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Turkey's accession to the EU: what will the Common Agricultural Policy cost?

Der EU-Beitritt der Türkei: Wie teuer wird die Gemeinsame Agrarpolitik?

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Abstract

At the EU Council in December 2004, European heads of governments decided to start EU accession negotiations with Turkey in October 2005. Various recent analyses assess the cost of applying the Common Agricultural Policy of the EU (CAP) to Turkey; most of them without taking into account the specific structure of the agricultural sector in Turkey, which would determine the receipts from EU funds. This paper assesses potential budgetary effects resulting from the application of the CAP to Turkey. The analysis is based on macroeconomic projections, equilibrium modelling of the Turkish agricultural sector, and projections of the future development of the CAP. It is found that total EU budgetary outlays for the application of the CAP to Turkey could total about € 3.5 billion in 2015 and rise to € 5.4 billion in 2025 due to full phasing in of direct payments and rural development policies. The resulting net transfer under the CAP to Turkey would be about € 1.7 billion in 2015 and could increase to € 2.9 billion in 2025. Such sums take a backseat to projected transfers under the structural policy of the EU and the overall political project of including Turkey in the EU.

Key words

Turkey; EU accession; CAP; budgetary effects

Zusammenfassung

Im Dezember 2004 hat der Europäische Rat beschlossen, zum Oktober 2005 Beitrittsverhandlungen mit der Türkei aufzunehmen. Es wird allerdings sowohl von europäischer wie auch von türkischer Seite ein langer Verhandlungszeitraum und eine EU-Vollmitgliedschaft der Türkei nicht vor 2014 erwartet. Die Diskussion über die aus der Gemeinsamen Agrarpolitik der EU (GAP) resultierenden Budgetwirkungen eines EU-Beitritts basiert bisher meist auf Schätzungen, die die spezifische Struktur des türkischen Agrarsektors sowie zukünftige Änderungen der GAP bis zu einem Beitritt der Türkei kaum einbeziehen. In diesem Beitrag werden die aus der GAP resultierenden Budgetwirkungen eines potentiellen EU-Beitritts der Türkei im Jahr 2015 auf Grundlage von der Literatur entnommenen makroökonomischen Projektionen, Abschätzungen zukünftiger Änderungen der GAP sowie einem Gleichgewichtsmodell des türkischen Agrarsektors analysiert. Im Ergebnis ergeben sich im Rahmen der GAP EU-Zahlungen an die Türkei von insgesamt 3,5 Mrd. € im Jahr 2015, die nach einer schrittweisen Einführung des vollen Umfangs der GAP im Jahre 2025 etwa 5.4 Mrd. € betragen. Der sich aus der GAP potentiell ergebende Netto-Transfer aus dem EU-Budget an die Türkei beträgt 1,7 Mrd. € im Jahr 2015 und steigt bis 2025 auf etwa 2,9 Mrd. € an. Im Verhältnis zu den sich voraussichtlich aus der europäischen Strukturpolitik ergebenden Transfers und dem politischen Gesamtvorhaben einer Integration der Türkei sind diese Summen eher gering.

Schlüsselwörter

Türkei; EU-Beitritt; Gemeinsame Agrarpolitik; Budgetwirkungen

1. Introduction

At the EU Council in December 2004, European heads of governments decided to start EU accession negotiations with Turkey in October 2005. This decision was prepared by a corresponding recommendation of the EUROPEAN COMMISSION (2004a) from October 6. Nonetheless, a long period of accession negotiations is expected and most observers believe that accession will not take place before 2014, which is the first year of the Financial Perspective by the EU which begins in 2014. In the EU, discussion of Turkish membership is controversial for its geopolitical aspects, security policies, the compatibility of political institutions, income divergence and potential labor mobility, and the budgetary consequences for current EU member states which would mainly result from EU structural and cohesion policies. The conflict between depth and breadth of the European integration process often dominates the discussion, and the assessment of consequences arising from this conflict differs widely, as do positions with respect to Turkish EU membership (see for example QUAISSER and REPPEGATHER, 2004; JÄGER and STEWART, 2004; FLAM, 2003; and QUAISSER and WOOD, 2004). Compared to these aspects, the consequences of applying the Common Agricultural Policy (CAP) of the EU to Turkey is not at the forefront of the discussion. Aspects of agricultural market integration, budgetary consequences of applying the CAP to Turkey, and necessary adjustments of the CAP as well as Turkish agricultural policies in case of accession are, however, part of the controversial debate.

For many products, agricultural markets between Turkey and the EU are already integrated to a large extent in the framework of mutual preferential market access regimes. Yet markets for some products, like cereals, beef and dairy products, are more highly protected in Turkey than in the EU. Recent simulation analyses (GRETHE, 2004a, 2004b; ÇAKMAK and KASNAKOGLU, 2002) show that Turkey would become a major importer of animal products in case of full market integration with the EU and would thus contribute to less market pressure for these products for which the EU is a net exporter. It is only for a few selected fresh and processed fruit and vegetable products that Turkey is projected to increase its exports to the EU significantly in case of full market integration.

Budgetary concerns with respect to Turkish accession are comprehensible, if one looks at basic indicators of the Turkish economy compared to the EU as presented in table 1.

Table 1. Basic economic indicators in Turkey and the EU-25

	EU-25	NMS-10	Bulgaria & Romania	Turkey	Turkey/ EU-25
Population (mill.) (2002)	453.0 ^b	74.6 ^b	29.7 ^b	70.3 ^a	15.5%
GDP (2003, bill. €)^b	9 738.9	437.1	68.1	212.3	2.2%
GDP_{PPS} per capita (2003, €/year)^b	23 270	11 302	6 331	5 750	24.7%
GDP of the agr. sector (2003, bill. €)	194.8	15.7	7.8	23.6	16.1%
As a share in total GDP	2.0% ^g	3.6% ^g	11.5% ^g	11.1% ^e	
Agr. production value (2001/02, bill. €)	282.8 ^d	27.1 ^d	13.9 ^d	25.6 ^e	13.3%
Share of employment in agriculture (EU 2002, Turkey 2002/03)	5.4% ^d	13.4% ^g	32.3% ^g	34.4% ^f	

Sources: ^aFAO (2004), ^bEUROSTAT (2004), ^cSIS (2004a), ^dEUROPEAN COMMISSION (2004b), ^eSIS (2003), ^fSIS (2004b), ^gEUROPEAN COMMISSION (2004c), own calculations

Table 1 shows that Turkey is a large country in terms of population, and has a large agricultural sector, measured by production value as well as agricultural GDP. In terms of population size and agricultural production value Turkey is comparable to the 10 new member states (NMS-10). With regard to the role of the agricultural sector in the economy and of per capita income, Turkey equals Bulgaria and Romania in shares of agriculture in employment and GDP, and per capita GDP in purchasing power standard (GDP_{PPS}). Compared to the EU-25, the Turkish economy is small; total Turkish GDP is only slightly more than 2% of that of the EU-25. Based on this data Turkey would become a significant net recipient under current EU policies because of high transfers under the EU structural and agricultural policies and a low contribution to the EU budget due to a low GDP. Yet Turkey will not accede today, nor in the immediate future. Until accession, many determining factors such as macroeconomic variables and the design of the CAP will change.

Even so, the public discussion on the cost of accession has started: a widely cited study of QUAISSER and REPPEGATHER (2004) estimates total EU expenditure for applying the current CAP to Turkey at € 4.4 to 5.4 billion. This estimate is based on a regression analysis applied to the EU-25 sample with agricultural value added and agricultural production value in the individual member states as explanatory variables for EU budgetary outlays for full implementation of the CAP. Such an approach, of course, does not account for the specific production structure of Turkey, nor does it account for the variables which play a major role in the allocation of rural development funds, which are agricultural area, agricultural employment, and per capita income. In addition, it seems unlikely that the current level of direct payments to agricultural producers in the EU, which accounts for more than 60% of budgetary outlays for the CAP, will survive until the year 2013, which QUAISSER and REPPEGATHER take as a potential accession year. DERVIS et al. (2004a) estimate the cost of the CAP applied to Turkey in 2015 at about € 8 billion, based on the

assumption that Turkey's GDP at that time would be around € 400 billion with a 10% share from the agricultural sector. Therefore, if the current EU-15 level of budgetary outlays for the CAP relative to agricultural GDP of roughly 20% were maintained, CAP outlays for Turkey would be 20% of € 40 billion, i.e. € 8 billion. This is considered an upper bound as no changes in the CAP until 2015 are taken into account. FLAM (2003) estimates annual EU budgetary outlays for Turkey as an EU member, including structural policies, at € 17 billion and Turkey's contribution to the EU budget at about € 5 billion. This estimate is based on a regression analysis for the EU-15 sample, which takes GDP as the explanatory variable for the contribution to the EU budget, and eligibility for the cohesion funds and council voting power as explanatory

variables for receipts from the EU budget. Obviously, in transferring these results to the accession candidates at that time, no budgetary limits are taken into account; total net transfers to the then 13 accession candidates are estimated at about € 50 billion annually (FLAM, 2003: 45). Furthermore, changes in EU policies since the base period for estimation (1999/2000) are not taken into consideration. None of these recent analyses is based on the specific structure of the agricultural sector in Turkey, which would determine the receipts from the EU budget.

Some sector specific analyses were carried out after Turkey's application for full membership in 1987 (MANEGOLD, 1988; AKDER et al., 1990). But the CAP has changed a great deal since the end of the 1980s making these assessments of limited validity today. A predecessor of this article in September (GRETHE, 2004c), a report of the EUROPEAN COMMISSION (2004c) in October, and a report prepared by OSKAM et al. (2004) as a background paper for the Dutch EU Presidency and published in December 2004 are recent analyses which are based on specific features of the agricultural sector in Turkey.

The aim of this article is twofold; first, to explore potential ways of determining budgetary outlays resulting from applying the CAP to Turkey and second, to determine the order of magnitude of effects on the EU budget resulting from the application of the CAP to Turkey under different assumptions. The determination of the magnitude of payments, although arbitrary in a situation of at least 10 years until accession, is considered relevant for two reasons. First, to see whether EU budgetary outlays for applying the CAP to Turkey are so high that they put the process of Turkish accession in question, as is sometimes maintained. Second, to look at long-term reform pressure on the CAP which may result from the accession of Turkey to the EU.

The article is structured as follows. Section 2 outlines the challenge of assessing budgetary effects resulting from the CAP in case of accession and an analytical framework to do so. In section 3, the amount of direct payments which would result for Turkey from the current CAP as well as

under further reform scenarios is estimated for the years 2015 and 2025. In section 4, potential payments from the EU budget to Turkey under the so-called second pillar of the CAP are examined, including a heterogeneous collection of rural development policies. Finally, section 5 summarizes and complements findings, presents potential net effects on the EU budget, and draws some conclusions.

2. Analytical approach of assessing budgetary implications of applying the CAP to Turkey

In the event of accession, Turkey would not only be subject to the market price level resulting from various market policies under the CAP, but to the CAP itself which is mainly financed by the EU budget. Main budgetary items are the direct payments to producers under the first pillar of the CAP, and payments under the second pillar of the CAP, including various types of rural development measures, e.g. payments under environmental programs and investment subsidies.

Due to the long period expected before accession, the time component is extremely important when analysing the effects of applying the CAP to Turkey. Four areas of interest play a major role, not least, the state of the CAP itself. Many reforms of the CAP yet to be implemented are already determined, including partial decoupling of direct payments under the Mid-Term Reform. Others can be guessed at on the basis of specific reform proposals, such as price reductions and direct payments foreseen for the sugar market regime. Still, for 2015 it seems arbitrary to formulate one "future CAP". Rather the analysis needs to frame a set of scenarios of how the CAP could look like in 2015, and which components and to what degree would be implemented in Turkey in case of accession.

The second important area of interest in determining the budgetary cost and net transfers to Turkey resulting from the CAP is the state of the Turkish agricultural sector at the time of accession. As a result of changes in world market prices, technological progress, increasing incomes and population, and many other factors, the Turkish agricultural sector will be different in 2015. In addition, accession itself will affect the allocation of resources in Turkish agriculture.

A third determining factor for net transfers to Turkey is Turkey's contribution to the EU budget in case of accession. As the contribution of member states to the EU budget is mainly determined by the size of their GDP, shares in GDP are a good indicator for shares in the EU budget. But Turkey's share in the total GDP of a potential EU-29 in 2014 may be very different from that today, as economic growth in the EU-25 (-28) up to 2015 may be different from that in Turkey.

And finally, the conditions of Turkish accession to be negotiated between the EU and Turkey will significantly determine budgetary flows. For example any transition periods for fully applying direct payments, the level of payments under the second pillar of the CAP, and the size of quotas for any quota products are all negotiable factors. Also the basic method of determining direct payments for Turkey may differ from that applied to the NMS-10 and Bulgaria and Romania. Whether negotiations about direct payments

for Turkey in about 5 years or more will still be based on base yields, areas and animal stocks, is an open question. The implementation of the Simplified Area Payments Scheme (SAPS) for 8 out of 10 of the new member states has set precedents for uniform per ha premiums. Fixing direct payments per ha based on the level in comparable countries and political negotiating power may therefore be an alternative for Turkey.

Based on these considerations, the following approach is applied for determining budgetary flows between the EU-27 and Turkey which would result from applying the CAP in case of accession.

- Turkey's contribution to the EU budget is calculated based on projected GDP from macroeconomic growth scenarios taken from the literature. LEJOUR et al. (2004) project real GDP growth for Turkey until accession at 5.6%. DERVIS et al. (2004b) project Turkish per capita GDP expressed in foreign currency to grow by 6% until accession, which is equivalent to about 7.2% total GDP growth due to population growth. This assumption is qualified by a demographic transition leading to a high share of economically active population, increased foreign direct investment due to the political and economic anchor provided by the start of accession negotiations, and a yearly appreciation of the real exchange rate by 1%. QUAISER and REPPEGATHER (2004) use a yearly growth rate of 5% for Turkish GDP, which they find optimistic. All authors project the GDP growth rate for the EU-25 around 2%. For the calculation of Turkey's contribution to the EU budget in this study, Turkey's growth rate of total GDP in € is assumed at 5.5% (4.4% per capita; 4.5% of total GDP_{PPS}) which is slightly above the average GDP growth rate of the last four decades (DERVIS et al., 2004b). For the EU-27 a GDP growth rate of 2.1% is assumed. A crucial parameter for the projection of future Turkish GDP in € is the development of the exchange rate. Mainly due to the dual structure of the Turkish economy, GDP in purchasing power standards is currently about twice as high as GDP valued in € at the market exchange rate. OSKAM et al. (2004: 189) assume that this GAP will close by 20% until 2015 which is equivalent to an appreciation of the exchange rate by more than 1.5% annually. In order to account for the significant tentativeness of assumptions on future growth rates of Turkish GDP in €, a sensitivity analysis is carried out which assumes Turkish annual GDP growth being 1.5 percentage points lower and 1.5 percentage points higher than under the 5.5% base assumption.
- The level of direct payments is determined based on two alternative approaches. First, product-specific EU rates for cereals; oilseeds and protein crops; tobacco; olive oil; cotton; milk; beef, sheep, and goat meat are applied to Turkish areas, yield and production quantities from a partial equilibrium model (TURKSIM) analysis of full integration of Turkish and EU agricultural markets.¹ These results already include all market effects due to full market integration, but do not include any reactions of the Turkish producers to the CAP, except to those resulting from price changes. This may be acceptable, as the most

¹ For a comprehensive description of TURKSIM and discussion of results see GRETHE (2004a, 2004b).

important element of the CAP other than price policies is direct payments to producers, which will largely be decoupled from production in the future. For payments not fully decoupled, the usual EU approach is to limit payments to reference quantities at a recent level, which also does not allow for strong production effects. Another impreciseness of the current TURKSIM analysis results from the fact that projections are for the year 2006 and not for 2015. This might slightly underestimate direct payments for Turkey due to a somewhat lower reference yield. As a second approach to determine the level of potential direct payments for Turkey, total agricultural area of Turkey is multiplied by a per ha rate for comparable countries under the SAPS.

- Budgetary outlays for rural development measures for Turkey under the second pillar of the CAP are determined based on the precedents of the NMS-10 as well as Bulgaria and Romania. Together with direct payments, these policies accounted for 84% of the agricultural budget in 2002, excluding export subsidies.² In order not to underestimate the real budgetary cost, the remaining 16% are added as a lump sum for Turkey in order to account for policies not explicitly covered by this analysis: mainly market policies and direct payments for other products.³
- In a first step, the assessment of total budgetary costs of applying the CAP to Turkey as well as the resulting net transfers is based on the full implementation of current agricultural policies including those reform steps already decided. It will be argued that this approach substantially overestimates budgetary outlays due to expected future reforms. Thus in a second step, alternative assumptions are made with respect to CAP reforms until 2015 and the speed at which the CAP will be phased in.

3. Direct payments

In 2004, the EU spent more than € 30 billion on direct payments to agricultural producers, more than 60% of its agricultural budget. As outlined above, direct payments for Turkey are estimated based on Turkish product-specific area, yield and production as well as based on total agricultural area only. For the first approach, table 2 shows the budgetary cost resulting from applying direct payments for selected products under the CAP to Turkish agricultural production in 2015 and 2025 under various reform and phasing in scenarios. Under all scenarios direct payments for milk are fully implemented, modulation of 5% is fully implemented, and direct payments for sugar are not yet

included. Furthermore, all direct payments are expressed in 2004 real € and inflation between 2004 and 2015 is estimated at 1.5% annually. Therefore, direct payments decline in real terms over time, even under the assumption that they are kept constant in nominal terms. Scenarios are differentiated in three dimensions. First, those that assume constant direct payments in nominal terms in contrast to those which assume a reduction in nominal payments. Second, those that apply in the first year of accession (2015) and those that apply 10 years after accession. And third, the 2015 scenarios are differentiated with respect to whether direct payments are granted fully from the first year of accession on, or if they are phased in as for the NMS-10.

Table 2 shows that budgetary outlays for fully applying direct payments to Turkey in 2015 for the most important products would total to about € 5.3 billion. The largest blocks of outlays are for cereals and oilseeds as well as cotton, which together account for € 2.9 billion. But the calculation of such numbers ignores the fact that Turkish producers are very unlikely to ever get direct income transfers of such size from the EU budget. This is due to the high cost of such payments to the EU budget which will potentially lead to further reform of the direct payment system before Turkish accession. Consider that the full phasing in of direct payments for the NMS-10 and future direct payments for Bulgaria and Romania will be costly to the EU-15 (WEISE et al., 2002). Furthermore the level of direct payments will conflict with the budget ceiling in the first pillar of the CAP which was set by the European Council in October 2002. The “financial discipline” mechanism is therefore likely to result in significant reductions of direct payments from 2007 on (AGRAINFORMA, 2004). An additional reason for the low probability of Turkish producers receiving direct payments at their current level is the most recent reform, which will fully decouple most direct payments from agricultural production in the future. Therefore, the need to establish payments at a comparable level in a common market for reasons of competition will become much less important. A trend towards nationalization of direct payments may be the result, already partially realized through the different level of direct payments in the EU-15 and the NMS-10 until 2013, and the possibility that individual countries in the NMS-10 pay national top-ups to their producers in addition to the EU direct payments. In short, direct payments will be reduced, probably fully decoupled, and possibly partly nationalized before Turkey will become an EU member. Thus, any direct payments from the EU budget to Turkish producers will be much lower than payments under the current CAP. Therefore, the “Reduction of DP” scenario depicts a situation in which the nominal level of direct payments in the EU is reduced by an annual rate of 3% up to 2015. Under this scenario, budgetary outlays for full implementation of direct payments in Turkey drop to € 3.8 billion.

Furthermore, the European Commission has already mentioned phasing in direct payments for Turkey (EUROPEAN COMMISSION, 2004d) as for the NMS-10 and as scheduled for Bulgaria and Romania. For those countries, the starting level is 25% of the EU level and the full level is reached in the tenth year of membership. Such an approach would reduce direct payments for Turkey in the initial year of membership to about € 1.3 billion with no reduction of

² Export subsidies are excluded as they will probably be abolished, or at least substantially reduced in 2014.

³ This is, of course, a very rough approach. For some of the policies which fall into this category, Turkey would get relatively less than current EU members, e.g. for pork market policies; for other policies Turkey would receive more, e.g. processing aids for paste tomatoes. Furthermore, 16% is a relative measure within the total agricultural budget. If the value of direct payments is assumed to decline in real terms by 1.5% annually, as it is in the calculations below, this implies an absolute decline in the amount reserved for “other policies”. This may be true for some policies, but not for others. In short, this 16% is more a reminder of “some substantial amount”, than a well-founded projection.

direct payments and € 0.9 billion under the “Reduction of DP” scenario. Although consistent with the approach applied to the Central European Countries, a phasing in of direct payments seems less than convincing for Turkey for two reasons. First, in contrast to the Central European Countries the Turkish price level for agricultural products would decline significantly on average due to market integration with the EU (GRETHE, 2004a). Second, Turkey currently applies a system of direct payments at a level of € 1.3 billion annually (OECD, 2004), which is above the projected level for the “Reduction of DP” scenario with the phasing in option.

specific reforms, with an estimate of € 3.8 billion. Although the total results are quite similar, some significant deviations exist in both directions. The strongest difference is for cotton: OSKAM et al. (2004: 209) report an estimate of € 372 million of direct payments in 2015 (2004 €), which compares to € 970 billion under the “Reduction of DP” scenario in this article (table 2). The main difference results from the area assumed eligible for cotton premium. OSKAM et al. report 543 000 ha whereas the TURKSIM result, which is based also on projected increases in irrigated area in the southeast of Turkey mainly planted in cotton (GRETHE, 2004a: 183-185), is 895 000 ha.

Table 2. Budgetary outlays for direct payments (DP) for selected products in Turkey under different reform and phasing in assumptions (in 2004 €)

	Quantity	DP per unit in 2015 (2004 €) ^a	Budgetary outlays (mill. 2004 €)					
			Current DP			Reduction of DP		
			2015 full	2015 25%	2025	2015 full	2015 25%	2025
Cereals & oilseeds in TURKSIM								
Eligible quantity (1 000 t)	31 156	50.68	1 579	395	1 358	1 130	282	716
2006 area (1 000 ha)	13 684							
Base yield (t/ha)	2.3							
Cereals & oilseeds not in TURKSIM								
Eligible quantity (1 000 t)	842	50.68	43	11	37	31	8	19
2002 area (1 000 ha)								
Protein crops in TURKSIM								
Eligible quantity (1 000 t)	3 029	58.33	177	44	152	126	32	80
2006 area (1 000 ha)								
Durum 2006 area (1 000 ha)	1 927	111.74	215	54	185	154	38	98
Tobacco 2006 (1 000 t)	237	2 339.46	556	139	478	397	99	252
Olive oil 2006 (1 000 t)	136	1 063.94	145	36	125	104	26	66
Hazelnuts 2006 area (1 000 ha)	987	97.14	96	24	82	69	17	43
Cotton 2006 (1 000 t)	3 248	417.53	1 356	339	1,166	970	243	615
Milk 2006 (1 000 t)	10 596	28.56	303	76	260	216	54	137
Beef 2006 (1 000 t)	353	953.41	336	84	289	240	60	152
Sheep meat 2006 (1 000 t)	333	1 351.55	450	113	387	322	81	204
Total outlays for direct payments:			5 274	1 318	4 534	3 772	943	2 392

^a Assumptions include: direct payments for milk fully implemented, modulation of 5% fully implemented, beef premiums/ton 50% above EU level as most payments are made per animal and Turkey has a higher number of animals/ton of meat produced, direct payments for sugar not yet included, direct payments fixed in nominal values, inflation between 2004 and 2015 1.5% annually.

Sources: AGRAEUROPE (2004a), SIS (2003), EUROPEAN COMMISSION (2003a), GRETHE (2004a), own calculations

In 2025, any phasing in period would be finalized and total outlays for direct payments would be at € 4.5 billion under the current level of direct payments and about € 2.4 billion under the “Reduction of DP” scenario.

The result of € 4.5 billion for full implementation of direct payments in 2025 contrasts considerably with that from the EUROPEAN COMMISSION (2004d: 47), which estimates direct payments for Turkey in 2025 at € 5.3 billion (2004 €). Unfortunately, no background material on how Commission figures are generated is published. OSKAM et al. (2004: 209) estimate budgetary outlays for direct payments in Turkey in 2015 at € 3.4 billion (2004 €). The underlying scenario includes an annual nominal reduction of direct payments by 2% and some additional product-specific reductions. Therefore, it can be best compared to the “Reduction of DP” scenario for 2015 in this article, which assumes an annual reduction by 3% but no additional product-

As a second alternative approach, direct payments for Turkey could be fixed at the level of direct payments per ha in other member states. Payments under the SAPS for the 10 new member states vary between 83 €/ha for Latvia and about 280 €/ha for Hungary and Cyprus when fully phased in (AGRAEUROPE, 2004b). Taking into account the extensive nature of agriculture in large parts of the country, and the potentially lower political negotiating leverage of Turkey, Turkey may end up at the lower end, say 80 €/ha. Under such a scenario direct payments for Turkey would amount to € 2.8 to € 3.2 billion, depending on which parts of agricultural land would be considered eligible. This question may be controversial, as large parts of rangeland consist of common pasture areas not assigned to single producers, but intensively used for grazing: who should get payments for this land?

4. Second pillar of the CAP

In contrast to the instrument of direct payments from the EU budget, which will probably decline in importance in the future, the second pillar of the CAP is projected to rise: in 2004 about € 8.3 billion, or 18% of the expenditure on EU agricultural policies, were spent on this broad policy basket of rural development policies, and in its draft Financial Perspective for 2007 to 2013, the EU Commission proposes to increase these payments to € 13.2 billion or 23% of the CAP bud-

get in 2013 (AGRA EUROPE, 2004c). (1) Factor $\text{Turkey / reference} = \frac{(0.65 \cdot \text{area ratio}_{\text{Turkey / reference}}) + (0.35 \cdot \text{employment ratio}_{\text{Turkey / reference}})}{(1 + \text{GDP}_{\text{PPS}} \text{ ratio}_{\text{Turkey / reference}}) / 2}$

Through the modulation mechanism, which shifts 5% of direct payments to the second pillar of the CAP until 2007, there is a direct link between the reduction of direct payments in the first pillar and the strengthening of the second pillar of the CAP. Current EU payments in the second pillar of the CAP are distributed among member states according to historical negotiating power and their readiness to cofinance EU funds. But for the allocation of modulation funds, which is "new second pillar money", the EU has explicitly established agricultural area, employment in agriculture, and GDP_{PPS} per capita as criteria for the allocation of funds.⁴ The same criteria were used by the European Commission, along with the somewhat nebulous "...specific territorial situation in each country" (EUROPEAN COMMISSION, 2002: 5) for the allocation of SAPARD funds to the Central European ac-

cession candidates, and in the allocation of rural development funds for the NMS-10 as well as Bulgaria and Romania. Based on these criteria Turkey would be eligible for a high share of payments under the second pillar of the CAP.

What could the future level of payments to Turkey be under the second pillar of the CAP? The answer to this question can only be guessed at as there is no clearly defined rule of allocating second pillar funds to individual member states, whether one of the EU-15 or a new member state. Therefore, the following "best guess" is based on the level of rural development funds being allocated to the NMS-10 for the period 2004-2006 and to Bulgaria and Romania for the period 2007-2009, as well as on the above-mentioned criteria of agricultural area, employment, and GDP_{PPS} per capita. Table 3 presents a comparison of those criteria for the NMS-10, Romania and Bulgaria, and Turkey in 2002, as well as projections for all countries for the (assumed) year of accession.

Table 3 shows that Turkey's agricultural sector is expected to be slightly larger in 2015 than that of the NMS-10, and considerably larger than that of Bulgaria and Romania at the time of accession in terms of area and employment. The GDP_{PPS} per capita, however, is projected to be 26% lower than that of the NMS-10 and about 14% above that of Bulgaria and Romania at the time of accession. The following formula has been chosen to determine the level of rural payments for Turkey relative to any reference country group based on the criteria given above:⁵

with "reference" standing for the NMS-10 or Bulgaria and Romania, or any average one wishes to apply.

The resulting factor of rural development payments for Turkey compared to the NMS-10 (Factor_{Turkey/NMS 10}) is 1.33. Rural development funds allocated to the NMS-10 from the Guarantee section of the EAGGF are € 5.8 billion for the period 2004 to 2006 (EUROPEAN COMMISSION, 2003b), i.e. about € 1.9 billion per year.⁶ Thus, Turkey would receive about € 2.5 billion of rural development funds in case of accession from the CAP budget if one takes the NMS-10 as a reference. Taking Bulgaria and Romania as a reference, the resulting factor is 1.63. Rural development funds foreseen for Bulgaria and Romania for the period 2007-2009 are € 1 billion annually (AGRA, 2004). Thus, Turkey would receive only about € 1.5 billion (2004 €)

Table 3. Criteria for the allocation of rural development funds to the NMS-10, Bulgaria and Romania, and Turkey

	NMS-10		Bulgaria & Romania		Turkey		Turkey (2015) in % of	
	(2002, 2003)	(2004)	(2002, 2003)	(2007)	(2002, 2003)	(2015)	NMS-10 (2004)	B & R (2007)
Agricultural area (1 000 ha)	36 139	36 139	20 144	20 144	38 883	38 883	108%	193%
Agricultural employment (1 000)	3 880	3 610 ^a	3 982	3 325 ^a	7 458	4 667 ^a	129%	140%
GDP_{PPS} per capita (2003 €)	11 302	11 641 ^b	6 331	7 550 ^b	5 750	8 588 ^b	74%	114%

^a Agricultural employment in Turkey is assumed to continue to decrease by an annual rate of 3.4% until 2015, as it did in 1996 to 2002. For the NMS-10, Bulgaria, and Romania the same annual rate is applied.

^b GDP_{PPS} per head is assumed to grow in real terms by 3% annually between 2003 and 2004 in the NMS-10. For Bulgaria and Romania the growth rate is assumed at 4.5% annually from 2003 to 2007. Projections are from EUROPEAN COMMISSION (2004c). In Turkey, GDP_{PPS} per capita is assumed to grow in real terms by an annual rate of 3.4% between 2003 and 2015 based on sources cited above.

Sources: SIS (2003, 2004b), EUROPEAN COMMISSION (2004b, 2004c), FAO (2004), own calculations

⁴ EC Directive 1782/2003, Official Journal of the EUROPEAN COMMUNITIES (OJ) L 270, 21.10.2003.

⁵ The higher weight of area than employment has been observed for example in the allocation of SAPARD funds to Bulgaria and Romania. But as has been mentioned above: any such formula is arbitrary and only a rough anticipation of what could happen in the future. Nonetheless, the results obtained are surprisingly close to the numbers put forward by the European Commission (see below).

⁶ Rural development measures financed from the guidance section of the EAGGF, which are much lower, are not included here.

Table 4. Total EU budgetary outlays and revenues resulting from Turkey's EU membership ("Reduction of DP" scenario)

	Budgetary outlays and revenues (bill. 2004 €)		
	2015 Full	25% of DP	2025
Budgetary outlays			
CAP			
Direct payments	3.8	0.9	2.4
Second pillar	1.5	1.5	2.0
Other policies	1.0	1.0	1.0
Total CAP	6.3	3.5	5.4
Structural policy	7.7	7.7	up to 25.6
Other outlays	1.6	1.6	1.6
Total outlays	15.6	12.7	up to 32.6
Turkey's contribution to the budget			
Base assumption	5.2	5.1	7.8
Catch-up growth	6.1	6.0	11.0
Slow growth	4.4	4.3	5.5
Net transfer to Turkey			
Total (base growth assumption)	10.4	7.6	up to 24.8
of which resulting from CAP	4.5	1.7	2.9
Total (catch-up growth)	9.3	6.5	up to 31.4
of which resulting from CAP	4.0	1.3	1.9
Total (slow growth)	11.3	8.6	up to 19.6
of which resulting from CAP	4.9	2.1	3.8

Sources: data from tables 1 to 3 above, EUROPEAN COMMISSION (2004e), OSKAM et al. (2004), own calculations

of rural development funds in the first years of membership from the CAP budget if one takes Bulgaria and Romania as a reference. For Bulgaria and Romania, in contrast to the NMS-10, rural development measures are phased in. In 2009 the level will be at € 1.27 billion and it is understood that this amount will increase to about € 1.4 billion in later years.⁷ If one takes this as a reference, the final level of rural development funds from the guarantee section of the EAGGF for Turkey may be about € 2 billion (2004 €), which is very close to the figures recently put forward by the EUROPEAN COMMISSION (2004d).

To no surprise, equation (1) can not fully explain the allocation of rural development funds to new member states. Still, final results derived from the NMS-10 are rather similar to those derived from Bulgaria and Romania. Two reasons lead to the assumption that in accession negotiations Turkey would probably end up closer to the allocation of funds based on the results for Bulgaria and Romania. First, the Turkish agricultural sector is more similar to that of Bulgaria and Romania in terms of its role in the overall economy. Second, Turkey's political "leverage" in accession negotiations may be less than that of the first wave of Central European accession countries. On the other hand, the decline in direct payments projected above may go along with a higher allocation of funds to the second pillar

of the CAP, which may also enhance rural development funds for newly acceding members.

5. Conclusions

The above analysis shows that fully applying an unchanged CAP to Turkey in 2015 would mean high outlays for the EU budget. However, the full implementation of direct payments at the current EU level does not seem to be realistic. Therefore, the following summary draws on the level of direct payments derived above (table 2) under the "Reduction of DP" scenario, which assumes a moderate annual reduction of direct payments by 3% in real terms over the projection period. The derived order of magnitude of direct payments under this scenario is close to the level which would result from applying the per ha SAPS rate of Latvia to Turkish agricultural area. Table 4 summarizes various budgetary positions under the CAP and complements them with projections of other budgetary outlays which would result from Turkish membership. In addition, projected contributions of Turkey to the EU budget as well as the resulting net transfers are reported.

Table 4 shows that the implementation of the CAP in Turkey without any phasing in of direct payments would result in EU budgetary outlays of about € 6.3 billion. More than half of this amount would be for direct payments. About 24% would be for the second pillar of the CAP based on the EU budgetary outlays for rural development policies in the first years of membership for Bulgaria and Romania as presented above. The category "other policies" is set at 16% of the total agricultural budget as justified above, or € 1 billion. This is much higher than figures published by the EUROPEAN COMMISSION (2004d) which projects € 660 million of market expenditures, and OSKAM et al. (2004) who project € 180 million of market expenditures. In the case of a phasing in of direct payments as applied for the NMS-10, direct payments would be much lower in 2015 and the total budgetary outlays for the CAP in Turkey would be only € 3.5 billion. In 2025, the level of direct payments is projected at € 2.4 billion which is below the full level in 2015 because of the projected annual decrease of 3% in nominal and 4.5% in real terms. The budget for rural development measures, however, increases to € 2 billion because of the full phasing in described above. Total outlays for the CAP in Turkey in 2025 are projected at € 5.4 billion.

But Turkey would not only receive part of the EU budget for the CAP, but also contribute to this budget. Turkey's projected contribution to the EU budget as a whole under the three growth scenarios specified above is presented in the middle part of table 4. In order to calculate Turkey's contribution to the EU budget, Turkey's share in projected EU-28 GDP is multiplied by the projected EU budget at that time.⁸ Turkey's contribution varies between € 4.3 billion in 2015 under the slow growth scenario and € 11 billion under the catch-up growth scenario in 2025.

⁷ This phasing in process and its determinants as well as the method to determine final levels are rather nontransparent and not made public by the European Commission.

⁸ The 2013 budget from the financial perspective 2007-2013 is used and projected outlays for Turkey are added.

By combining Turkey's contributions and receipts, net transfers can be calculated. First, only the net transfers resulting from the CAP are looked at, which are presented together with total net transfers in the lower part of table 4. They are calculated as the outlays for the CAP in Turkey minus the relative share of Turkey in the total EU budget multiplied by the size of the projected EU-28 agricultural budget in the respective year (again, the 2013 budget from the financial perspective 2007-2013 is taken for that purpose and additional projected outlays for the CAP in Turkey are added). For example, the EU budget for the CAP without Turkey in 2015 is projected at € 55.5 billion and the budgetary outlays under the CAP for Turkey are estimated at € 3.5 billion with phasing in of direct payments. As Turkey has a projected GDP share in 2015 of 3%, Turkey would contribute about € 1.8 billion to the EU CAP budget under the base growth scenario. As a result, the net transfer under the CAP to Turkey would be about € 1.7 billion in 2015. Total net transfers resulting from the CAP for Turkey vary between € 1.3 billion in 2015 in case of a phasing in of direct payments and a catch-up growth scenario, and € 4.9 billion in case of full implementation of direct payments in 2015 and a slow growth scenario. In 2025, net transfers to Turkey resulting from the CAP vary between € 1.9 and € 3.8 billion according to the respective growth scenario. Are these figures high? In closing these amounts are put into perspective from a Turkish as well as an EU point of view.

For Turkey, a net transfer of € 1.7 billion from the CAP would be about 0.3% of projected total GDP in 2015 and thus relatively small. Total annual EU payments for implementing the CAP in Turkey would amount to about 9% of projected agricultural production value in 2015 and about € 750 per capita employed in agriculture. This would increase to about 12% of agricultural production value and about € 1 660 per person employed in agriculture in 2025.⁹ So for the agricultural sector, transfers resulting from the CAP are substantial. On the other hand, applying the CAP in Turkey would go along with significant price reductions leading to an estimated loss in producer income of about € 1 billion (GRETHE, 2004a: 211), and probably also an abolition of transfers to agricultural producers under the current Turkish system of direct payments, which amounted to € 1.3 billion in 2003 (OECD, 2004).

More important from the Turkish perspective than the resulting net transfers, however, seems to be the degree to which the CAP fits Turkish needs for the development of the agricultural sector. Direct payments in the first pillar of the CAP simply shift money to agricultural producers, which for the most part ends up in the pockets of land owners, as long as payments are linked to area. Such transfers may even inhibit the necessary process of improvement of Turkish agricultural structure. Transfers of EU funds to Turkey under the second pillar of the CAP may hold more interest for Turkey than high direct payments. This is because payments under the second pillar can be targeted at measures which are aimed at improving productivity in

Turkish agriculture. Such measures might include training farmers in order to increase their productivity in agriculture or to enable them to leave the sector, public investment in rural infrastructure, modernization of the food processing industry, and measures to improve the distribution of land among farms (e.g. reparation).

From an EU perspective, Turkey would be a significant recipient of CAP funds. Projections made above would estimate Turkey receiving about 5.7 to 10.2% of the CAP budget. This is not especially high compared to other large EU countries. For example in 2002 France received about € 9.9 billion, which was 21% of the CAP budget of the EU-15. In terms of the net transfer situation resulting from the CAP, Turkey is in line with other acceding countries: net transfers resulting from the CAP to the NMS-10 between 2004 and 2006 are about € 900 million annually, and net transfers resulting from the CAP to Romania and Bulgaria are projected at € 1.7 billion annually for the period 2007 to 2009.¹⁰ Some of the EU-15 members also received large net transfers in the past: in 2002 net transfers to France resulting from the CAP were about € 1.5 billion and for Spain they amounted to € 2.9 billion.¹¹

Finally, transfers to Turkey under the CAP can be assessed against the overall project of including Turkey in the EU, in budgetary as well as political terms. With respect to the budgetary impact of Turkish membership, expected transfers resulting from the CAP are much below the transfers that would result from the full implementation of the current EU structural policy in Turkey. Because of low income levels, all Turkish regions would be eligible to receive funds, and under the current policy rules the upper limit of payments after full phasing in would be 4% of GDP. As rural development measures are scheduled to be concentrated in the future in the European Agricultural Fund for Rural Development (EAFRD) which should be fully included under the 4% limit (EUROPEAN COMMISSION, 2004e: 28), the potential amount for structural policies (except rural development measures, which are partly included in this study under the CAP) is somewhat lower than 4%. Based on GDP projections made above, EU budgetary outlays for structural policy in Turkey could amount to € 14.6 billion in 2015. However, a slower phasing in is applied to the NMS-10, which receive about € 7.2 annually on average for 2004 to 2006 from the structural and cohesion funds (EUROPEAN COMMISSION, 2002), equivalent to about 1.6% of their projected GDP in that period. For Bulgaria and Romania an annual average sum of about € 2.8 billion is agreed upon for the period 2007-2009 (EUROPEAN COMMISSION, 2004f), which is about 3% of their projected GDP. For both country groups, structural and cohesion fund outlays per capita in the first three years of membership are around € 90, which seems to have been the navigational mark fixing the level of payments for this period. If one applies this level to the projected population in Turkey in 2015, Turkey would receive € 7.7 billion an-

⁹ Negative growth rates projected for employment in the agricultural sector above are extrapolated to 2025. Projections for the production value of Turkish agriculture are based on TURKISM.

¹⁰ Own calculations based on the GDP growth rates presented above, the Financial Perspective for 2007-2013 (EUROPEAN COMMISSION, 2004f), EUROPEAN COMMISSION (2003b, 2004g), and AGRA (2004).

¹¹ Own calculations based on EUROPEAN COMMISSION (2003c, 2004b).

nually in the first years of membership which is used in this article as an indicator of the level of outlays for structural policies which may apply to Turkey in 2015. The question then remains, what the level of outlays for structural policies in Turkey may be in 2025. Table 4 shows that the standard approach of 4% of projected GDP would yield about € 26 billion of outlays under the standard growth scenario. But for different reasons this figure should only be used as an indicator for the upper bound. First, some regions in Turkey may no longer be eligible for transfers under the EU structural policy due to economic convergence (current criterion is a regional GDP less than 75% of the EU average). Second, economic growth projections over a period of 20 years are arguable. And third, the size of structural policy transfers under the 4% rule in case of accession of a country as large as Turkey may bring pressure to lower this upper limit.

In order to assess the total size of potential outlays and net transfers under the accession of Turkey the category "other outlays" is included in table 4 to account for policies for fisheries, home affairs, justice etc., and the amount of € 1.6 billion is adopted from OSKAM et al. (2004: 211). Table 4 reports total EU budgetary outlays resulting from Turkish membership in 2015 between € 12.7 billion in the case of a phasing in of direct payments, and € 15.6 billion with full implementation of direct payments. Outlays may increase to more than € 30 billion in 2025 if current rules for structural policies are maintained. Total net transfers in 2015 vary between € 6.5 billion with phased in direct payments and the catch-up growth scenario, and € 11.3 billion in case of full implementation of direct payments and the slow growth scenario. In 2025, total net transfers may be somewhere between € 19 and € 32 billion if current structural policies are maintained. It is interesting to note that the higher the growth assumption, the higher the projected net transfers to Turkey. Although Turkey pays a higher contribution to the EU budget in the case of higher growth, this effect is overshadowed by higher outlays for payments under EU structural policies, for which the 4% of GDP limit is assumed to be binding. This, however, does not take into account that faster growth may lead to more Turkish regions exceeding the 75% of average EU GDP limit until 2025, and would therefore no more be eligible for EU structural policies resulting in lower budgetary outlays.

What becomes clear from table 4 is that the CAP is not the main budgetary factor determining the financial consequences of Turkey gaining EU membership. Rather it is the future development of the EU structural policy and the results with respect to any phasing in period for this policy which will largely determine the level of total budgetary outlays and net transfers from the EU-27 to Turkey. In 2015, only 20 to 25% of net transfers to Turkey would result from the CAP if direct payments are phased in. If direct payments are granted at full level in 2015, the share of net transfers resulting from the CAP would be about 43%. In 2025, the share of the CAP in total net transfers may be as low as 6 to 19%.

With respect to the overall political and economic project of including Turkey in the EU, costs resulting from the CAP take a background role. The values, interests and opportunities at stake seem too important to let an annual transfer of about € 1.7 to 4.5 billion dominate the discussion. Nonethe-

less, the accession of Turkey may be an additional incentive among many to fully decouple and phase out direct payments in the EU, which constitute the largest single agricultural policy category in the above projections. Also, the fact that high transfers to land owners are not in the interest of future development of the Turkish agricultural sector may contribute to further reform of the EU's direct payment system.

References

- AGRA (2004): Council Concludes Bulgarian and Romanian Accession Talks on Agriculture. In: AGRA FACTS 46-04, 04.06.2004: 1-2.
- AGRAEUROPE (2004a): CAP Monitor.
- (2004b): EU Agrees SAPS Aid Ceilings for New Member States. In: AgraEurope Weekly 2099, 02.04.2004: EP 6-7.
- (2004c): Commission Triggers Funding Row as Financial Perspectives Unveiled. In: AgraEurope Weekly 2092, 13.02.2004: EP 1-3.
- AGRAINFORMA (2004): EU Farmers Facing Large Reductions in Direct Payments Post-2007. In: AgraEurope Weekly 2132, 19.11.2004.
- AKDER, H. et al. (1990): Turkish Agriculture and European Community Policies, Issues, Strategies and Institutional Adaptation. Report of a study for the United Nations Development Programme, executed by the United Nations Conference on Trade and Development.
- CAKMAK, E and H. KASNAKOGLU (2002): Assessment of Agricultural Policies and the Impact of EU Membership on Agriculture in Turkey. Ankara, December. In: <http://par.iamm.fr/ressources/recherche/champ1/turquie.pdf>.
- DERVIS K., D. GROS, F. ÖZTRAK and Y. ISIK (2004a): Turkey and the EU Budget. Prospects and Issues. Centre for European Policy Studies, EU-Turkey Working Papers No. 6, Brussels, August. In: http://shop.ceps.be/BookDetail.php?item_id=1148.
- DERVIS K., D. GROS, F. ÖZTRAK, F. BAYAR and Y. ISIK (2004b): Relative Income Growth and Convergence. Centre for European Policy Studies, EU-Turkey Working Papers No. 8, Brussels, September. In: http://shop.ceps.be/BookDetail.php?item_id=1153.
- EUROPEAN COMMUNITIES (2003): Official Journal. L 270, 21.10.2003.
- EUROPEAN COMMISSION (2002): EU Agriculture and Enlargement. Fact Sheet. In: http://europa.eu.int/comm/agriculture/publi/fact/enlarge/2002_en.pdf.
- (2003a): 32nd Financial Statement Concerning the European Agricultural Guidance and Guarantee Fund EAGGF, Guarantee Section, Financial Year 2003. COM(2003) 680 final, 12, November. In: <http://europa.eu.int/comm/agriculture/fin/finrep02/en.pdf>.
- (2003b): Rural Development in the European Union. Fact Sheet. In: <http://europa.eu.int/comm/agriculture/publi/fact/rurdev2003/en.pdf>.
- (2003c): Allocation of 2002 EU Operating Expenditure by Member State. September 2003. In: http://europa.eu.int/comm/budget/pdf/agenda2000/allocrep_en_2002.pdf.
- (2004a): Recommendation of the European Commission on Turkey's Progress towards Accession. Communication from the Commission to the Council and the European Parliament. COM(2004) 656 final, 6, October.
- (2004b): The 2003 Agricultural Year. In: http://europa.eu.int/comm/agriculture/agrista/2003/table_en/index.htm.
- (2004c): unpublished data.

- (2004d): Issues Arising from Turkey's Membership Perspective. Commission Staff Working Document. SEC(2004) 1202, 6, October. In: http://europa.eu.int/comm/enlargement/report_2004/pdf/issues_paper_en.pdf.
 - (2004e): Building our Common Future, Policy Challenges and Budgetary Means of the Enlarged Union 2007-2013. Communication from the Commission to the Council and the European Parliament. COM(2004) 101 final, 10, February. In: http://europa.eu.int/eur-lex/en/com/cnc/2004/com2004_0101en02.pdf.
 - (2004f): Commission Proposes a Fair and Balanced Share of the EU Budget for Bulgaria and Romania. Press Release IP/04/188, 10.02.2004. In: <http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/04/188&format=HTML&aged=0&language=EN&guiLanguage=en>.
 - (2004g): General Budget for the European Union for the Financial Year 2004, The Figures. In: <http://europa.eu.int/comm/budget/pdf/budget/syntchif2004/en.pdf>.
- EUROSTAT (2004): New Cronos Database. In: <http://europa.eu.int/comm/eurostat/newcronos/queen/display.do?screen=welcome&open=/&product=YES&depth=2&language=de>.
- FAO (2004): FAOSTAT database. In: <http://faostat.fao.org/faostat/collections?subset=agriculture>.
- FLAM, H. (2003): Turkey and the EU: Politics and Economics of Accession. Seminar Paper 718, Institute for International Economic Studies, Stockholm University. In: <http://www.iies.su.se/publications/seminarpapers/718.pdf>.
- GRETHE, H. (2004a): Effects of Including Agricultural Products in the Customs Union between Turkey and the EU. A Partial Equilibrium Analysis for Turkey. CeGE-Schriften, Center for Globalization and Europeanization of the Economy, Georg-August-Universität Göttingen, No. 9. Peter Lang Verlag, Frankfurt am Main. Also published at <http://webdoc.sub.gwdg.de/diss/2004/grethe/index.html>.
- (2004b): Marktintegration ohne Gemeinsame Agrarpolitik: Auswirkungen einer Einbeziehung von Agrarprodukten in die Zollunion mit der EU auf den türkischen Agrarsektor. In: *Agrarwirtschaft* 7 (53): 280-288.
- (2004c): Turkey's Accession to the EU: What Will the Common Agricultural Policy Cost? Working Paper No. 70/2004. Institut für Wirtschafts- und Sozialwissenschaften des Landbaus, Humboldt-Universität zu Berlin. In: <http://www.agrar.hu-berlin.de/wisola/va/wp70.pdf>.
- JÄGER, T. and S. STEWART (2004): Gehört die Türkei in die Europäische Union? Eine kommentierende Dokumentation. Interkultureller Rat in Deutschland und Förderverein PRO ASYL.
- LEJOUR, A.M., R.A. DE MOOIJ and C.H. CAPEL (2004): Assessing the Economic Implications of Turkish Accession to the EU. CBP Document No 56, March. In: <http://www.cpb.nl/eng/pub/document/56/doc56.pdf>.
- MANEGOLD, D. (1988): Agrarpolitische Probleme einer Mitgliedschaft der Türkei in der Europäischen Gemeinschaft. Arbeitsbericht des Instituts für landwirtschaftliche Marktforschung der Bundesforschungsanstalt für Landwirtschaft Braunschweig-Völkenrode (FAL).
- OECD (2004): Producer and Consumer Support Estimates, OECD Database 1986-2003. In: http://www.oecd.org/document/58/0,2340,en_2649_37401_32_264698_1_1_1_37401.00.html.
- OSKAM, A., A. BURRELL, T. TEMEL, S. VAN BERKUM, I. MOLINA VILCHEZ and N. LONGWORTH (2004): Turkey in the European Union? Exploring the Consequences for Agricultural, Food, Rural Areas and Structural Policy. December.
- QUAISSER, W. and A. REPPEGATHER (2004): EU-Beitrittsreife der Türkei und Konsequenzen einer EU-Mitgliedschaft. Working Paper Nr. 252, Osteuropa-Institut München. In: http://www.cdu-csu-ep.de/tuerkei/studie_osteuropainstitut_lang_0304.pdf.
- QUAISSER, W. and S. WOOD (2004): EU Member Turkey? Preconditions, Consequences and Integration Alternatives. Forst Arbeitspapier Nr. 25, October.
- SIS (State Institute of Statistics) (2003): Agricultural Structure 2002.
- (2004a): Quarterly GNP. In: <http://www.die.gov.tr/english/SONIST/GSMH/gsmh.html>.
- (2004b): Labour Force Database. In: http://lmsint.pub.die.gov.tr/die/plsql/lmwebeng.lmrapor_header.
- WEISE, C., M. BANSE, W. BODE, B. LIPPERT, F. NÖLLE and S. TANGERMANN (2002): Die Finanzierung der Osterweiterung der EU. Nomos Verlagsgesellschaft, Baden-Baden.

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