ahmadi *et al.*, 2015; Louhichi *et al.*, 2018) or the impact of changes introduced to farm specific DPs by the past reforms (*e.g.*, Espinosa *et al.*, 2020). Most of these micro simulation

1 The database does not include individual farms which are usually small with 56 ha average farm size and use approximately 16% of agricultural area in Slovakia (Table 3). However, small farms are not affected by capping and hence they do not affect the simulated results.

approaches are based either on individual (real) farms (e.g., Buysse *et al.*, 2007; Solazzo and Pierangeli, 2016; Louhichi *et al.*, 2018) or on representative (average) farms (e.g., Gocht and Britz, 2011; Louhichi *et al.*, 2010). Although the representative farm simulation approach can capture certain extent the farm-specific policies (e.g., DP diversity), they are subject to some limitations. They cannot model policies for which implementation of a measure depends on individual farm characteristics as they are subject to significant aggregation bias (Louhichi *et al.*, 2017).

In this paper we apply the micro simulation approach based on individual (real) farms (e.g., similar to Vanni and Cardillo, 2013). We simulate the scenarios mentioned above for all the individual farms available in the commercial farm database for Slovakia for 2017. The simulation of the capping scenarios assumes fixed farm structure. We adjust only the value of DPs to all the farms in the database; the other variables (e.g., land allocation, production, prices) are kept fixed. Given that most of DPs are granted in the form of SAPS which is decoupled from production, they are not expected to significantly impact the production or land allocation between crops. The impact of SAPS (and hence also of capping scenarios) might have some production effects only in the presence of credit constraint and through its link to land by impacting land prices and total farm land use (Ciaian and Swinnen, 2009; O'Donoghue and Whitaker, 2010; Ciaian *et al.*, 2012). However, these two effects as such are not expected to significantly impact results simulated in this paper. In general, the impact of decoupled DPs on production are found in the literature to be relatively small and some studies even find negative effects (e.g., Goodwin and Mishra, 2006; Rizov *et al.*, 2013; Kazukauskas *et al.*, 2014), whereas the land allocation impacts are expected to be constrained due to the presence of relatively high transaction costs in the land markets in Slovakia.<sup>2</sup>

## 6. Results

Table 5 reports impacts of the simulated scenarios on the affected DPs by capping. The simulated results show that when labour costs are not deducted, the most strict policy option in terms of the affected DPs is the capping at EUR 60K. This is expected as this scenario imposes the lowest threshold for capping. That is, under the capping at EUR 60K, large commercial farms would lose annually around EUR 208.4 million DPs per year which represents 75% of total DPs. As expected, the simulated DP losses for large farms decrease with the capping level. They reduce to EUR 174.8 million (63% of total DPs)

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2 The land owners face significant transaction costs in Slovakia if they want to withdraw their land from the corporate farms and relocate it (e.g., bargaining costs with farm management, costs of dealing with inheritance and co-owners). The transaction costs limit adjustments of farm structure, farm land use and in general the functioning of land market (Ciaian *et al.* 2009, Ciaian and Swinnen, 2006).

and EUR 141.5 million (51%) for the capping at EUR 100K and EUR 150K, respectively. The annual DP losses of large farms for the 2018 Commission proposal are at EUR 190.1 million (68% of total DPs). They are close but lower than in the scenario assuming capping at EUR 60K. This is because under the 2018 Commission proposal DPs are gradually reduced starting at EUR 60K and capping is implemented only at EUR 100K, whereas for the latter scenario the capping is at a lower rate at EUR 60K. These results suggest that the capped DPs are relatively large amounts representing more than 50% of the total DPs implying that such CAP changes as considered in the four scenarios are likely to be politically infeasible to be accepted from the perspective of large farms' interest groups.

As expected, when labour costs are taken into account the DP losses for large farms are significantly reduced (by a factor greater than 13) due to capping. They reduce to EUR 15.4 million (5.5% of total DPs), EUR 9.7 million (3.5%) and EUR 5.8 million (2.1%) for the capping at EUR 60K, EUR 100K and EUR 150K, respectively. For the 2018 Commission proposal, DP losses to large farms represent EUR 12.2 million (4.4% of total DPs) (Table 5). As a result, this option appears to be politically more acceptable from the perspective of large farms than the option without the deduction of labour costs.

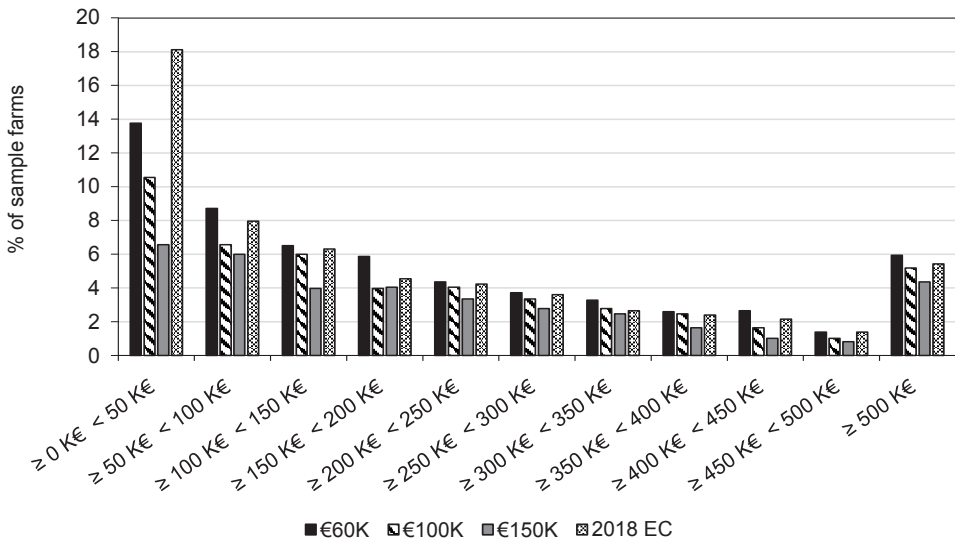
**Table 5: Simulated effects of capping of DPs in Slovakia**

		Labour costs are not deducted before applying capping				Labour costs are deducted before capping			
		EUR 60K	EUR 100K	EUR 150K	2018 EC	EUR 60K	EUR 100K	EUR 150K	2018 EC
Number of farms	Capped farms	931	753	586	931	203	105	62	203
	Not capped farms	653	831	998	653	1,381	1,479	1,522	1,381
	Share of capped farms in all sampled farms (%)	59	48	37	59	13	7	4	13
Capped amount (million EUR /year)		208.4	174.8	141.5	190.1	15.4	9.7	5.8	12.2
Capped amount in total DPs (%)		74.7	62.7	50.7	68.1	5.5	3.5	2.1	4.4
Share of DPs received by the 20% biggest (sampled) beneficiaries (%)		6	11	16	9	55	56	56	55

Notes: EUR 60K: Capping at EUR 60,000; EUR 100K: Capping at EUR 100,000; EUR 150K: Capping at EUR 150,000; 2018 EC: the 2018 Commission proposal.

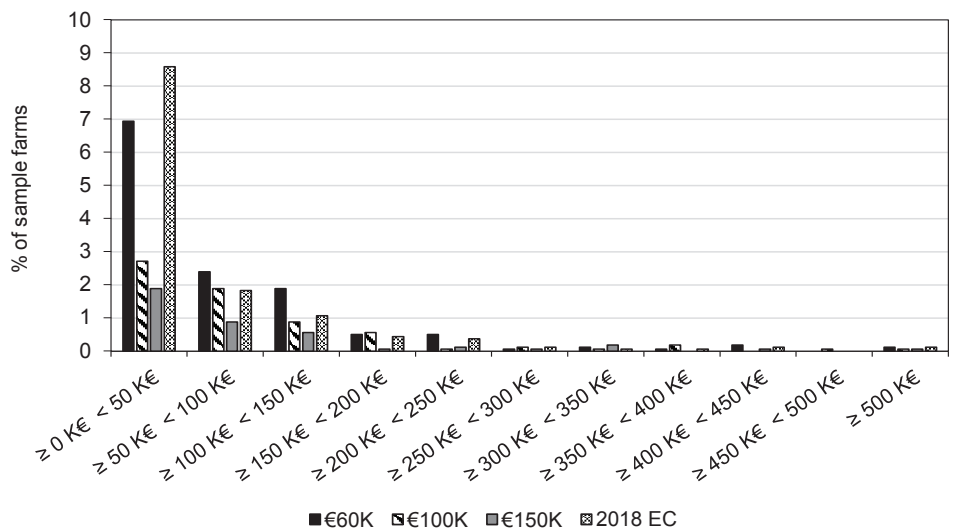
Source: MPRV (2017), own calculations

**Figure 3: The distribution of capped DPs per farm across sampled farms for all four scenarios when labour costs are not deducted**



Source: MPRV (2016), own calculations.

**Figure 4: The distribution of capped DPs per farm across sampled farms for all four scenarios when labour costs are deducted**



Source: MPRV (2016), own calculations.

As expected, the share of commercial farms affected by the capping is negatively correlated with the capping level and varies between 37% (or 586 farms) and 59% (931) of all sampled farms. The share of farms affected by capping significantly decreases when labour costs are taken into account to between 4% (62 farms) and 13% (203) of all sampled farms. In contrast, the share of DPs received by the top 20 percent largest sampled beneficiaries is positively correlated with the capping level while this share is significantly lower when labour costs are not deducted. It varies between 6% and 16% when labour costs are not deducted and between 55% and 56% when labour costs are deducted (Table 5).

Figure 3 and Figure 4 depict the distribution of capped DPs with and without considering labour costs deductions for the four simulated scenarios. When labour costs are not deducted, most capped farms lose annually DPs in the amount between EUR 0 and EUR 50K representing around 14%, 11%, 7% and 18% of the sampled farms for the capping at EUR 60K, at EUR 100K, at EUR 150K and the 2018 EC proposal, respectively (Figure 3). This is followed by the DP losses between EUR 50K and EUR 100K varying between 6% and 9% of the sampled farms across the four simulated scenarios. For the rest of DP losses considered in Figure 3, the share of capped farms is less than 7% of the sampled farms. More than EUR 200K DPs per farm are lost as many as 24%, 20%, 16% and 22% of the sampled farms for the capping at EUR 60K, at EUR 100K, at EUR 150K and the 2018 EC proposal, respectively. There is also a significant share of farms losing DPs from capping by more than EUR 500K (between 4% and 6% of the sampled farms). These are huge sums of DPs per farm and impact relatively many farms suggesting that a strong opposition from these farms is expected if such policy options are proposed or approved.

When labour costs are deducted, the vast majority of capped farms (between 3.3% and 11.5% of the sampled farms across all the scenarios) lose annually DPs less than EUR 150K per farm. Only a small share of farms lose more than EUR 200K DPs per farm (less than 1.1% of the sampled farms across all the scenarios) or more than EUR 500K DPs per farm (less than 0.2% of the sampled farms across all the scenarios) when labour costs are deducted (Figure 4). These figures are also sizable for some farms but significantly fewer farms are affected compared to the situation when labour costs are not deducted.

**Table 6: Difference in the performance of capped and not capped farms**

		Labour costs are not deducted before applying capping				Labour costs are deducted before capping			
		EUR 60K	EUR 100K	EUR 150K	2018 EC	EUR 60K	EUR 100K	EUR 150K	2018 EC
<b>Share of crop production (%)</b>	Capped	60	60	59	60	73	73	74	73
	Not capped	72	72	73	72	60	60	61	60
<b>Production in EUR per ha</b>	Capped	1,752	1,730	1,758	1,752	1,164	1,227	1,297	1,164
	Not capped	1,875	1,950	1,781	1,875	1,902	1,845	1,808	1,902
	Ratio	1.1	1.1	1.0	1.1	1.6	1.5	1.4	1.6
<b>Employment per 100 ha</b>	Capped	2.4	2.4	2.4	2.4	1.1	1.0	0.9	1.1
	Not capped	2.6	2.6	2.4	2.6	2.7	2.6	2.6	2.7
	Ratio	1.1	1.1	1.0	1.1	2.5	2.6	2.9	2.5
<b>Profits per EUR of DPs</b>	Capped	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4
	Not capped	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
	Ratio	1.4	1.4	1.4	1.4	1.5	1.5	1.2	1.5
<b>Equity (thousand EUR per farm)</b>	Capped	1,621	1,855	2,240	1,621	981	1,384	1,499	981
	Not capped	280	355	380	280	1,085	1,049	1,054	1,085
	Ratio	0.2	0.2	0.2	0.2	1.1	0.8	0.7	1.1
<b>Asset value (thousand EUR per farm)</b>	Capped	3,420	3,917	4,651	3,420	2,429	3,536	4,080	2,429
	Not capped	589	747	847	589	2,236	2,170	2,186	2,236
	Ratio	0.2	0.2	0.2	0.2	0.9	0.6	0.5	0.9
<b>Sales (thousand EUR per farm)</b>	Capped	2,051	2,366	2,822	2,051	1,200	1,764	2,108	1,200
	Not capped	233	339	410	233	1,322	1,274	1,274	1,322
	Ratio	0.1	0.1	0.1	0.1	1.1	0.7	0.6	1.1
<b>Total profits per farm (thousand EUR per farm)</b>	Capped	162	184	214	162	113	170	206	113
	Not capped	16.0	26.4	34.0	16.0	97.9	94.5	95.0	97.9
	Ratio	0.10	0.01	0.16	0.10	0.87	0.56	0.46	0.87
<b>Number of owners (per farm)</b>	Capped	44	51	58	44	12	18	21	12
	Not capped	1.5	4.8	8.1	1.5	29	27	27	29
	Ratio	0.0	0.1	0.1	0.0	2.5	1.5	1.3	2.5
<b>UAA (ha per farm)</b>	Capped	1,156	1,357	1,603	1,156	1,038	1,458	1,639	1,038
	Not capped	86	134	194	86	670	665	680	670
	Ratio	0.1	0.1	0.1	0.1	0.6	0.5	0.4	0.6

Notes: EUR 60K: capping at EUR 60,000; EUR 100K: capping at EUR 100,000; EUR 150K: capping at EUR 150,000; 2018 EC: the 2018 Commission proposal; Capped: Capped farms; Not capped: Not capped farms; Ratio: Ratio of not capped to capped farms.

Source: MPRV (2017), own calculations

As Table 6 shows there are significant differences in performance between affected (capped farms) and not affected (non-capped) farms. In general, farms that would be affected by capping usually cultivate a much larger area, have higher assets, equity, sales, and total profits, but have fewer employees as well as lower production per hectare and lower profits per EUR 1 of DPs compared to farms that would not be affected by capping. For example, compared to non-capped farms, capped farms have lower agricultural production per hectare (between 1% and 63%), lower employment per 100 hectare (between 0% and 190%) and profits per EUR 1 of DPs (between 20% and 50%). This is valid for both situations when labour costs are deducted or not when calculating capping amounts. Further, potentially affected farms by capping have a greater number of owners than not affected farms when labour costs are not deducted. However, the reverse is valid when labour costs are deducted: former farms have a lower number of owners than the latter farms.

In general, non-capped farms specialize in production of more labour-intensive commodities like fruits and vegetables and permanent crops, whereas capped farms tend to specialise in more capital intensive commodities such as cereals and oilseeds. As Table 6 shows, capped farms tend to have a lower share of animal production in total production than not capped farms when labour costs are not taken into account. The reverse is valid for the situation when labour costs are deducted.

## 7. Political economy context of capping in Slovakia

Given that the objectives of the Slovak agricultural policy is to stimulate agricultural productivity growth, agricultural employment, animal production, special plant production (*e.g.*, fruits and vegetables) and rural development (MoARD, 2015), the capping of DPs might contribute to certain extent in achieving some of these policy objectives or to make the policy more efficient. As shown above, this is because potentially affected farms by the capping are those that contribute less to achieving the policy objectives compared to not affected farms (*e.g.*, in terms of employment or per hectare productivity).<sup>3</sup> The saved funds from the capping could be used to enhance the policy priorities such as supporting smaller farms, specific production sectors or rural development.

On the contrary to these results, the Slovak revealed policy position shows a limited or no support for capping of DPs (MoARD 2012). There are three main reasons for this position of the Slovak government. The first reason is the productivity argument supported

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3 In other words, without capping many farms receive a substantial share of DPs but contribute less to employment and productivity. When removing a part of DPs through the capping, the potentially affected farms are those with lower performance implying a potential improvement in the efficiency of the Slovak agricultural policy.



by the fact that the productivity of farms might partially depend on DPs. The conceptual and empirical literature supporting this view is primarily linked to the imperfect credit access widely argued to be valid for the agricultural sector (*e.g.*, Janda, 2003; Blancard *et al.*, 2006; Ciaian and Swinnen 2009; Huttel *et al.*, 2010; Curtiss *et al.*, 2012). DPs may alleviate farm credit constraint (especially SAPS which is decoupled from production) by directly providing access to liquidity or indirectly by increasing farms' credit worthiness or their use as collateral (Ciaian and Swinnen 2009; Latruffe *et al.*, 2010; O'Donoghue and Whitaker, 2010; Ciaian *et al.*, 2012). This ultimately may lead to a positive relationship between farm productivity and DPs. However, the application of capping reduces DP to large farms and thus could lead to a reduction of the overall farm productivity. This effect is expected to be stronger for small farms which are expected to have more difficult access to capital than large farms (*e.g.*, Petrick 2004; Sarris *et al.* 2004). However, large farms could also be affected to a certain extent.

The second reason is the political economy argument linked to the lobby pressure from the interest groups (Becker, 1983; Swinnen 2015). The previous section showed that (would-be capped) large farms could lose significant amount of money from capping which provides them a strong incentive for lobbying for the implementation of the CAP in a manner which maximizes their gains (Table 5). In comparison to other interest groups (*e.g.*, tax payers, consumers, environmental groups, small farms), they are relatively small in numbers and thus have relatively low coordination and communication costs and can more effectively control the free riding problem. In contrast, small farms are less effective in lobbying and thus affect to a lesser extent the CAP implementation because they face higher coordination and communication costs due to their large population size, geographic dispersion, lower economic relevance<sup>4</sup> and they face greater free riding problem. Regarding other interest groups, they are not always affected (*e.g.*, taxpayers) because usually capping implies only redistribution of the support between beneficiaries within the agricultural sector or relocation of support to other CAP policy instruments and does not necessarily leads to CAP budget reduction (which may ultimately reduce taxes). Only environmental groups might be concerned as they may pressure for funds obtained from capping to be used for environmental purposes. However, environmental groups are relatively weak and not very active in Slovakia.

Finally, the third reason of Slovakia's position against capping is the argument related to the low economic distortions induced by DPs. As mentioned in previous sections, most DPs are granted in the form of SAPS which are decoupled from production.

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4 They are smaller in terms of their size (56 ha per farm as compared to 519 ha per farm for corporate farms) and in terms of the amount of land they control (16% of UAA as compared to 80% of UAA for corporate farms) (Table 3).

As a result, SAPS payments create low deadweight costs as they are lump sum transfers.<sup>5</sup> They, however, create deadweight costs in taxation. However, Slovakia is a net beneficiary of the CAP and a large share of DPs in Slovakia are financed by foreign taxpayers rather than Slovak taxpayers implying a limited opposition against CAP from this interest group.<sup>6</sup> This situation generates rather low opposition from domestic taxpayers against DPs or how they are distributed among farms.

It seems that the above political pressures were materialised with regards to the final agreement of the 2013 CAP reform. The opposition to the more ambitious initial proposal of the Commission from 2011 (Table 1) was “successful” as the interest of large farms were accommodated in the adopted less ambitious final agreement on the 2013 CAP reform (MoARD 2012). That is, the final agreement gave flexibility to MS in choosing how they want to implement capping. MS could opt for degressivity of a minimum of 5% above the EUR 150,000 threshold. Higher rates of degressivity could be applied by MS (up to 100%) but this was made optional. Further, instead of degressivity and capping MS could use a redistributive payment which aims to transfer support from large farms to small farms. Ultimately, Slovakia’s choice on the implementation of the 2013 CAP reform reflects the preferences of large farmers. Slovakia decided to apply the minimum degressivity (*i.e.*, 5% above the EUR 150,000 threshold) and no capping of DPs, while the redistributive payment was not applied. Although small farmers could have benefited from the redistributive payment, they were unable to affect the final decision reached by the Ministry to introduce this payment.

The current position against capping is expected to be maintained also in the future in Slovakia; particularly with respect to the negotiation of the CAP for the period 2021–2027. There are not observed underlying developments that would change the status-quo. In fact, the official position of the Slovak government on the 2018 Commission proposal for the CAP for 2021–2027 states that Slovakia does not support capping of DPs and that the redistributive payments should be exempt from capping. Slovak government called for the voluntary capping and MS specific capping by taking in consideration the structure of the farming sector across EU (MoARD 2018; Slovak Spectator 2018). Similar position on the 2018 Commission proposal is represented by the Slovak Chamber of Agriculture and Food who reject mandatory capping and degressivity of DPs (Štefček 2018).

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5 In contrast, as argued above, DPs might lead to agricultural productivity increase.

6 This is reinforced by the fact that when a country is a net beneficiary of the CAP, politically optimal level of support is greater when the country is within the CAP as compared to a situation when the country would be outside the CAP (*e.g.*, outside EU) with agricultural policy fully funded from the national sources (Pokrivcak *et al.* 2001).

## 8. Conclusions

Direct payments are a main support instrument applied within the CAP. Since its introduction there were several attempts to reduce DPs to large farms based on the ground that they are unnecessary given that these farms are able to generate sufficient income. Moreover, many voters often perceive unfair granting DPs to large farms in favour of their transfer to better uses such as for rural development and/or the provision of public goods. On the other hand, Member States with dominant large farms strongly oppose the reduction of DPs to large farms. This is particularly the case of Slovakia, where large farms dominate the farm structure representing around 80% of the total land use.

The objective of this paper is to analyse the implications of DP capping for Slovakia as well as to discuss the political economy background explaining the political preferences in Slovakia in the context of the ongoing discussions and negotiations about the CAP for the period 2020–2027. The analyses are based on the micro simulations aiming to estimate the affected DP amounts under different scenarios of DP capping using the commercial farm database from Slovakia for 2017. Four scenarios are simulated (with and without subtracted labour costs): (i) capping at EUR 60,000, (ii) capping at EUR 100,000, (iii) capping at EUR 150,000 and (iv) the 2018 Commission proposal.

The simulation results show that the capped DPs, which are estimated potential losses to large farms, are relatively significant amounts when labour costs are not subtracted representing more than 50% of the total DPs in Slovakia. Annually they vary between EUR 208.4 million and EUR 141.5 million across the simulated scenarios. The annual DP losses to large farms, if the 2018 Commission proposal would be approved, are at EUR 190.1 million (68% of total DPs). Up to between 16% and 24% of the sampled commercial farms would lose more than EUR 200K DPs per farm across the simulated four scenarios. Also a significant share of farms (between 4% and 6% of the sampled farms) would lose DPs from capping by more than EUR 500K per farm.

However, when the labour costs are subtracted the capped DPs are significantly reduced by a factor greater than 13. They reduce to between EUR 5.8 million and EUR 15.4 million (between 2.1% and 5.5% of total DPs). Under the 2018 Commission proposal the losses to large farms would be at EUR 12.2 million (4.4% of total DPs). With the labour costs subtracted, only a small share of farms would lose more than EUR 200K DPs per farm (less than 1.1% of the sampled farms across all the scenarios) or more than EUR 500K DPs per farm (less than 0.2% of the sampled farms across all the scenarios).

From a policy efficiency point of view it might be rational to reduce DPs to large farms because potentially affected large farms in Slovakia show lower performance and lower contributions to the agricultural policy objectives compared to unaffected farms by the DP

capping. For example, the potentially affected large farms have fewer employees, lower profits, and lower production per hectare than unaffected farms.

However, contrary to this evidence, Slovakia is strongly opposed to reduction of DPs to large farms. There are three main reasons for this position of Slovakia: the productivity argument, the political economy argument linked to the lobby pressure from large farms and low economic distortions caused by DPs.

The first productivity argument is link to the evidence that there might be a positive relationship between farm productivity and DPs through credit channel by alleviating credit constraint in the agricultural sector. Since the capping reduces DP to large farms, it could lead to reduction of the overall farm productivity. Second, large farms are politically better organised and have relatively low coordination and communication costs compared to other interest groups (e.g., tax payers, consumers, environmental groups, small farms) which makes them an effective interest group able to influence the Slovak government position on capping in their favour. Finally, most DPs are granted in the form of support decoupled from production. This implies that DPs create low deadweight costs as they are lump sum transfers, while Slovakia is a net beneficiary of the CAP (and DPs) thus inflicting relatively low costs on Slovak taxpayers.

It seems that this political-economic preference of Slovakia was already materialised in the past particularly with respect to the final agreement of the 2013 CAP reform. The opposition to the more ambitious initial proposal of the Commission from 2011 was significantly watered down by adopting lower capping rates and providing flexibility to MS in choosing how they want to implement it. This position against capping is expected to be maintained also for the future CAP reforms in Slovakia; particularly with respect to the negotiation of the CAP for the period 2021–2027. As a result, similar to the 2013 CAP reform, the relatively ambitious 2018 Commission proposal is expected to be significantly adjusted downward with respect to capping. This could be done either by reducing capping rates (including allowing deduction of labour costs from DPs) and/or by allowing flexibly of its implementation across MS.

## References

- Becker, G. (1983). A Theory of Competition Among Pressure Groups for Political Influence. *Quarterly Journal of Economics*, 8(3), 371–400, <https://doi.org/10.2307/1886017>
- Blancard, S., Boussemart, J. P., Briec, W., et al. (2006). Short- and Long-run Credit Constraints in French Agriculture: A Directional Distance Function Framework Using Expenditure Constrained Profit Functions. *American Journal of Agricultural Economics*, 88(2), 351–364, <https://doi.org/10.1111/j.1467-8276.2006.00863.x>

- Buyse, J., Van Huylenbroeck, G., Lauwers, L. (2007). Normative, Positive and Econometric Mathematical Programming as Tools for Incorporation of Multifunctionality in Agricultural Policy Modelling. *Agriculture, Ecosystems and Environment*, 120(1), 70–81, <https://doi.org/10.1016/j.agee.2006.03.035>
- Ciaian, P., Kancs, D., Swinnen, J. F. M. (2014). The Impact of the 2013 Reform of the Common Agricultural Policy on Land Capitalisation in the European Union. *Applied Economic Perspectives and Policy*, 36(4), 643–673, <https://doi.org/10.1093/aep/ppy016>
- Ciaian, P., Kancs, D., Espinosa, M. (2018). The Impact of the 2013 CAP Reform on the Decoupled Payments Capitalisation into Land Values. *Journal of Agricultural Economics*, 69(2), 306–337, <https://doi.org/10.1111/1477-9552.12253>
- Ciaian, P., Pokrivcak, J., Drabik, D. (2009). Transaction Costs, Product Specialisation and Farm Structure in Central and Eastern Europe. *Post-Communist Economies*, 21(2), 191–201, <https://doi.org/10.1080/14631370902778526>
- Ciaian, P., Pokrivcak, J., Szegenyova, K. (2012). Do Agricultural Subsidies Crowd Out or Stimulate Rural Credit Market Institutions? The Case of EU CAP. *European Integration Online Papers*, 16, 1–30, <https://doi.org/10.1695/2012015>
- Ciaian, P., Swinnen, J. F. M. (2009). Credit Market Imperfections and the Distribution of Policy Rents. *American Journal of Agricultural Economics*, 91(4), 1124–1139, <https://doi.org/10.1111/j.1467-8276.2009.01311.x>
- Cionga, C., Lucian, L., Hubbard, C. (2008). *The Impacts of Direct Payments on Romanian Farm Income: Who Benefits from The CAP*. 109<sup>th</sup> Seminar, November 20–21, 2008. Viterbo, Italy: European Association of Agricultural Economists, <https://doi.org/10.22004/ag.econ.44840>
- Crombez, C., Swinnen, J. F. M. (2011). *Political Institutions and Public Policy: The Co-Decision Procedure in the European Union and the Reform of the Common Agricultural Policy*. LICOS – Centre for Institutions and Economic Performance. Leuven Discussion Paper 286/2011.
- Curtiss, J., Ratering, T., Medonos, T. (2012). *Ownership and Investment Behaviour in Transition Countries: A Case Study of Collective and Corporate Farms in the Czech Republic*. Centre for European Policy Studies. Brussels Factor Markets Working Paper No. 17.
- Espinosa, M., Louhichi, K., Perni, A., et al. (2020). EU-Wide Impacts of the 2013 CAP Direct Payments Reform: A Farm-Level Analysis. *Applied Economic Perspectives and Policy*, Forthcoming, <https://doi.org/10.1093/aep/ppz021>
- European Commission (EC) (2008). *Impact Assessment, SEC(2008) 1885*. Brussels: European Commission.
- European Commission (EC) (2011a). *Proposal for a Regulation of the European Parliament and of the Establishing Rules for Direct Payments to Farmers under Support Schemes within the Framework of the Common Agricultural Policy*. Brussels: European Commission.
- European Commission (EC) (2011b). *Impact Assessment. Common Agricultural Policy towards 2020*. Brussels Commission Staff Working Paper – Annex 3. SEC(2011) 1153 final/2.

- European Commission (EC) (2017). *Report on the Distribution of Direct Payments to Agricultural Producers (Financial Year 2016)*. Brussels: European Commission.
- European Commission (EC) (2018a). *Proposal for a Regulation of the European Parliament and of the Council Establishing Rules on Support for Strategic Plans to be Drawn Up by Member States under the Common Agricultural Policy (CAP Strategic Plans) and Financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD)*. COM/2018/392, Brussels: European Commission.
- European Commission (EC) (2018b). *Impact Assessment, SWD(2018) 301*. Brussels: European Commission.
- European Union (EU) (2013). Regulation No. 1307/2013 of European Parliament and the Council Establishing Rules for Direct Payments to Farmers under Support Schemes within the Framework of the Common Agricultural Policy. *Official Journal of the European Union*, L 347/608.
- Floyd, J. E. (1965). The Effects of Farm Price Supports on the Returns to Land and Labor in Agriculture. *Journal of Political Economy*, 73(2), 148–158, <https://doi.org/10.1086/259003>
- Gardner, B. L. (1987). *The Economics of Agricultural Policies*. New York: McGraw-Hill, Companies.
- Gocht, A., Britz, W. (2011). EU-wide Farm Type Supply Models in CAPRI – How to Consistently Disaggregate Sector Models into Farm Type Models. *Journal of Policy Modeling*, 33(1), 146–167, <https://doi.org/10.1016/j.jpolmod.2010.10.006>
- Goodwin, B. K., Mishra, A. K. (2006). Are ‘Decoupled’ Farm Payments Really Decoupled? An Empirical Evaluation. *American Journal of Agricultural Economics*, 88(1), 73–89, <https://doi.org/10.1111/j.1467-8276.2006.00839.x>
- Huttel, S., Mushoff, O., Odening, M. (2010). Investment Reluctance: Irreversibility or Imperfect Capital Markets? *European Review of Agricultural Economics*, 37(1), 51–76, <https://doi.org/10.1093/erae/jbp046>
- Janda, K. (2003). Credit Guarantees in a Credit Market with Adverse Selection. *Prague Economic Papers*, 12(4), 331–349, <https://doi.org/10.18267/j.pep.225>
- Kazukauskas, A., Newman, C., Sauer, J. (2014). The Impact of Decoupled Subsidies on Productivity in Agriculture: A Cross-country Analysis Using Micro Data. *Agricultural Economics*, 45(3), 327–336, <https://doi.org/10.1111/agec.12068>
- Kilian, S., Salhofer, K. (2008). Single Payments of the CAP: Where Do the Rents Go? *Agricultural Economics Review*, 9(2), 96–106, <https://doi.org/10.22004/ag.econ.178238>
- Kirwan, B. E. (2007). The Distribution of U.S. Agricultural Subsidies. *SSRN Electronic Journal*, 1–37, <https://doi.org/10.2139/ssrn.1117342>
- Kirwan, B. (2009). The Incidence of U.S. Agricultural Subsidies on Farmland Rental Rates. *Journal of Political Economy*, 117(1), 138–164, <https://doi.org/10.1086/598688>
- Latruffe, L., Davidova, S., Douarin, E., et al. (2010). Farm Expansion in Lithuania after Accession to the EU: The Role of CAP Payments in Alleviating Potential Credit Constraints. *Europe-Asia Studies*, 62(2), 351–365, <https://doi.org/10.1080/09668130903506862>

- Louhichi, K., Ciaian, P., Espinosa, M., L., *et al.* (2017). Does the Crop Diversification Measure Impact EU Farmers' Decisions? An Assessment Using an Individual Farm Model for CAP Analysis (IFM-CAP). *Land Use Policy*, 66, 250–264, <https://doi.org/10.1016/j.landusepol.2017.04.010>
- Louhichi, K., Ciaian, P., Espinosa, M., *et al.* (2018). Economic Impacts of CAP Greening: Application of an EU-wide Individual Farm Model for CAP Analysis (IFM-CAP). *European Review of Agricultural Economics*, 45(2), 205–238, <https://doi.org/10.1093/erae/jbx029>
- Louhichi, K., Kanellopoulos, A., Janssen, S., *et al.* (2010). FSSIM, a Bio-economic Farm Model for Simulating the Response of EU Farming Systems to Agricultural and Environmental Policies. *Agricultural Systems*, 103(8), 585–597, <https://doi.org/10.1016/j.agry.2010.06.006>
- MacDonald, J., Hoppe, R., Banker, D. (2006). *Growing Farm Size and the Distribution of Farm Payments*. Economic Research Service, U.S. Department of Agriculture. Washington, D.C. Economic Brief No. 6.
- Matthews, A. (2018a). Why Capping will be a Mirage? *CAP Reform*. Available at: <http://capreform.eu/why-capping-will-be-a-mirage/>
- Matthews, A. (2018b). More on Capping Direct Payments. *CAP Reform*. Available at: <http://capreform.eu/more-on-capping-direct-payments-2/>
- Michalek, J., Ciaian, P., Kancs, D. (2014). Capitalization of the Single Payment Scheme into Land Value: Generalized Propensity Score Evidence from the European Union. *Land Economics*, 90(2), 260–289, <https://doi.org/10.3368/le.90.2.260>
- Ministry of Agriculture and Rural Development of the Slovak Republic (2012). *Európskej komisii už dotácie pre veľké farmy neprekážajú*. Bratislava: Ministry of Agriculture and Rural Development of the Slovak Republic. Available at: <http://www.mpsr.sk/index.php?navID=102&id=7018&start>
- Ministry of Agriculture and Rural Development of the Slovak Republic (2015). *Slovakia – Rural Development Programme*.
- Ministry of Agriculture and Rural Development of the Slovak Republic (2016, 2017). *Informačné listy*. Bratislava: Ministry of Agriculture and Rural Development of the Slovak Republic.
- Ministry of Agriculture and Rural Development of the Slovak Republic (2018). *Ministri poľnohospodárstva krajín V4+4 rokovali o budúcnosti spoločnej poľnohospodárskej politiky*. Bratislava: Ministry of Agriculture and Rural Development of the Slovak Republic. Available at: <http://www.mpsr.sk/index.php?slD=43&id=12525>
- O'Donoghue, E. J., Whitaker, J. B. (2010). Do Direct Payments Distort Producers' Decisions? An Examination of the Farm Security and Rural Investment Act of 2002. *Applied Economic Perspectives and Policy*, (32)1, 170–193, <https://doi.org/10.1093/aep/p/p005>
- OJEU (2018). Budgets: Definitive Adoption (EU, Euratom) 2018/251 of the European Union's General Budget for the Financial Year 2018. *Official Journal of the European Union*, L 57/1.
- O'Neill, S., Hanrahan, K. (2016). The Capitalization of Coupled and Decoupled CAP Payments into Land Rental Rates. *Agricultural Economics*, 47(3), 285–294, <https://doi.org/10.1111/agec.12229>



- Patton, M., Kostov, P., McErlean, S. A., et al. (2008). Assessing the Influence of Direct Payments on the Rental Value of Agricultural Land. *Food Policy*, 33(5), 397–405, <https://doi.org/10.1016/j.foodpol.2008.01.001>
- Petrick, M. (2004). Farm Investment, Credit Rationing, and Governmentally Promoted Credit Access in Poland: a Cross-sectional Analysis. *Food Policy*, 29(3), 275–294, <https://doi.org/10.1016/j.foodpol.2004.05.002>
- Pokrivcak, J., de Gorter, H., Swinnen, J. F. M. (2001). Does a “Restaurant Table Effect” Exist with the EU’s Common Agricultural Policy? A Note. *Journal of Agricultural Economics*, 52(3), 111–113, <https://doi.org/10.1111/j.1477-9552.2001.tb00942.x>
- Rizov, M., Pokrivcak, J., Ciaian, P. (2013). CAP Subsidies and Productivity of the EU Farms. *Journal of Agricultural Economics*, 64(3), 537–557, <https://doi.org/10.1111/1477-9552.12030>
- Salhofer, K., Schmid, E. (2004). Distributive Leakages of Agricultural Support: Some Empirical Evidence. *Agricultural Economics*, 30(1), 51–63, [https://doi.org/10.1016/S0169-5150\(03\)00080-X](https://doi.org/10.1016/S0169-5150(03)00080-X)
- Sarris, A., Savastano, S., Tritten, C. (2004). Factor Market Imperfections and Polarization of Agrarian Structures in Central and Eastern Europe, in Petrick, M., Weingarten, P., eds., *The Role of Agriculture in Central and Eastern European Rural Development: Engine of Change or Social Buffer?* Halle (Saale): Leibniz-Institut für Agrarentwicklung in Transformationsökonomien (IAMO), pp. 84–100.
- Slovak Spectator (2018). New Joint Agriculture Policy Proposal Disappointed Slovakia. *Slovak Spectator*. [2018-06-06] Available at: <https://spectator.sme.sk/c/20843653/ministry-joint-agriculture-policy-after-2020-is-a-disappointment-for-slovakia.html>
- Solazzo, R., Donati, M., Arfini, F., et al. (2014). A PMP Model for the Impact Assessment of the Common Agricultural Policy Reform 2014–2020 on the Italian Tomato Sector. *New Medit*, 2, 9–19.
- Solazzo, R., Pierangeli, F. (2016). How does Greening Affect Farm Behaviour? Tradeoff between Commitments and Sanctions in the Northern Italy. *Agricultural Systems*, 149, 88–98, <https://doi.org/10.1016/j.agsy.2016.07.013>
- Swinnen, J. F. M. (2015). *The Political Economy of the 2014–2020 Common Agricultural Policy an Imperfect Storm*. London: Rowman & Littlefield International.
- Štefček, M. (2018). *Position of SPPK on Legislative Proposals of 1 June 2018*. International Conference ‘Common Agricultural Policy post 2020’, Vilnius, July 4, 2018. Available at: [https://www.zur.lt/wp-content/uploads/2018/07/Slovakijos%C5%BD%C5%AAMR\\_2018\\_07\\_04.pdf](https://www.zur.lt/wp-content/uploads/2018/07/Slovakijos%C5%BD%C5%AAMR_2018_07_04.pdf)
- Vanni, F., Cardillo, C. (2013). The Effects of CAP Greening on Italian Agriculture. *Politica Agricola Internazionale – International Agricultural Policy*, 3, 7–21, <https://doi.org/10.22004/ag.econ.169845>
- Vosough-Ahmadi, B., Shrestha, S., Thomson, S. G., et al. (2015). Impacts of Greening Measures and Flat Rate Regional Payments of the Common Agricultural Policy on Scottish Beef and Sheep Farms. *Journal of Agricultural Science*, 153(4), 676–688, <https://doi.org/10.1017/S0021859614001221>