

Trade Sustainability Impact Assessment for the FTA between the EU and Ukraine within the Enhanced Agreement

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List of Abbreviations

a.a.g.r.	Average annual growth rate
AAU	Assigned amount units
ACAA	Agreement on Conformity Assessment and Acceptance of Industrial Products
AMC	Anti-Monopoly Committee
AMS	Aggregate measure of support
ASA	Air services agreements
BAT	Best available techniques
BEI	Business environment index
BIT	Bilateral Investment treaty
CAA	Common Aviation Area
CCA	Causal Chain Analysis
CD	Compactdisc
CDR	Cost Disadvantage Ratio
CD-ROM	Compact Disc - Read-Only Memory
CEECs	Central and Eastern European Countries
CEN	European committee for standardisation
CENELEC	European Committee for Electro-technical Standardisation
CES	Constant Elasticity of Substitution
CIS	Commonwealth of Independent States
CGE	Computable general equilibrium
CO ₂	Carbon dioxide
CSP	Country Strategy Paper
CSR	Corporate social responsibility
DG ECFIN	Directorate General for Economic and Financial Affairs
DG Trade	Directorate General of Trade, European Commission
DVD	Digital Video Disc
EA	Enhanced Agreement
EAA	European Association Agreements
EASA	European Aviation Safety Agency
EBA	European Business Association
EC	European Commission
ECPA	European Crop Protection Association
EECCA	Eastern Europe, Caucasus and Central Asia
EIA	Environmental impact assessment
EIU	the Economist Intelligence Unit
EU	European Union
ENP	European Neighbourhood Policy
ENPI	European Neighbourhood Policy Instrument
EPPO	European and Mediterranean Plant Protection Organisation

EUREP-GAP	Euro-Retailer Produce Working Group Good Agricultural Practise
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investments
FSTS	Major Securities market index in Ukraine
FTA	Free trade area
GAR	Global Analysis Report
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GFCF	Gross fixed capital formation
GINI –index	Measure of inequality in income distribution
GMO	Genetically modified organisms
GMP	General Manufacturing Practise
GNI	Gross National Income
GOST	Russian standardisation system
GP	Government Procurement
GPA	Government Procurement Agreement
GSP	General System of Preferences
GTAP	Global Trade Analysis Project
HACCP	Hazard Analysis and Critical Control Point
HIV/AIDS	Human Immunodeficiency Virus/ Acquired immunodeficiency syndrome
HS	Harmonised system
ICT	Information and Communication Technologies
IEC	International Electrotechnical Commission
IFIS	International Financial Institutions
IFRS	International Financial Reporting Standards
ILO	International Labour Organisation
IMF	International Monetary Fund
INOGATE	Interstate Oil and Gas Transport to Europe -programme
IP	Intellectual Property
IPA	Inter-Parliamentary Assembly
IPO	Initial Public Offering
IPPC	International Pollution Prevention and Control
IPR	Intellectual Property Rights
IRTS	Increasing returns to scale
ISIC	International Symposium on Intelligent Control
ISO	International Organization for Standardization
ISPM	International Standards for Phytosanitary measures
ITA	Information Technology Agreement
ITUC	International Trade Union Confederation
JI	Joint Implementation
JSC	Joint stock companies
KVED	Classification of Economic Activities
kWh	Kilowatts per hour
M&A	Mergers and Acquisitions
MDG	Millennium Development Goals
MDSS	Ukrainian Material data safety sheets
ME	Ministry of Economy

MED	Mediterranean
MES	Minimum Efficient Scale
MoU	Memorandum of Understanding
MRD TB	Multidrug resistant Tuberculosis
MRT	Multi-region Trade Model
MFN	Most-favoured-nation
Mln	Millions
NACE	General Industrial Classification of Economic Activities within the European Communities
NBU	National Bank of Ukraine
NERC	National Electricity Regulatory Commission
NGO	Non-governmental Organisation
NMS	New Member States
NO _x	Nitrogen oxide
NTB	Non-tariff barrier
NUTS	Nomenclature of Units for Territorial Statistics
OECD	Organisation for Economic Co-operation and Development
OIE	Office of International Epizootics
OLI	Eclectic paradigm
OSH	Occupation Safety and Health
PCA	Partnership and Co-operation Agreement
PECA	Protocols on European Conformity Assessment and Acceptance of Industrial Protocols
PHARE	Poland and Hungary Assistance for the Restructuring of the Economy (programme)
PIC/S	Pharmaceutical Inspection Cooperation Scheme
PPP	Purchasing Power Parity
PSE	Producers support estimate
R&D	Research & Development
RoO	Rules of Origin
ROW	Rest of the World
RTA	Regional Trade Agreement
SAM	Social accounting matrix
SCM	Subsidies and Countervailing Measures
SD	Sustainable Development
SEE	South Eastern European (countries)
SME	Small or Medium size Enterprise
SO ₂	Sulphur dioxide
SPS	Sanitary and phyto-sanitary
TCU	Tender Chamber of Ukraine
TBT	Technical barriers to trade
ToT	Terms of Trade
TRACECA	Transport Corridor Europe Caucasus Asia
TRIMS	Trade related investment measures
TRQ	Tariff rate quota
TSIA	Trade sustainability impact assessment
UACRR	Ukrainian agency for Copyrights and Related Rights
UAH	Ukrainian Hryvnia

UNDP	United Nations Development Programme
UCTE	Union for the Co-ordination of Transmission of Electricity
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
USA	United States of America
USAID	United States Agency of International Development
USD	United States Dollars
USSR	Union of Soviet Socialist Republics
VAT	Value added tax
VOC	Volatile organic compounds
WB	World Bank
WP	Working Party
WEEE	Waste electrical and electronic equipment
WHO	World Health Organisation
WTO	World Trade Organisation
WWT	Waste Water Treatment

Preface

This report is the Final Report and entails our study of the Trade Sustainability Impact Assessment study of the Free Trade Agreement within the Enhanced Agreement between the EU and Ukraine.

This study is a joint work by ECORYS Netherlands and CASE Ukraine and it aims to shed light on the expected economic, social and environmental impacts of the FTA in order to assist the negotiation process between the European Union and Ukraine. Even though we have extensively consulted with government representatives of both Ukraine and the EU, we would like to emphasise that all results presented in this report are economic predictions based on CGE modelling and our in-depth analyses. These outcomes are based on FTA assumptions that are our estimates of how the negotiations may go, but are by no means predictions of how they will go – and should not be interpreted as such by any party in the negotiations. Moreover, this report represents the views and analyses of the consortium that are in no way linked to the negotiating positions of the EU.

We have benefited greatly from the various meetings with civil society (three public meetings, the TSIA Workshop in Kyiv and various in-depth interviews), sector and horizontal issue experts and European Commission services members. We are grateful to Dr. M. Maliszewska and Prof. dr. J. Francois for their work on the CGE modelling sections and various experts for the in-depth analysis.

The project website for this study is www.trade-sia.ecorys.com and you can e-mail us at trade-sia@ecorys.com for comments.

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Executive Summary

Introduction

In line with the Handbook methodology on Trade Sustainability Impact Assessments, this report provides an in-depth analysis of the potential impacts of FTA negotiations between the EU and Ukraine within the framework of the Enhanced Agreement. This report does not provide indications of any negotiating position, but instead focuses on impacts that may occur given specific negotiation outcomes.

In order to achieve these goals, the report will:

- Give a global analysis of the trade relations between the EU and Ukraine;
- Quantify – using a CGE model – the potential economic impacts of an FTA;
- Conduct in-depth analysis studies to fine-tune the CGE outcomes and include experts and specific data and information;
- Provide general policy recommendations and suggestions for flanking measures.

This study looks at two possible FTA scenarios: an extended (deep) FTA and a limited FTA (both in the short run and in the long run) and then at the mentioned economic, social and environmental impacts by making use of core indicators and specific indicators.

Having carefully screened all the sectors, we see that agriculture, metallurgy, machinery and electronics and energy are important goods sectors and transport, distribution, telecommunication and financial services are important service sectors in terms of magnitude, FTA impact effects, social and environmental impacts and complementary civil society remarks. Therefore, in the report, we analyse the following five sectors:

- Agriculture (and various subcategories);
- Metallurgy;
- Machinery and electronics;
- Energy;
- Trade in services (and various subcategories).

Having carefully analysed the various horizontal issues and progress that is currently being made by Ukraine, we have selected the following issues, keeping in mind their estimated effect on trade flows, tarifficated levels of protection, social and environmental (positive) impact and the fact that some issues are already largely dealt with through Ukraine's accession to the WTO (e.g. sanitary- and phytosanitary measures):

- Competition policy;
- Government procurement;
- Technical standards.

Based on the pre-selection of sectors and horizontal issues we proceed with an in-depth analysis and policy recommendations. These in-depth analyses and policy recommendations include consultations with civil society (see Chapter 16).

The extended FTA

When we look at the two scenarios, it becomes clear from the CGE analysis as well as from the detailed sector studies and horizontal issue investigations that the extended FTA will bring Ukraine and the EU by far the most benefits in terms of economic, social and environmental gains: welfare gains, production, international trade, wage increases, health effects, productivity increases, employment generation and poverty reductions. However, not all social effects are positive and there are several negative environmental effects. They can potentially be protected by flanking policy measures to the extended FTA. The general model outcomes are shown in Table E.1. The expected impacts are based on the scenario definitions coming from the first part of the study and do not reflect any negotiating position of the EU in the FTA negotiations.

Table E.1 Macro-economic CGE modelling results

Variable	Ukraine	Russia	EU-27	ROW
Scenario: WTO Accession				
Welfare (% change)	0.654	0.018	0.006	0.006
Income (return factors and taxes) (bn US\$)	0.058	0.364	8.526	24.847
Skilled Wage (% change)	0.814	-0.004	0.001	-0.001
Unskilled Wage (% change)	0.839	-0.038	-0.001	-0.001
Scenario 1: Extended FTA (short run) – including WTO				
Welfare (% change)	2.261	0.030	0.007	-0.001
Income (return factors and taxes) (bn US\$)	0.060	0.364	8.526	24.846
Skilled Wage (% change)	2.496	0.049	0.009	-0.001
Unskilled Wage (% change)	3.066	-0.028	0.009	-0.002
Scenario 1: Extended FTA (long run) – including WTO				
Welfare (% change)	5.285	0.071	0.011	0.003
Income (return factors and taxes) (bn US\$)	0.061	0.364	8.527	24.847
Skilled Wage (% change)	4.355	0.059	0.009	-0.003
Unskilled Wage (% change)	4.970	-0.029	0.008	-0.003
Scenario 2: Limited FTA (short run) – including WTO				
Welfare (% change)	1.216	0.004	0.007	0.002
Income (return factors and taxes) (bn US\$)	0.059	0.364	8.526	24.846
Skilled Wage (% change)	1.547	-0.003	0.006	-0.001
Unskilled Wage (% change)	1.789	-0.053	0.006	-0.001
Scenario 2: Limited FTA (long run) – including WTO				
Welfare (% change)	3.295	0.032	0.009	0.004
Income (return factors and taxes) (bn US\$)	0.060	0.374	8.527	24.847
Skilled Wage (% change)	2.817	0.002	0.006	-0.002

Variable	Ukraine	Russia	EU-27	ROW
Unskilled Wage (% change)	3.093	-0.054	0.005	-0.002

* All values are in billion USD unless specified to be in %

Even though the overall effects of our modelling exercise show they are clearly positive in total, there are two important considerations to keep in mind. Firstly, in the short-run, the most beneficial scenario can also be costly in terms of regulatory approximation, investments in new and upgraded standards and production methods and sector re-allocations (e.g. metallurgy production upgrading, SPS standards in meat and animal fats, certification trainings and agreement, border cost reductions). Several of these types of costs carry over to the long run. Secondly, even though the overall effects are positive, it is clear that some sectors gain and some lose, and within the sectors, some people gain and some lose.

We have taken care to make sure that both the impacts for Ukraine as for the EU are included. Given the relatively large impacts in the Ukrainian economy and relatively small impacts of the FTA on the (much larger) European Union economy, there is a natural bias towards Ukraine. However, in some sectors and with respect to some issues there are EU impacts that will be highlighted. These include for example, wine & beer, transport, government procurement and metallurgy.

Economic sustainability impacts of the FTA

In general, the **(initial) economic impacts** of the FTA are estimated to be overwhelmingly positive for the extended FTA and slightly less positive for the more limited FTA. This happens because in the extended FTA scenario we assume the EU and Ukraine cut tariffs deepest and achieve the highest levels of regulatory approximation, leading to lower standard costs, border costs and costs for trade in services and FDI. Also in the long run, the economic impacts are more positive than in the short run. The reason for this is that capital is assumed mobile only in the long run, allowing capital to find the highest rate of return across the Ukrainian economy only in the long run, causing the marginal product of labour to rise. This analysis is corroborated in Table E.1, showing that the welfare gains are largest in the long run extended FTA with 5.3% welfare gains for the Ukrainian economy.

Across sectors and horizontal issues, we identify the main expected economic impacts by looking at the sustainability impact indicators presented in Table 5.1.

Real income

Overall GDP per capita is expected to go up as a consequence of the FTA – more in the extended FTA than in the limited one and more in the long run than in the short run.

Assumed improvements in competition policy are expected to lead to increases in production and GDP per capita as productivity goes up. For the cereals sector, the FTA will lead to growth if the tariff rate quota (TRQ) and quotation of exports are sufficiently reduced. Ukrainian meat and animal fat may experience growth if SPS measures are

sufficiently implemented to approximate the EU food and safety standards, albeit this is expected to be a long run development. The metallurgy sector is expected to show significant increases in GDP per capita from the FTA. Distribution services and communication services will benefit but transport and financial services will show negative real income effects. The latter is expected due to restructuring of the sectors (e.g. banking), consolidations and existence of scale economies. A well-functioning government procurement system can lead to growth in specific sectors where it enhances efficient investments (e.g. infrastructure, transport, hospitals, education). The assumption of technical standards approximation is expected to have positive growth effects in the agri-food sector, machinery & electronics, manufacturing of textiles and wearing apparel, motor vehicles and agriculture due to lower costs of compliance. Short-term approximation costs should not be underestimated though.

Overall, the net value added, will go up as a consequence of the FTA. Especially in meat and animal fat (agriculture sub sector) if SPS is sufficiently harmonised, metallurgy, and machinery & electronics, if technical standards are sufficiently harmonised. Improvements in the distribution sector may lead to secondary positive net value added effects in the retail & wholesale sectors. Also improvements in government procurement and technical standards potentially lead to higher net value added because of regulatory cost reductions, which make sectors more competitive, allow more firms to tender and increase value added. The net value added in EU industries is also likely to go up because of (limited) production reallocation to Ukraine.

Consumers are expected to benefit significantly from the FTA, mostly because of cheaper prices for agricultural and manufacturing products and services. If sugar tariffs are dropped consumers pay less for sugar, but also the confectionary industry will benefit from cheaper prices for the major input in their production processes. Modelled reductions in tariffs in metallurgy and machinery & electronics lead to lower prices for intermediate goods, having a positive impact for price levels of consumer goods all across the Ukrainian economic sectors. In agriculture, due to the FTA, food security may increase if SPS standards are being implemented which can have a positive effect on people's health and even life expectancy. For industrial goods, if technical barriers to trade are reduced, more efficient and cleaner production may be the consequence, and more attention for workers' safety and health. The expected energy effects of the FTA are not clear. There will be more pressure for environmentally sound production of energy, which is positive for consumer health, but due to external effects, coal production with current production technologies may continue and even increase (at least in the short run) which is not a positive effect from a sustainable point of view. Lower prices for transport services due to the break up of monopolies in public transport and infrastructure may lead to better quality of transport services and cheaper prices. The same goes for financial services where clear standards, rules and regulations improve consumer confidence in the sector. Government procurement is expected to lead to public investments that are much more effective and yield higher returns with tax money, having positive effects in areas like infrastructure, construction, financial services, and communication services. Finally lower prices can spill over into the Ukrainian economy from technical standards approximation to EU legislation. EU consumers will also benefit due to increased trade with Ukraine, mostly in agricultural products and steel, which will have a downward effect on prices for consumer products and is expected to lead to more choice.

Generally – as explained under consumer effects – the FTA scenario predicts lower prices in the Ukrainian and EU economies due to the use of scale economies. In the meat and animal fat sub-sector, prices go down depending on the level of approximation of Ukrainian production standards to EU food safety rules. For sugar the drops in prices are expected to be significant and also prices for beer and wine will go down because of increased international competition. When metallurgy and machinery prices drop this will have a positive impact on downstream sectors that need steel and machines for production, also in the EU. The effects on energy prices are not clear because of other factors, outside the FTA, that have a significant impact. Energy security for Ukraine and the EU can increase because of the FTA if addressed properly in the Enhanced Agreement. Also in the services sector, international competition can lead to lower prices. If technical standards are harmonised with EU legislation, especially agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production can experience lower costs of compliance and customs controls. This is expected to lead to more trade between the EU and Ukraine and lower prices.

With respect to agricultural products the number of varieties of products is expected to increase (e.g. meat offer, wine, beer, fruits and vegetables) and the same applies to the confectionary industry with sugar as its main raw material input. For the manufacturing sectors metallurgy and machinery & electronics variety in intermediate products may increase because of the integration of the Ukrainian economy into the worldwide (and especially EU) steel and machinery production networks. For consumers, liberalisation of the electronics sector is expected to lead to more choice in terms of electrical appliances and electronic equipment. The positive effect of the distribution services on retail and wholesale will also increase varieties of products. We expect a strongly increased offer of service products from the financial sector – both from foreign and domestic suppliers – to the Ukrainian consumers, multinationals and SMEs.

Fixed capital formation

GFCF formation – the total value of additions to fixed assets by resident producer enterprises – is most commonly applied to tangible assets like plants & machinery equipment, vehicles, land-improvements and building (excluding their depreciation). But also intellectual property and discoveries of mineral deposits are included. The FTA is expected to have an impact on the GFCF in the cereals sub-sector through investments in upgrading the production methods, including the machine parks at farms. Most investments in the long run are expected in the production upgrading of the metallurgy and machinery sectors. There are large investment opportunities for EU capital in these sectors. Also in the major restructuring of the energy sector that is likely to follow an extended FTA, including energy production with open hearth furnaces, outdated coal plants, unsafe nuclear power plants, etc. large investments will occur – and are desperately needed. In the transport sector, transport equipment is expected to be upgraded to meet EU environmental standards (Euro-5 level) as part of the FTA. This also is in line with the reduction of the level of concentration in transport services. An improved competition policy – where state aid and anti-trust policies are reduced and enforced respectively – leads to more gross fixed capital formation and so do an

improved government procurement system and harmonisation in technical standards. Regarding the latter, the process of regulatory approximation of technical standards can make sectors like agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production much more attractive to investments from the EU because these sectors will get access to EU markets over time.

In the beer and wine as well as cereals sub-sectors of agriculture, we expect public and private capital formation to have positive impacts. Also private capital formation is encouraged and has a strong potential in metallurgy. The latter may improve environmental effects – i.e. cleaner production – in this sector in the longer run.

FDI is of crucial importance for the positive impacts of the FTA because it can give a boost to sectors in Ukraine that is not possible with the (limited) amounts of domestic money and with FDI come modern standards and new (read: also cleaner) production technologies. FDI can support the wine and beer industries, help in SPS approximation to EU levels and contribute to technology upgrades and more efficient and cleaner production methods using less energy in metallurgy, chemicals, and machinery & electronics. FDI in the energy sector can be used for new and ‘sustainable’ projects and upgrades of energy production, including increasing safety standards at work. The FTA is expected to increase FDI in the services sector because of its liberalisation, allowing for foreign investments, take-overs, stakeholdership, etc. Our gravity estimations show that the larger the increase in Business Climate Index (BEI), the larger the expected FDI inflows in Ukraine will be. The Ukrainian financial services sector can potentially integrate with the EU (and other) financial markets. If the broad FTA includes provisions for improving government procurement procedures, they may lead to more foreign bidders in the process. Increases in technical standards lead to more foreign investments into those sectors that harmonise enough to EU standards to get export approvals into the EU markets. The need for FDI in Ukraine, provides EU firms with large investment opportunities in the years to come.

Trade

Overall the trade balance for Ukraine will improve and for the EU it will worsen in relative terms. In absolute terms also EU exports to Ukraine will rise significantly. However, due to the fact that the trade balance of the EU is over 100 times larger than Ukrainian trade, the effects for the EU are insignificant. Improvements in the trade balance for Ukraine are expected in cereals, meat and animal fats (depending on the depth of the SPS agreement if it is included in the FTA (and EA)), machinery & electronics, metallurgy and distribution services (while an improvement for EU industries is expected in beer and wine, sugar, transport services, and financial services – these are the sectors where imports are expected to increase faster than exports). Improvements in domestic competition policy may enhance the competitive force of Ukrainian industries and will lead to a further improvement of the trade balance.

The FTA may lead to large increases in the volume of trade for cereals (if TRQs are sufficiently reduced), sugar, steel products, machinery & electronics. Growth in distribution services is limited and initial growth rates in trade in transport and financial

services are negative. Overall, FDI inflows, competition policy, simplifications and streamlining of customs procedures, clearer and more transparent government procurement procedures and harmonisation of technical standards are horizontal issues that we expect to lead to significant trade increases for Ukraine and increases for the EU also because of more understanding and mutual recognition of each others product quality.

The terms of trade apply to the Ukrainian economy as a whole and it is hard to use the sum of some sector impacts to determine the ToT impacts of the FTA. Given import prices, the terms of trade for sugar and transport services are expected to worsen, while the terms of trade for metallurgy and machinery & electronics is improving. An overall effect, however, is impossible to give due to the fact we need detailed information regarding all sectors in Ukraine.

Social sustainability impacts of the FTA

Overall, **social impacts** are closely linked to the economic impacts, which imply employment increases for both Ukraine and the EU – although the CGE outcomes may present an upper limit to this effect – and wage increases. Employment increases are lower initially and more marked in the long run, while the nature of employment – required skills and skill levels demand – may be subject to change. For the EU in relative terms the employment increases are very small, albeit that in absolute terms they are large. Wage increases that are positive for both the EU and Ukraine, next to employment effects, are important in the light of differences in regional income distribution in Ukraine. Increased employment opportunities and wages should lead to lower levels of poverty and may have a mitigating effect on labour migration. Again, the predicted effects are much stronger in the long run in an extended FTA than in the short-run and the transition from the short to the long run may bring with it losses to specific groups or regions.

The FTA is also expected to encourage an overall improvement of working conditions, health & safety standards (via regulatory approximation) and quality of work along the lines of the decent work indicators as identified by the EU and ILO. This effect will be both direct, due to the need to adjust to and comply with EU standards and more indirect, through the fact that the FTA will further encourage and speed up ongoing restructuring and modernisation in certain sectors which still use out-dated (and often more hazardous) technologies and production methods.

Finally, growth potential in some sectors, may spur investments, entrepreneurial activities and self-employment, which all have positive potential impacts on income and poverty levels.

In the longer run increased employment opportunity, but particularly increases in wages and the quality of work, may reduce out-migration of labour and particularly the worst forms of this migration: illegal migration and ‘slave’ trade of women into prostitution. As such it should improve the position of some of the weakest groups (low-skilled / uneducated and poor persons and particularly women) in Ukrainian society.

Across sectors and horizontal issues, we identify the main expected social impacts by looking at the sustainability impact indicators presented in Table 5.1.

Poverty

Most poverty in Ukraine is concentrated in the rural agricultural areas. The model outcomes for the FTA for the agricultural sector predict both employment and wage growth, which will be more pronounced in the long run. This implies poverty can be reduced, both in depth and in breadth, also through flanking policy measures as will be further discussed in Chapter 15. The positive effects would be most noticeable in the cereals, meat and animal fats and fruits sectors. Harmonisation of technical standards can further enhance agricultural performance leading to further poverty reductions. Also increasing employment opportunities in metallurgy, machinery & electronics, the electricity and distribution services sectors lead to increased job opportunities and income, hence to lower poverty levels. However, especially in the short run, large scale restructuring of the coal industry – a possible FTA outcome – would have a negative impact on poverty levels in areas where this industry is concentrated, because it raises unemployment in a sector with workers that are not easily re-allocated to other industries or sectors.

The GINI index is a measure for income equality in a country: the higher the GINI coefficient, the greater the difference between rich and poor. Since the lowest incomes are found in the rural areas and agricultural sector, predicted impacts of an FTA in terms of improvement of employment and wage levels in this sector could contribute to an improvement of the GINI coefficient – depending on the overall size of these effects. But improvement of the GINI coefficient hinges most crucially on issues that are not necessarily directly related to the FTA, such as the tax and education systems, ownership structures and factor returns. An FTA would lead to increased openness, competition and approximation of standards and regulations, in turn further encouraging restructuring and modernisation in certain sectors and the Ukrainian economy at large. As such it may indirectly affect these systems and structures, thus reducing income disparities. There are no effects foreseen of the EU Ukraine FTA on the EU GINI index.

Through various mechanisms, the FTA is expected to have regional effects in Ukraine. Regional effects are important in the country because of political sensitivities and because of regional development and poverty reduction programmes. Agricultural productivity, growth – albeit not so large in the short run – tends to positively affect the (mostly Western) rural agricultural countryside. If FDI leads to improved productivity in wine production the wine producing areas in the south of Ukraine benefit. If the FTA leads to increased importance of metallurgy and machinery, that are pre-dominantly located in the (south)east of Ukraine, this should lead to employment and income growth in these regions. Possible closure of the coal mines for environmental reasons and because of a change in the energy mix resulting from an FTA will have large negative social and economic impacts in Eastern Ukraine where most miners live and work. The development of distribution services has a regional effect in that it will benefit the industrial areas in Ukraine more than the agricultural countryside. Development in communication services is expected to be stronger for cities than for the countryside unless accompanied by

flanking measures. Also competition policy may lead to regional effects due to reductions in state aid for specific sectors and enforcement of antitrust policies in others (e.g. coal subsidies, metallurgy subsidies, agricultural subsidies, transport service monopolies). Also for the EU there may be regional effects, with the bordering countries to Ukraine being affected more strongly than those EU member states that are located further away. For example, in some ‘new’ EU member states, agricultural production may experience some pressure from the FTA, while the transport sectors are expected to benefit.

Health

Life expectancy increases when living conditions in general improve. One effect of the regulatory approximation of SPS standards to comply with EU food safety regulations and harmonisation of technical standards for industrial products to EU levels is that food quality goes up. This means that product safety and health aspects in Ukraine and the EU improve. Both these effects lead to an increase in life expectancy. Also envisaged improvements in working conditions, worker safety, and quality of work in manufacturing and agriculture will lead to higher life expectancy. On the other hand, negative environmental impacts like increased CO₂ and SO₂ emissions, more chemicals in the air, and increased water and waste pollution lead to a less healthy environment and reductions in life expectancy. In general, if poverty decreases and disposable incomes increase, people have more money and will live healthier lives, leading to higher life expectancies. For coal miners, an FTA that improves production technologies, working conditions and worker safety can have a significantly positive impact on their life expectancies. Government procurement improvements resulting from the FTA can have a positive effect on life expectancy in the long run through increase procurement quality of facilities like roads, infrastructure, hospitals, better advice and policies, etc. For the EU we do not identify any significant impact.

Studies show that higher income levels (in this case for Ukraine because of the FTA) can lead to purchase of better and more diverse food products and – based on research of the relation between income and lifestyle – a healthier lifestyle. In many sectors, worker safety and working conditions will be improved because of the FTA. Upgrading of production methodologies as well as vehicles and planes, investments in road, rail and airport infrastructure lead to more road, rail and air safety. A negative impact stems from the mixed environmental aspects related to air pollution, greenhouse gas emissions, waste increases, and chemicals in the air. Maternal and child health is likely to improve due to increasing income levels and more transparent government procurement for maternity and child hospitals. Although labour migration of health professionals (especially obstetricians and paediatricians) may have negative effects, it must be noted that such migration is still limited as long as Ukrainian diplomas and certificates are not yet recognised in the EU.

Although the ongoing process of an ageing population due to low birth rates and high mortality rates represents an autonomous demographic process, an FTA with the EU may indirectly affect this process. The extent of these effects should not be overestimated though. On the positive side, improved public health (systems) may decrease the

mortality rate, while on the negative side labour migration may reduce further the share of the working population and the availability of health professionals.

We identified no direct links between the FTA and access to health services. However, indirectly, higher incomes make it easier to access health services and improved government procurement procedures improve the quality of constructed hospitals and other health-related buildings. Services liberalisation, including mode 4, can lead to migration of surgeons, doctors and other health specialists.

There is an expected indirect positive effect of government procurement schemes on the quality and availability of sanitation. Also, if the FTA leads to poverty reductions and more unlocking of the Ukrainian countryside, sanitational quality is likely to improve. For the EU we do not identify any effects.

Through improved Ukrainian SPS standards as a consequence of the FTA effects on approximation of the EU food safety standards, meat, fruits, cereals enjoy higher quality and increased nutritional levels. Technical agri-food standards improvements have the same effect.

Education

Reductions in poverty, and increases in income will likely have a positive effect on enrolment rates, as less children will be required to supplement household income at a young age. This is a medium to long run effect, which is also strongly influenced by Ukraine's overall education policy (e.g. importance of the MDGs). However, in the short run, trade liberalisation leads to increased levels of competition in most sectors of the Ukrainian economy, which will lead to both intra- and inter-sector restructuring. Thus on the one hand this implies skills and skill levels required in specific sectors may change, while on the other hand labour will have to transfer from losing to gaining sectors. Both of these effects place an adjustment burden on the Ukrainian education system, not just in terms of the quality of existing basic and higher education systems, but also in terms of the need for adult education, vocational training, on the job training and retraining, etc. For EU educational policy and educational institutions there are cooperation opportunities (e.g. joint programmes) that can serve mutual interests.

Reductions in poverty, increases in employment and consequent increases in enrolment rates will have long term positive effects on literacy rates. However, no immediate effects of the FTA on literacy rates have been identified, neither for Ukraine nor for the EU.

Labour issues (including employment and decent work)

Unemployment overall is expected to go down. However, this is not the case for all sectors, while in Ukraine the unemployment rate is only part of the story since a large share of the Ukrainian population does not participate in the labour market and is thus not registered as unemployed. The model outcomes need to be interpreted with some caution, especially for certain sectors. Thus, although the model predicts strong employment gains

for the Ukraine, these effects may be more moderate in reality, particularly in the short run. On the one hand the current labour participation rate is low, implying that increased job opportunities may result in more people ‘returning’ to the official labour market and official unemployment figures remaining at the same level or even increase. On the other hand, in many companies more people are employed than strictly necessary. Production, sales and export growth may therefore not immediately translate into new jobs, but rather lead to increased productivity of the existing workforce.

In addition, in certain sectors the FTA will not substantially change the direction of more structural and ongoing transition and modernisation processes. Thus, for instance, in the long run the number of jobs in the agricultural sector is expected to decrease, as the sector is modernised and becomes more efficient and as employment shifts from agriculture to manufacturing and services.

At the sectoral and sub-sectoral levels effects will likely vary. For agriculture the employment effects would be negative in the short run and positive in the long run, while the nature of the jobs may change over time (more technology intensive). Employment in the meat and animal fat sub-sector would go up if SPS standards are approximated to EU levels. Also for metallurgy and machinery & electronics we expect employment to increase. The energy sector shows mixed results with employment increases for the electricity sub-sector but decreases for coal, gas and oil. In the energy sector deep restructuring is needed so in the immediate aftermath of the FTA implementation employment is expected to go down. Particularly the coal industry is expected to experience employment declines due (in part) to the FTA. Unemployment in transport and financial services sector are expected to go up but only to a limited extent. Employment changes in communication services are negligible and positive in distribution services. Increased competition policy should lead to lower margins initially and increased unemployment, especially in non-competitive (sub)sectors (e.g. transport, and meat and animal fat production). In the long run competition is good for employment as it keeps wage increases within limits and raises productivity. Technical standards are expected to have positive effects (if harmonised) for employment in agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production because approximation of standards may lead to the opening up of new, large markets and because of lower compliance costs to higher standards.

For the EU we expect very small and at most regional effects. Based on the modelling results, in-depth analyses and engagement with civil society, we see the main benefits for the financial sector, transport sector and sugar sector if the extended FTA scenario is analysed. However, also very small positive effects occur in leather products, beverages and tobacco sectors in the EU. There are negligible negative effects in the wearing apparel, vegetable oils & fats and oil & petroleum production sectors as the FTA will cause a small shift towards Ukraine.

As becomes clear from the above, the effect of the FTA on employment opportunities would be on the one hand more of the same type of jobs and on the other hand new and/or different jobs. Examples of the first effect would be the metallurgy sector, and machinery & electronics sector, where more similar jobs are expected to be created due to increased

outputs of those sectors. At the same time, in the coal industry and in some service sectors, employment opportunities will likely decrease. Examples of the second type of effect include agriculture, financial and transport services. The nature of employment in agriculture will change due to mechanisation. This will have implications for the skills required for these jobs, for instance the use of new tractors and machines (e.g. hydraulics, electronics), IT skills for administrative and management purposes, knowledge of dosing, use and registration of pesticides and fertilisers etc. and the acquisition of certain certificates (e.g. EUREP-GAP). Government procurement and competition policy is expected to generate further employment opportunities in the long run.

For the EU there are employment opportunities in the sugar and confectionary industry as well as in beverages (beer & wine mostly) and tobacco sectors. In the service sectors, most employment opportunities are created in the financial services sector.

In financial services and transport services wages are expected to decrease and so are wages in the coal industry. The effects on agricultural wages are expected to be mixed, with positive effects for the meat and animal fats sub-sector, if SPS standards are harmonised. Competition policy will lead to less protection and a downward pressure on wages initially. In the longer run, competition policy will make Ukrainian firms more competitive internationally and with rises in productivity allow for rises in wages. As explained in the above, increased overall wage levels should lead to poverty reduction and improvement in health and education levels.

In the EU overall, the wages will go up also, albeit with a very small amount.

In service and manufacturing sectors with a high minimum efficient scale (MES), such as metallurgy, chemicals and machinery, the possibilities for self-employment are low due to minimum investment levels needed to start up a successful business. However in agriculture, and various services sectors (communication, financial) these possibilities exist. The FTA will have a positive impact on self-employment in these sectors if at the same time, red tape and bureaucracy around setting up new businesses is significantly reduced. Since cutting these costs is part of the border and standard costs reductions in the FTA, this is an expected impact for Ukraine.

Overall, productivity is expected to increase for various reasons. For Ukraine, first, improved competition because of the FTA will force firms and industries to become more efficient in order to survive. Second, increases in investments in (new) production technologies and updated and cleaner machinery, R&D as a consequence of the FTA, would lead to higher levels of productivity. Finally, improved government procurement procedures will lead to more competition and pressure to perform on the part of the tenderers. These effects would be particularly noticeable in certain (sub) sectors. With respect to agriculture (livestock), gross inefficiencies of many pig-breeding and cattle-breeding enterprises and outdated production methods exist according to sector experts that were interviewed. These inefficiencies will alter potentially because of the FTA. Metallurgy and machinery are expected to increase productivity over time as investments come in. In turn, higher productivity also allows for payment of higher wages in various sectors of the Ukrainian economy. The FTA envisages the energy sector to become more productive by aiming for the use of more gas and for improving energy efficiency in the

production of electricity. For the EU, EU capital will be an engine to increase productivity and therefore capital returns.

The enforcement of competition policy as part of an EU-Ukraine FTA is expected to have rather ambiguous social impacts. The key issues to be negotiated within future FTA - state aid, anti-trust, and state monopolies policies – should increase competition in the most monopolised sectors and in general improve the overall competitiveness of Ukrainian enterprises. This would lead to a downward pressure on goods and service prices. On the other hand, increased competition also creates pressures to reduce costs and raise labour productivity, thus leading to potential employment reductions. These effects are expected to be most pronounced in sectors with highly monopolistic structure and state ownership dominance, such as transport and telecommunications, energy and coal industries. These would all be long term effects.

The FTA clearly puts sustainable development as a top priority in the negotiations. We assumed in the modelling a reduction in differences in technical standards, which should be achieved through adoption of EU technical standards. Not automatically, but in addition to the existing FTA, policy measures could be developed to include environmental, health and safety aspects with regard to the work place and methods. Indirectly, restructuring and modernisation should lead to the adoption of safer and cleaner technologies and working conditions in sectors such as metallurgy, machinery & electronics, transport and the coal industry. In the energy sector, improving safety standards and their monitoring and implementation related to nuclear energy is envisaged. Likewise, inflows of FDI would lead to upgrading of machine parks, introduction of cleaner production methods, increased worker safety, and increased health standards at the workplace, e.g. through corporate social responsibility (CSR) schemes on the part of the foreign investors. For the EU there may be some very small and regional competitive pressures but overall the EU serves as an example for quality of work standards for the Ukraine.

The FTA impact on rights at work and social protection would take place both through the adoption of standards and FDI inflows (see above remark about CSR). However, most of the effects will likely be indirect and require specific policy measures to take place that will be assessed in Chapter 15. In principle the EU approach to the FTA is to grant Ukrainian workers reciprocal rights that EU workers currently enjoy in Ukraine and looking ahead to Chapter 15, social protection will likely be dealt with under the enhanced agreement.

There are no identified direct effects of the FTA on social dialogue. However, overall, the FTA will lead to restructuring of the Ukrainian economy and gains and losses across sectors and high-skilled and low-skilled workers. This will likely lead to a more active involvement of social partners to protect and assert worker's rights. Such active involvement would of course depend on their ability to strengthen their capacities and the willingness of the Ukrainian authorities to enter into a dialogue.

Equality

As simulated in the CGE analysis, the main FTA effect on gender equality would occur due to the expected substantial employment increases in the textiles and wearing apparel sectors (if technical standard procedures are cleared). Given the fact that many women work in these sectors this would have a positive impact on gender equality in terms of labour participation rates. However, wages in this sector are usually among the lowest and labour circumstances remain an issue of international debate as the sector often employs young women known to be cheap, docile and often unorganised. The effect in terms of the income gap may thus be limited or even negative, while labour rights for women may also come under pressure.

There are no identified effects of the FTA on gender equality in education.

Environmental impacts

With respect to **environmental impacts**, increased production, growth and employment have potentially negative effects on the environment, air quality, biodiversity, land use, water use and overall environmental quality.¹ The FTA however, could include provisions for upgrading environmental standards and include the environment as a sustainable factor for long-term development at an early stage – This will be done in Chapter 15.

Across sectors and horizontal issues, we identify the main expected environmental impacts by looking at the sustainability impact indicators presented in Table 5.1.

Atmosphere

Growth in the metallurgy, machinery, energy and transportation sectors will likely lead to negative environmental impacts with respect to CO₂ emissions (energy in the short-run) as well as to greenhouse gas emissions in general. For machinery & electronics, there is evidence of increased (though for the EU negligible) SO₂ and NO_x emissions. Production upgrading and the use of ‘cleaner’ technologies are impacts expected to occur because of the FTA can mitigate these effects somewhat. If energy restructuring leads to an intensified use of coal as the main source of energy, this may have very negative environmental impacts due to the pollution of the current coal mining process itself and because of the use of coal for electricity generation (Ukrainian coal contains a high level of polluting sulphur).² A smaller transport sector, combined with expected standard upgrading (e.g. car emissions from Euro-2 to Euro-5 level) is expected to lead to lower CO₂ emissions. Competition policy is thought to have mixed effects on CO₂ emissions: initially environmental concerns may be neglected due to competitive pressures, but in the long run, environmental aspects will be priced into the market. Government

¹ Ukraine needs to take care not to go back to the pollution levels of the final years of the Soviet period.

² However, if Ukraine joins the Memorandum of Understanding on Energy or the Energy Treaty, these effects are addressed and mitigated.

procurement system improvements can have significant positive impacts on CO₂ emission reductions. A first example of this development could be the ‘green scheme’ of the Kyoto protocol but also joint implementation projects can be developed. Ukraine signed the Kyoto protocol but remains below the boundary of emission rights, increasing potential for higher production or re-allocation of production from somewhere else.

For the EU the FTA has potential impacts of the CO₂ emissions in that the FTA may prompt re-location of the EU industries to Ukraine that may reduce CO₂ emissions in the EU. Also, in the short run, when polluting industries grow, CO₂ emission levels in the eastern part of the EU may increase and only in the longer run decrease again.

Revival of the agricultural industry and productivity increases can lead to more intense use of pesticides used for crop (e.g. cereals, fruits) protection.³ If the number of livestock increases, more methane gas is going to be produced in agricultural areas. Manufacturing sector growth like metallurgy can have a negative impact on air quality due to increased levels of pollutants in the air and greenhouse gas emissions. In general, air pollution in Ukraine is significant with greenhouse gas and SO₂ and NO_x emissions into the atmosphere and it is likely to increase. Moreover, since air does not stop at borders, these environmental effects also partially spread over to the (eastern) EU. Also, a shrinking transport sector is expected to lead to less emissions and improvements of air quality if not offset by increases in cars on the Ukrainian roads. Competition policy and government procurement can have similar effects as mentioned above under ‘CO₂ emissions’. The EU effects mentioned under CO₂ emissions apply equally to air quality.

In line with the arguments presented in the previous impact descriptions, agriculture growth may bring associated problems with eutrophication and the use of chemicals and dangerous pesticides. Like in the cereals sector, increased fruit production may lead to increased use of fertilisers and pesticides in order to increase fruit production output. This will have adverse environmental effects. Metallurgy growth leads to potentially more pollutants in the air and greenhouse gas emissions. Also aerial pollution is significant and is likely to get worse unless the FTA clearly breaks with past Ukrainian (energy) production methods and sets new standards.

Land

Livestock increases in the meat production sub-sector of agriculture, and the gross inefficiencies in production can have a negative impact on land use in agriculture. Increased amounts of livestock also potentially bring problems with methane gas and phosphates and nitrates – though Ukraine is still far from the level of urgency of these issues that has been reached in the EU.

Especially open coal mining, and the use of hearth furnaces, are expected to have a continuing negative impact on Ukrainian lands. If in the short run, the coal industry will

³ FTA provisions could cover these issues in flanking policy measures as will be explained in Chapter 15.

grow this effect may exacerbate.⁴ More intense use of agriculture is also likely to lead to a 'giving land back to nature' tendency. No significant EU effects are expected.

We expect migration effects from rural agricultural areas to the cities to continue and even be encouraged by the FTA because of growth of manufacturing and services sectors relative to the agricultural sector. Wage differences that increase over time between cities and villages will also lead to more urbanisation. For the EU no significant effects are expected.

The FTA is expected to lead to an increased use of natural resources, but less so than the growth rates of certain sectors would predict because the FTA in the longer run also facilitates and encourages more efficient energy use and 'cleaner' means of production. The use of coal, oil and gas is expected to increase because of increases in production. In the meat sector, the number of livestock will increase and the concept of bio-industry may be gaining ground to combat gross inefficiencies of many pig-breeding and cattle-breeding enterprises and outdated production methods.

Biodiversity

There are no indications that the FTA will have a significant impact on the number of species in Ukraine or the EU.

There is no significant impact of the FTA on protected areas. However, the increased attention in the FTA for environmental concerns can have a positive impact on real protection of protected areas and increase their number and size. Inclusion of sustainable development in government procurement procedures and Ukrainian authorities' thinking will also have an impact. Next to this being a model assumption, it also will come back in Chapter 15 as a policy recommendation.

The ecosystems in Ukraine and the EU may – to a limited extent – be affected by the FTA. Livestock increases and meat production bring with them the problem of eutrophication, increased agricultural production may increase the use of pesticides and chemicals in the air and water and waste pollution of metallurgy and energy production can also negatively affect the ecosystem. Less transport services lead to improvements (read: decreases) in CO₂ emissions but in the long run, when transport services start to grow this effect may be reversed. Longer run effects involve upgrading to 'cleaner' production methods and investments in waste processing. Ukraine signed the Kyoto protocol but remains under the boundary of emission rights, increasing potential for higher production or re-allocation of production from somewhere else. For the EU the small impact may be an improvement of the ecosystem due to re-allocation of industries to Ukraine and due to re-allocation of some agricultural production to Ukraine – both of which reduce the pressure on the EU ecosystem.

⁴ The impacts of the envisaged government procurement that include environmental standards and an attitude of awareness in general for environmental issues, can lead to combating desertification.

Environmental quality

Waste management applies mostly to the energy sector, metallurgy and chemicals sectors. The FTA is expected to lead to more wastewater production but also to more environmental care to address the management of waste production through FDI and production upgrading. Wastewater increases involve toxic side-products in metallurgy production, coal mining and gas transport through pipelines (gas leakages). Especially wastewater management in the Black Sea region is also potentially affecting the EU as Ukraine's sea waters are close to those of Romania and Bulgaria, EU member states.

Traditionally, many energy resources have been and are wasted in Ukraine through inefficient extraction methods and the use of heavily outdated and energy wasting production equipment and techniques. In the short-run, our analysis expects the FTA to lead to increased coal production and increases in CO₂ emissions. Only in the long run, and after significant investments, the FTA may lead to significant improvements in the creation and use of energy resources. Growth of the economy and specific sector growth will lead to the use of much more energy. Through investments, foreign and domestic, the FTA can enhance production techniques and reduce leakages of energy in metallurgy production, machinery production, chemicals production, etc. This will make the sectors more competitive (important in an age of rising energy prices) and energy-efficient. Coal extraction is very inefficient in Ukraine and so is electricity generation, which leads to negative impacts on Ukrainian ecological standards. In addition to the traditional sources of energy, sunflower seed oils and cereals are more and more used as bio-fuels.

For the EU an intensified agreement with Ukraine has the potential impact of higher energy security and increased energy interdependency. Through EU funds and FDI, the Ukrainian energy sector may increase efficiency and energy exports to the EU.

Fresh and waste water

Overall, water use is expected to increase because of the FTA as water is used for irrigation in agriculture, input in metallurgy and machinery production. Also, macro-economically, if incomes rise, consumers start using more water. For the EU, no impact of the FTA on quantity of water use is expected.

There are potential negative effects of environmental and wastewater pollution on access to safe drinking water. This FTA impact has however not been found, neither for Ukraine, nor for the EU.

Ukraine has to be careful with the water quality – keeping in mind the enormous pollution of water in the late Soviet period – when more fertilisers and chemicals are used in agricultural production (e.g. cereals, fruits). Also the metallurgy sector seems to create a negative environmental impact by water and waste pollution generation. However, we need to note that economic growth in general has these environmental impacts unless sustainable growth allows policy makers to address the polluting issues *ex ante*. The FTA is expected to lead to more growth and thus to growth of industries that can affect the

water quality. There is space for flanking measures here. For the EU, FTA impacts on water quality are not found.

The quantity of wastewater in Ukraine is expected to go up due to sector growth as a consequence of the FTA. Especially in metallurgy this environmental impact is expected. For the EU no such effects are found.

Regulatory approximation of environmental standards envisaged are designed to lead to higher environmental standards, including the cleaning of waste water (see also the section on water quality above). However these effects will be dominated by the increased need of cleaning of wastewater due to larger amounts of wastewater production as a consequence of the FTA. For the EU impacts in cleaning of wastewater are not found.

The FTA will impact the utility companies by introducing more market access and thus competition as well as increased competition in the government procurement markets. These improvements in public utilities as a consequence of the FTA can have a positive impact on quality and productivity of water utilities, including the water supply. For the EU no significant impacts of the FTA on the water supply are envisaged.

Policy implications

The sustainable impact assessments show the expected economic, social and environmental effects for the FTA overall and for the various sectors and horizontal issues. Sometimes care needs to be taken in interpreting these impacts as they may stem from the model assumptions in the first place. The latter may lead to the idea that a policy measure is already in place even though it is just a model assumption that has specific impacts if agreed and implemented. The economic, social and environmental effects show a very diverse and mixed picture. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts.

Institutional setting and rule of law

Most of the potential sustainability issues have not been experienced in Ukraine before. Efforts to improve social and environmental quality are recent. Because of this, especially concerning social and environmental sustainability, many of the structures required for the mitigating (flanking) measures do not yet exist. This is especially important, for example, for SPS approximation and Technical Standards. In cases where a political and economic consensus exists, there is usually a fully effective regulatory body, which is not the case for Ukraine in many instances. The role of the EU in acting to mitigate the negative sustainability consequences of the EU-Ukraine FTA could find its way through support efforts in institutional design, research efforts and an EU-Ukraine educational dialogue.

The sectors where the sustainability impacts have been most noted are the greatly (economically) benefiting manufacturing industries. As the sustainability impacts are closely related to existing effects, the mitigating measures must address the underlying situations affecting these sectors. In developing the approach, an important question to be

asked is why an existing regulation has not already been effectively addressed. It may be due to lack of resources (trained personnel, financial resources), to a sub-optimal regulatory system or to a lack of consensus about objectives, leading to evasion of regulation.

A crucial part of the institutional setting is the implementation and institutional approach to implementing an objective ‘rule of law’. This is perceived by policy makers and businesses as an important problem. Judicial reforms, independence of the judiciary, and an effective fight against corruption at all layers of the administration/society are crucial for the success of the FTA.

Technology transfer

In a number of sectors in Ukraine there are factories that do not have access to pollution-reducing technology, although other companies may well have this access. The objective of technology transfer as a mitigating action is to provide the technical means to reduce various forms of pollution that would otherwise result from increased production from the EU-Ukraine FTA. The sectors where such an action could prove useful include mining and metals, food processing, chemicals, and machinery & electronics. Care will have to be taken to avoid giving unfair advantages to plants that are assisted with technology transfer and to avoid providing a disincentive to companies to invest themselves in pollution reducing equipment.

Monitoring

Periodic monitoring and evaluation should analyse the impact of the EU-Ukraine FTA (and thus implicitly the projections contained in this study); and the relevance and impact of the mitigation and enhancement measures adopted. The aim should continue to be to understand why, how and where sustainability impacts occur; what can be done to ameliorate the sustainability impacts; and what counteracting policies do and do not work and why. The aim of monitoring and evaluation is thus both continuing analysis and policy prescription and should cover both the trade policy itself and the mitigating measures.

FTA related policy measures

Economic

FTA policy measures to address economic impact issues may include:

- The establishment of a **transition period** for (1) the agricultural sector and specifically the meat and oils sub-sector, the beer & wine sub-sector and the sugar & confectionary sub-sector; (2) Machinery and Electronics sector; and (3) the services sub-sectors transport, financial services and retailing;
- Improvement of the **investment climate** through trade facilitation measures, a stable macro-economic climate and lower alleged levels of corruption;
- Promote **entrepreneurship and SME development**. In part this would be achieved through improvement of the investment climate and further development of the SME policy, but a number of additional measures, sometimes linked to social policies could be beneficial as well (see Chapter 15);

- Enhancement of approximation and adoption of EU **SPS and technical standards** – particularly in agricultural sectors, transport, machinery & electronics, textiles & wearing apparel – through upgrading of laboratories, revising of SPS and other control systems (certification), capacity building for relevant institutions;
- Strong emphasis should be placed on **approximation of the EU *acquis*** in various areas. E.g. services trade, SPS, technical standards, government procurement and intellectual property rights. This will lead to lower NTB levels, greater economic integration between the EU and Ukraine and more benefits from a potential FTA;
- Inclusion of a ***Sustainable development chapter*** to the FTA, including a possibility to establish a Trade and Sustainable Development (SD) Forum providing for consultation with civil society.

Social

FTA policy measures to address social impact issues may include:

- ***Sustainable development chapter*** to the FTA. Social clauses in this chapter could include for instance: commitment to effective implementation of core labour standards and other basic decent work components, agreement to ratify the ILO standards concerned, reporting on general progress, engagement to respect the OECD Guidelines on Multinational Enterprises and the ILO Tripartite Declaration on Multinational Enterprises and Social Policy, and not to lower labour standards in order to attract foreign investment;
- Possibly develop – in the scope of the SD mechanism - review mechanisms and conduct **ex-post impact assessment** studies to evaluate impacts in particular areas of concern, e.g. through a Trade and SD Forum providing for consultation with civil society.

Environmental

FTA policy measures to address social impact issues may include a

- ***Sustainable development chapter*** to the FTA. Environmental clauses in this chapter should include for instance: commitment to multilateral environmental agreements, such as the Kyoto Protocol, creating a system of standards for objective measurement of pollution, engagement with respect to the Kyoto protocol guidelines, and possibility to establish a Trade and SD Forum providing for consultation with civil society on particular areas of concern in the context of environmental impacts;
- Incorporate the **upgrading of Ukrainian engine technology** to EU standards (currently Euro-4 or Euro-5) and provide incentives for the upgrade like access to the EU or lower environmental tax obligations;
- Tie the speed at which sector liberalisation takes place, i.e. may produce and export to the EU (support trade and services flows) or obtain other benefits to the level of environmental progress in that sector;
- Fast-track for **trade liberalisation in environmental goods and services** between the EU and Ukraine;
- Include **environmental standards** in discussion about state aid reductions and competition policy;
- Temporary **funds for upgrading production methodologies** and inclusion of environmental concerns in production can be provided by the Ukrainian authorities.
- Include **environmental standards in government procurement tenders** – e.g. in the evaluation grids of government procurement tenders.

Broader policy measures

Economic

The main policy measures addressing economic impacts should be aimed at enhancing the positive effects of investments, restructuring and modernisation and SME development.

- Improvement of the **Investment Climate** and investment promotion. Policy measures to achieve this range from the promotion of macro-economic stability to reductions in the cost of doing business (see Chapter 15) and implementation of the rule of law;
- Encourage **restructuring and modernisation** of economy and particularly specific sectors. Such sectors would include coal mining, metallurgy and agriculture (see Chapter 15). The restructuring programmes and trajectories followed by the steel sectors in the new member states and accession countries could serve as an example of how to set up such programmes;
- Promote developments in the ‘**rule of law**’, especially with respect to implementation. This is perceived as a core problem, also for successful implementation of the FTA. Judicial reforms, independence of judiciary, and an effective fight against corruption at all layers of the administration/society need to be initiated by the Ukrainian authorities;
- Encourage **business-to-business contacts** in order to be able to exchange best practices, have EU business serve as specific examples for Ukrainian entrepreneurs and policy makers and develop business links that facilitate production and international trade.

Social

The main policy measures to mitigate negative and enhance positive social FTA impacts relate to:

- Encourage the involvement of social partners and civil society in the design and implementation of social policies. This would imply the need for an inclusive approach by Ukrainian authorities and the need for capacity development to act as legitimate and well informed partners for dialogue on the part of the social partners;
- Encourage **employment creation** and promote **improvement of labour conditions** (see Chapter 15);
- Promotion of **SME development and entrepreneurship** as new sources of employment creation;
- Support **adoption and implementation of EU labour standards and decent work principles** in Ukrainian business and society;
- Provide **skills retraining** in short run and refocus and improve **training and education** system in Ukraine for longer run (see Chapter 15);
- **Address migration issues** (labour migration, illegal migration, brain drain) in concerted and cooperative way (see Chapter 15);
- Develop **regional strategy** to deal with issues regarding regions suffering from industrial decline and migration (for EU, address this issue through structural funds instrument);
- Work towards approximation of the law on **equal rights of women** with the relevant EU *acquis*.

Environmental

- Develop a **regional strategy** to deal with issues regarding regions suffering from changes in land use and environmental degradation. Include biodiversity issues and the promotion of alternative land uses, e.g. for bio-fuels;
- Include environmental provisions in government procurement tenders and make them part of the evaluation grid;
- The moment Ukraine meets pre-defined obligations and standards, commence negotiations with Ukraine on the Energy Community Treaty;
- Compensating increased greenhouse gas emissions with Joint Implementation (JI) and emission trading with the EU partners;
- Increase in nature conservation and soil remediation projects;
- Regulate transport related carbon dioxide emissions (CO₂) and volatile organic compounds (VOC) in accordance with the Best International Practice;
- When devising investment promotion schemes / encouraging inward investments, give priority / provide extra incentives to environmentally sustainable investments, solutions and technologies.

1 Introduction

1.1 Aims of the study

The Trade Sustainability Impact Assessment methodology is set up for two major reasons:

- To analyse the **economic, social and environmental impacts** in advance of policy decision making in order to include sustainable development goals in trade policy. This aim is achieved in this report by using analytical tools (CGE modelling) and causal chain analysis in a scientific and objective manner.
- To **involve civil society in a dialogue on trade policy and trade policy issues**. This aim is achieved in this report by actively engaging with civil society at various stages of the report development, including dissemination of results.

In order to achieve these goals, the study has been carried out in three intertwined parts:

- Phase 1: The Global Analysis of the economic relations between the EU and Ukraine and first economic impact analysis;
- Phase 2: The in-depth analysis of sectors and horizontal issues, including economic, social and environmental impacts;
- Phase 3: Policy measures, including flanking measures, to maximise the outcome of the FTA negotiations.

Phase 1: The Global Analysis

In the Global Analysis part, we make a preliminary assessment of the economic impacts of trade and investment liberalisation measures which can be taken within the framework of the EU-Ukraine FTA negotiations as part of the overall objective of the study. For the Global Analysis part, the following specifications have been presented in the assignment:

‘Describe in a preliminary overview the baseline scenario, with focus on WTO commitments and selected sensitive areas, define two scenarios of likely outcome of the negotiations and propose selected sectors and horizontal measures for in-depth analysis’

As outcomes, we provide a general economic analysis of the Ukraine and EU, assess the quantitative impacts of the EU-Ukraine FTA on both economies through CGE modelling and propose five sectors and three horizontal issues for in-depth study based on a screening and scoping exercise.

Phase 2: The in-depth study of sectors and horizontal issues

In the in-depth studies, we analyse the economic, social and environmental impacts of trade and investment liberalisation measures which can be taken within the framework of the EU-Ukraine FTA negotiations:

‘The Trade SIA should address how the trade and investment provisions of the Enhanced Agreement under negotiation could affect social, environmental and developmental issues in the EU and in Ukraine’.

Also, actively, we consult civil society through the TSIA workshop, public meetings and in-depth interviews based on interim report outcomes.

Phase 3: Policy recommendations and flanking policy measures

In the final part, presented in Chapter 15, we broadly recommend two types of policy measures: policy measures concerning negotiation positions and policy measures that aim to maximise the positive FTA impacts and minimise its negative effects (flanking measures). These policy measures are based on the impact analyses of the earlier parts of the study. Also during this part, we heavily involve ourselves with civil society and its representatives to discuss the results and outcomes.

1.2 Description of the structure of the report

This final report is structured in such a way as to combine the methodological aspects with the empirical and policy outcomes and to combine the three sub-parts of the study into one coherent result. At all times, we focus on maintaining the following aspects as core issues throughout the report:

- Clearly look at and present the assumptions we make throughout the report;
- Clearly look at the FTA as coming ‘on top of’ WTO obligations for Ukraine;
- Clearly look at the FTA from both the Ukrainian and EU sides (e.g. in terms of modelling, impacts and policy recommendations);
- Clearly present the involvement and outcomes of our engagement with civil society.

First, in Chapter 1, we present the Trade Sustainable Impact Assessment methodology, based on the DG Trade Handbook (2006). In there we show the various steps from the global analysis part, the CGE modelling, causal chain analysis to in-depth sector and horizontal issue studies to reach policy recommendations in support of the FTA negotiations.

Given the importance and weight placed on civil society consultations, we present the ways in which ECORYS and CASE Ukraine have presented results to and interacted with representatives of civil society (e.g. via the TSIA workshop, public meetings, digital consultations and private interviews and discussions). This has resulted in a clear and constructive involvement of civil society and key stakeholders throughout the study.

In Chapter 3 we investigate the strengths and weaknesses – at present – of the Ukrainian and EU economies. We look at the way the economies are structured and the way they interact with the rest of the world (through trade and FDI), also in terms of social and environmental state of affairs. Towards the end we narrow the analysis down to the trade issues likely to be discussed during the FTA.

Chapter 4, the macroeconomic analysis, represents the quantitative core of the study in which we explain the CGE model used, the assumptions and restrictions as well as the

two scenarios (including underlying assumptions regarding tariff and non-tariff barrier reductions). We include more dynamics into the CGE model and add a gravity analysis on FDI to complement the general equilibrium analysis. Chapter 4 also summarises the CGE overall and sector-specific outcomes in terms of changes in welfare, prices, output, imports, exports and employment.

The screening of sectors and horizontal issues – prioritisation to determine where to focus with the in-depth analysis – takes place in Chapter 5. Based on four criteria, we determine what sectors and horizontal issues are most important and warrant a deeper analysis. For each of the sectors and horizontal issues, we also investigate the scope of the research that needs to be done – a preliminary analysis of the key issues per sector and horizontal issue.

Chapters 6 to 13 cover the in-depth analyses of the screened (and scoped) sectors and horizontal issues. In these Chapters, the following sectors and horizontal issues are carefully analysed, based on the CGE outcomes, in-depth theoretical and (local) empirical research and consultations with civil society: agriculture (including various sub-sectors), metallurgy, machinery & electronics, energy, trade in services (including various sub-sectors), competition policy, government procurement and technical standards.

Chapter 14 summarises all economic, social and environmental impacts of the FTA. More focus is put on the social and environmental impacts that are the consequence of changes in the production structure because of the FTA. Because the economic impacts of the FTA are significantly positive, but the social impacts show ambiguous picture and environmental effects may be significantly negative, we believe extra focus on social and environmental impacts is justified. This Chapter provides also additional insights into the impacts of the FTA by looking at the sustainability (core) indicators instead of at the analysed sectors and horizontal issues. As such this analysis is more broad and links the impacts direct to the indicators that matter for sustainable development.

The final translation of our study, from CGE modelling to in-depth analysis and impact assessments, into flanking policy recommendations is carried out in Chapter 15. In a general form, we present – in line with best economic practice – policy suggestions for the negotiators as well as flanking policy recommendations to enhance the positive FTA impacts and mitigate the negative ones.

The final Chapter of the report, Chapter 17, concludes.

Additionally, in the various Annexes, we provide more details, additional information that is not at the core of the final report.

1.3 Sources of information

Throughout this study, we use various references (See Annex I) but the main ones are mentioned below:

- The Partnership and Cooperation Agreement between the EU and Ukraine;
- EU-Ukraine Action Plan in the context of the ENP;

- The Terms of Reference for the TSIA if the FTA in the framework of the Enhanced Agreement to be negotiated between the EC and Ukraine;
- The Handbook for TSIA's, EC, External Trade, March 2006;
- Guidance and Note provided to the Contractor during the kick-off meeting of 7 February 2007;
- CEPS (2006), "The prospects of deep free trade between the EU and Ukraine";
- CASE (2006), "Prospects for EU-Ukraine Economic Relations".
- ICPS (2007), "Free trade between Ukraine and the EU – an impact assessment "
- Further references in Annex I.

1.4 Explanation of the conclusion tables

At the end of each Chapter in which sectors and horizontal issues are analysed, we present the conclusions for that sector (or horizontal issue) together with a conclusion Table in line with the Trade SIA Handbook. The Table summarises the effects of the FTA for the selected economical, social and environmental indicators for sustainable development. Table 1.1 below shows an example of this kind of conclusion table of the effects with all the specific indicators. For each indicator there's an indication of:

- Overall direction and magnitude of change from baseline (WTO accession) scenario;
- Extent of existing economic, social and environmental stress in affected areas;
- Equity of change: how it affects different sectors of the population;
- Potential for irreversibility;
- Regulatory and institutional capacity to implement ameliorating measures.

The symbols for impacts:

- Insignificant impact
- △ Positive, less significant impact
- ▽ Negative, less significant impact
- ↑ Positive and negative impacts to be experienced
- ? Net effect uncertain
- ▲ Positive, highly significant effect
- ▼ Negative, highly significant effect

Additional symbols used:

- (--, -, 0, +, ++)
- Existing conditions, where:
 - = Important existing stress
 - ++ = Absence of stress
- Yes Potential for reversibility
- No Irreversible
- L Low capacity to change
- M Medium capacity to change
- H High capacity to change

Table 1.1 Example conclusion table

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income					
Fixed capital formation					
Trade					
Social					
Employment & decent work					
Poverty					
Equality					
Health					
Education					
Environment					
Atmosphere					
Land					
Bio-diversity					
Environmental quality					
Fresh and waste water					

2 Trade SIA Methodology

2.1 Introduction

The TSIA methodology has been developed during the 1990s to support policy makers and trade negotiators to get a better picture and idea of the expected economic impacts and sustainable impacts (social, environmental) of FTA negotiations. Currently, all EU policy measures are carried out in parallel to or after a sustainability impact assessment has been carried out.

The TSIA methodology consists of a few core components. These core methodological components are:

- Causal Chain Analysis (CCA);
- Scenario analysis and CGE modelling;
- Sector case study methodology;
- Consultation and dissemination strategy.

2.2 Causal Chain Analysis (CCA)

CCA is a conceptual tool used to identify the relevant cause-effect links between the trade measures proposed and the economic, social and environmental impact this trade measure may have. What is imperative for a realistic impact assessment is that the CCA is applied to *significant* links between trade negotiations and their impacts. In the first part of the TSIA CCA is used to provide insights into the Global Analysis, as a tool to provide preliminary screening and scoping as well as indicating possible priority issues.

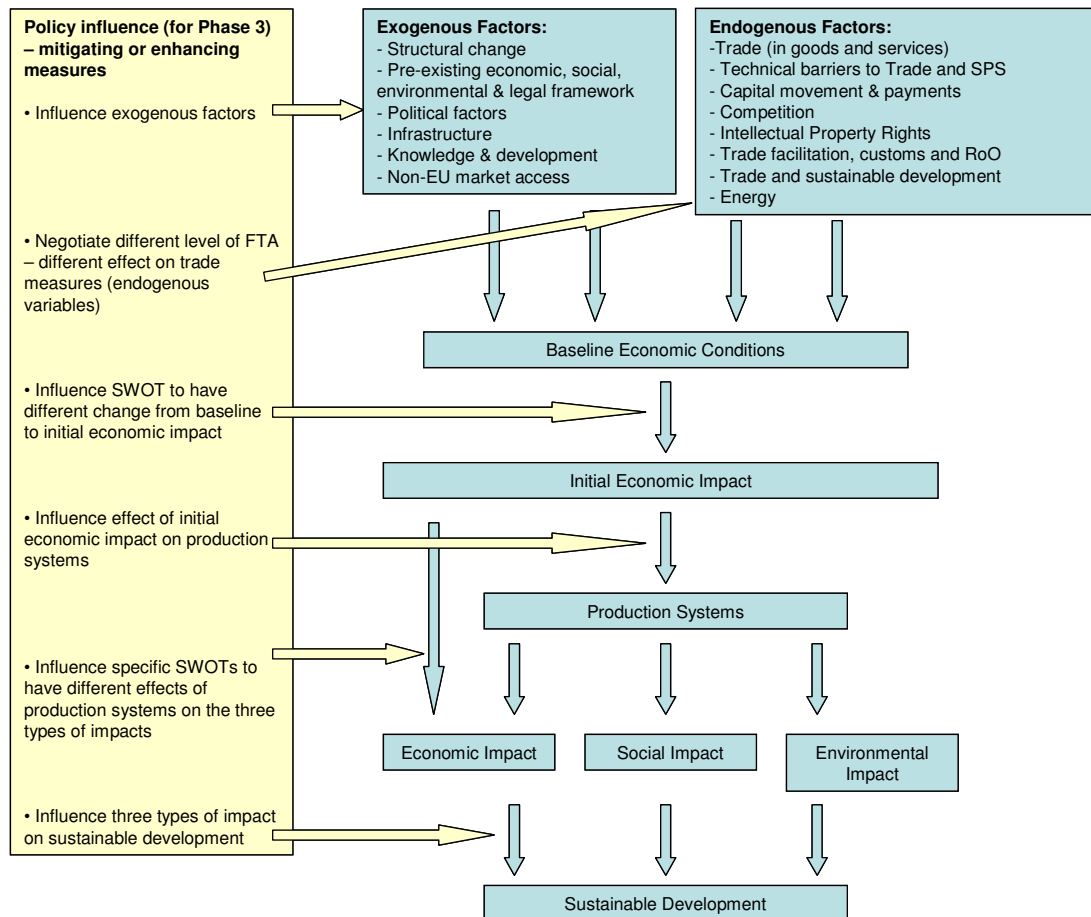
Figure 2.1 shows – in a slightly adapted way compared to Chart 3 of the ‘Handbook’ (p. 35) how we view the way Causal Chain Analysis should be applied within the TSIA framework for the Global Analysis part of the study.

Exogenous and endogenous factors influence a baseline (pre-defined) scenario. The exogenous factors are present but determined elsewhere, while the endogenous factors are the possible change variables because of the FTA negotiations within the Enhanced Agreement between the EU and Ukraine.

The change in baseline scenario to initial economic impact as a consequence of the FTA negotiations depends on the strength of specific effects (like for example the size of sectors, levels of international trade, market structures or regulatory environment). Subsequently, the initial economic impact affects the production structure which in turn affects the economic, social and environmental impacts. This means there is an indirect

effect of the initial economic impact on the specific fields. On top of that there is also a direct influence of economic impact. Finally, the economic, social and environmental impacts of the FTA negotiations between the EU and Ukraine determine sustainable development.

Figure 2.1 Causal Chain Analysis: from trade measure to impact on sustainable development



The effects of the FTA negotiations on sustainable development therefore run through the light blue arrows. For example, if the FTA between EU and Ukraine alters the regulatory framework regarding technical standards of agricultural products (technical barriers to trade), the baseline economic scenario changes because trade patterns change, and so do (international) market conditions for producers and consumers. This will change the behaviour of (agricultural) producers as well as EU and Ukrainian consumers (following price changes) which in turn will have an economic, social and environmental impact – related to sustainable development.

However, in addition to the ‘Handbook’ we show also – already at this stage – how via the light yellow arrows, policy measures taken (enhancing or mitigating) can influence the various cause-effects. Thus Figure 2.1 shows how at what stages flanking policy measures may increase the positive and mitigate the negative impacts of the FTA negotiations between the EU and Ukraine, since we believe policy can influence various stages and ‘should not wait till the effects are over’.

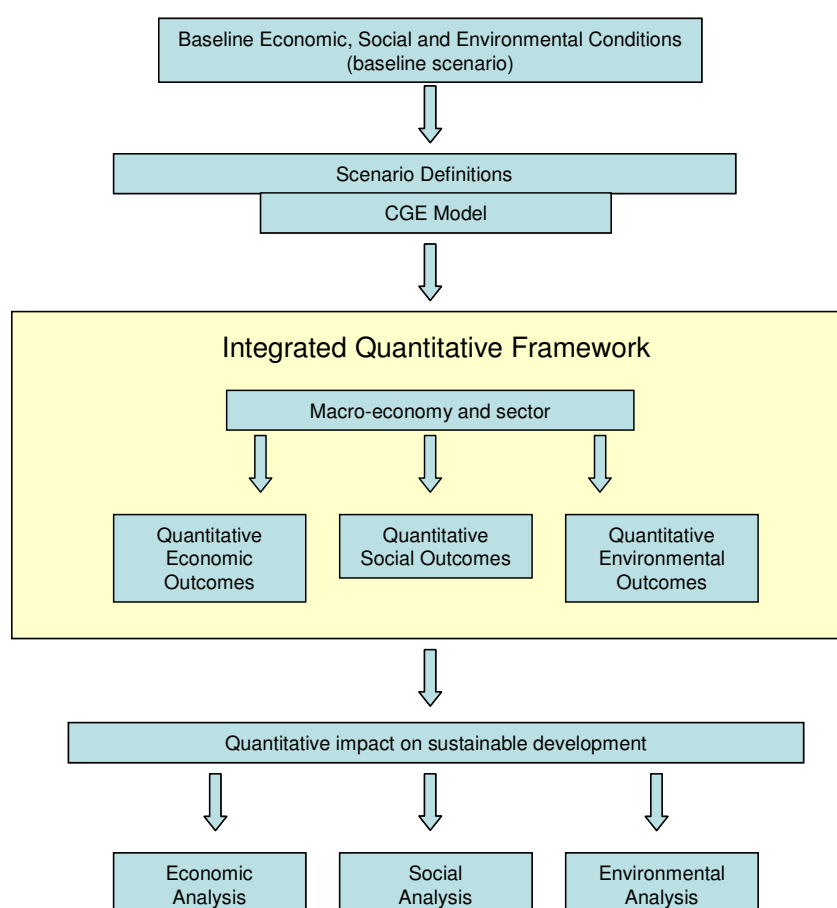
2.3 Scenario analysis and CGE modelling

The approach ECORYS and CASE Ukraine take towards this part is covered in paragraph 2.3 in detail. The general methodology, however, runs as described below.

Scenario analysis

Two scenarios are developed regarding future consequences of the FTA negotiations within the EA between the EU and Ukraine in order to assess prospective consequences of the negotiations. The more information ECORYS and CASE Ukraine have available on where Ukraine currently stands, the more realistic these scenarios can be. That is a logical deduction since the scenarios will be based on assumptions regarding the context and starting position (the baseline scenario) that may or may not include a continuation of recent trends with respect to Ukraine's economic, social and environmental performance, depending on various processes Ukraine is in right now (e.g. WTO accession).

Figure 2.2 Framework for Quantitative Analysis through CGE modelling



We will carry out two scenario analyses to predict the likely consequences of outcomes of the FTA negotiations. These quantitative outcomes can be of economic, social and/or environmental nature. Given the focus of the TSIA on sustainable development, the model outcomes will be screened and then analysed in-depth regarding this aspect – split

out, again, in the fields of economic, social and/or environmental sustainable development. This is shown in Figure 2.2 in stylised form.

Scenarios define the scope of the evaluation and reflect the extremes of a likely range of realistic outcomes of the trade negotiations between the EU and Ukraine.

Modelling

In order to quantify the impacts on sustainable development of a possible FTA outcome, various modelling techniques are available. For the general overview, Computable General Equilibrium models (CGE-models) are used. This class of models can provide insights into the effects of trade and investment liberalisation on trade flows, trade balances and economic welfare. For sector or regional analyses other tools like input-output models and gravity models are available. Some of the major issues that need to be solved are those of NTBs, capital accumulation and last but certainly not least: imperfect competition and market structure. The place of CGE modelling in the quantitative framework is shown in Figure 2.2.

The advantages of modelling include the possibility of a quantitative assessment of any type of impact and the fact these quantitative results rely on clear hypotheses and assumptions. At the outset of this study, modelling can help to provide useful insights.

The disadvantages of modelling results is that even the general equilibrium models (CGEs) provide only a partial analysis because of lack of data and the fact the models are inherently static. Berden and Van Marrewijk in the Journal of Development Economics (2007)⁵ have looked at the dynamic welfare effects of trade restrictions, which is a good addition to these models because it gives indications as to what the long term FTA effects are. Modelling, moreover, ignores a large part of the trade agenda like trade in services, trade rules, market access, legal issues like intellectual property rights and trade rules and investment.

2.4 Sector and horizontal issue case study methodology

Once the first part of the study is completed, leading to the focus on specific sectors and horizontal issues (at least 5 sectors and three horizontal issues, as specified), the detailed sector/issue analysis part and the final overview and recommendations part can commence. This will include:

- A detailed assessment of the economic, environmental and social impacts of possible results according to the two scenario outcomes relevant for the specific sectors and horizontal issues through CCA;
- An assessment of the expected significance of these impacts for the sector under investigation, using quantitative and qualitative techniques;
- Identification of the social groups and geographical areas most likely to be affected positively or negatively by the negotiation outcomes (as assumed in the two scenarios);

⁵ Berden, K.G. and C. van Marrewijk (2007), 'On the static and dynamic costs of trade restrictions', Journal of Development Economics (2007).

- Organise a Workshop in Ukraine to interact extensively with key stakeholders in the process, in particular Ukrainian business, administration and civil society in order to create transparency and inputs for the detailed sector studies and study outcomes;
- A proposal for effective flanking measures that either mitigate or enhance the (expected) effects at sector level of the negotiation outcomes – this is presented in a stylised way in general in Figure 2.1;
- Continuously contribute to the debate and dialogue of the TSIA methodology in general and the TSIA on the FTA between EU and Ukraine in particular and involve all into the sector studies.

2.5 Policy recommendations

In the final part of the TSIA, the methodology consists of the possibility of devising policy recommendations for the EU negotiating position and flanking measures to enhance the positive impacts of the FTA and mitigate the negative ones. Based on normative and positive policy analysis to look at the optimal mix of economic policy, the measures are suggested.

2.6 Consultation and dissemination strategy

The target groups for the consultation process and dissemination of knowledge can be split into three parts:

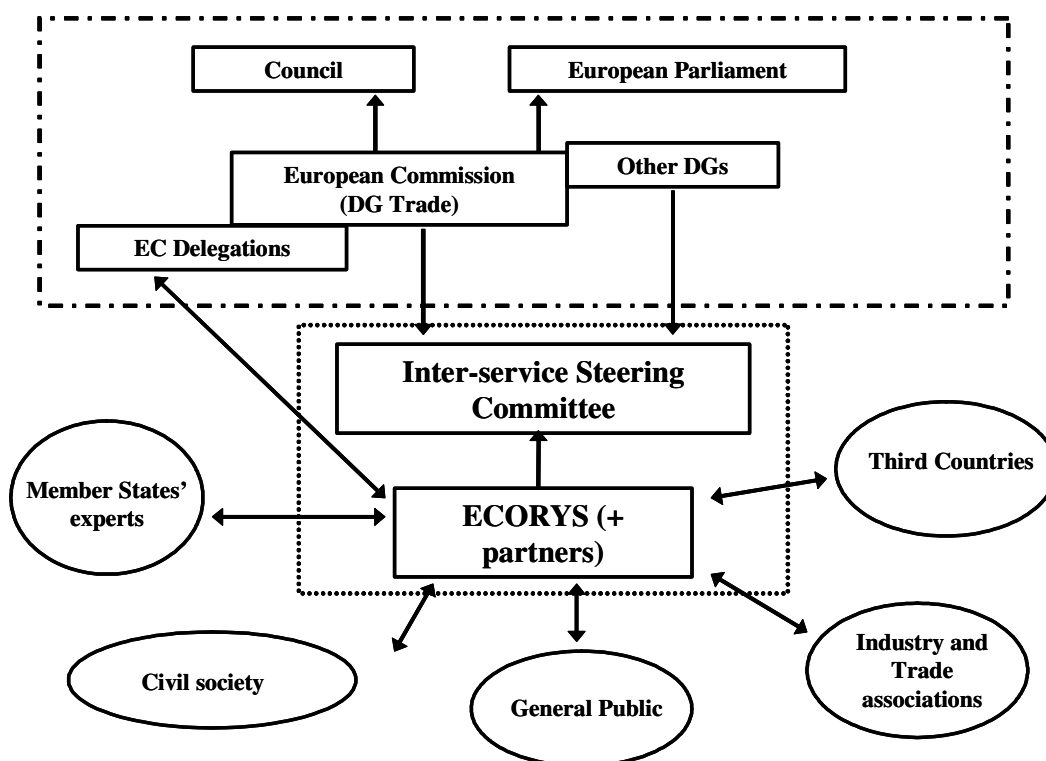
- Key stakeholders affected by the negotiations between the EU and Ukraine;
- Key stakeholders who will be involved in the implementation of the negotiation results;
- Stakeholders because they are interested in the EU-Ukrainian FTA negotiating process and results.

That means, for this TSIA, the following interested (key) stakeholders will be targeted, approached and invited to take part in the consultation process:

- The Ukrainian government;
- The European Union institutions: European Commission (mainly DG Trade but also other DGs), European Parliament, Delegation of the European Commission to Ukraine;
- Civil society including environmental and social NGOs in the EU and Ukraine;
- Interested institutions and persons from third countries (contacting in progress);
- Producer and consumer associations in the EU and Ukraine;
- Regional experts (contacting in progress).

From the tender application we show – again in Figure 2.3 – the stylised way in which we view the involvement of the various key stakeholders.

Figure 2.3 Key stakeholders in the consultation process



To ensure also focused consultation, we will make sure that representatives from the sectors that are chosen to be assessed in detail (both from the EU and Ukraine), will be invited specifically. Also those who can shed a light on and provide valuable insights onto the horizontal issues, will be invited.

Next to inviting the key stakeholders from the EU and Ukraine for inputs into the TSIA study, we also involve them actively by providing them with the latest outcomes of the various parts of our study. This dissemination of knowledge will not only entail the key stakeholders but will also be provided via general means of communication.

For the practical implementation of involving civil society and key stakeholders, we refer to Chapter 16.

3 Ukraine and the EU: economically, socially and environmentally

3.1 Agreements shaping EU-Ukraine relations

3.1.1 Overview

In order to get a first overview on the relations between Ukraine and the EU, we need to shortly look back at the historical agreements that were signed. A concise list is presented in Box 3.1.

Box 3.1 Overview of trade related agreements between Ukraine and the EU

- Agreement between Ukraine and European Community on Trade in Textile Products (signed in 1993, new Agreement signed in 2000);
- Agreement between the Government of Ukraine and the Commission of the European Communities on the Establishment and the Privileges and Immunities of the Delegation of the Commission of the European Communities in Ukraine (signed in 1993);
- Agreement between the Commission of the European Communities and the Government of Ukraine setting up a Contact Group on Coal and Steel (signed in 1994);
- Partnership and Cooperation Agreement between the European Communities and their member states, and Ukraine (signed in 1994);
- Agreement between the Government of Ukraine and the European Coal and Steel Community on Trade in Certain Steel Products (signed in 1997);
- Agreement for Cooperation between the European Atomic Energy Community and the Cabinet of Ministers of Ukraine in the Field of Controlled Nuclear Fusion (signed in 1999);
- Bilateral protocol between Ukraine and the EU for market access in goods and services in the framework of Ukraine's WTO accession (signed in 2003);
- European Neighbourhood Action Plan for Ukraine as part of European Neighbourhood Policy (signed in 2005).

It is within this policy context of agreements that the Enhanced Agreement (EA) – and within the EA the Free Trade Agreement (FTA) – is to be negotiated and developed.

Box 3.2 shows the trade related issues that follow from these agreements. The General System of Preferences (GSP) that Ukraine has become a beneficiary of, allows a differentiation between sensitive and non-sensitive products and differentiated treatment of these product categories. Notably steel and textiles are exempt and subject to special rules and regulations. Ukraine has a specific challenge to meet in facing the anti-dumping allegations brought forward at the WTO – also by members of the EU-25.

Box 3.2 Trade related issues a.o. based on Vinhas de Souza et al, 2005 and EC Delegation to Ukraine, 2007

Generalised System of Preferences (GSP)	<p>Since 1 January 1993, Ukraine has become a beneficiary of the Generalized Scheme of Preferences (GSP).</p> <p>EU GSP benefits are however not granted to the commodities accounting for a considerable part of Ukrainian exports (iron and steel, fertilizers, fishery products, grain, seeds, fruits, and plants). Still, the GSP should be considered as a tool for facilitating the access of Ukrainian goods to the EU market.</p>
Steel	<p>The import of certain steel products is subject to quantitative restrictions in the EU (Ukraine, on its side, levies duties on metal scrap exports). The EU and Ukraine have negotiated an agreement on steel products that will remain in force until 31 December 2007. This Agreement shall be automatically renewed year by year provided that neither Party gives the other Party written notice of denunciation of the Agreement at least six months before it expires. With each early renewal, quantities in every product group shall be increased by 2.5%.</p> <p>The EU-Ukraine Cooperation Council on 18 June 2007 provided the framework for signing of 3 important agreements among which a new agreement on Trade in Steel.</p>
Textiles	<p>Trade in textiles between the EU and Ukraine is regulated by a separate agreement, signed in December 2000 (replacing a previous agreement dating back to 1993), aimed at reciprocal liberalization of trade in textiles and clothing. The Parties agreed to refrain from adopting any non-tariff measures that could hinder trade in textile and clothing products if certain conditions are met by the Ukrainian side. Ukraine's commitments under this agreement were:</p> <p>First, to bound tariff rates applicable to EU textile imports from Ukraine to the level of tariffs as of July 2000, and</p> <p>Second, reduce them to the level not exceeding the rate EU has bound in WTO.</p>
Anti-dumping investigations / Market economy status	<p>Anti-dumping measures are applied particularly frequently against steel and chemicals, two categories that comprise nearly half of Ukraine's total exports. According to the WTO, Ukraine ranked 13th in the world as a target of anti-dumping measures between January 1995 and June 2004, with 51 anti-dumping measures concluded by various countries.</p> <p>At the EU-Ukraine Summit in December 2005 the granting of Market Economy Status for anti-dumping purposes by the EU to Ukraine was agreed. This implies that in anti-dumping investigations calculations of the normal value of products can be based on the data of Ukrainian exporting producers concerned, instead of those of an analogue country.</p> <p>By March 2006 the EU had applied anti-dumping measures on imports of 7 types of products originated in Ukraine, in particular: urea, ammonium nitrate, urea ammonium nitrate, silicon carbide, seamless tubes, welded tubes, steel ropes and cables. Besides in the beginning of 2006, the EC started two new anti-dumping procedures on imports, inter alia, from Ukraine of pentarythritol and ironing boards and review on ammonium nitrate.</p>

3.1.2 Neighbourhood policy and Action Plan

In 2003, the EU created a new framework for its relations with neighbours, including Ukraine, called the European Neighbourhood Policy (ENP). The main idea of the ENP is to encourage stability, security and prosperity in the neighbouring states without extending EU membership to them.⁶ To make the ENP operational, the EU agreed with

⁶ The blueprint for the ENP was outlined in the Communication on Wider Europe issued in March 2003 (EC, 2003), and then elaborated in the ENP Strategy Paper, adopted in 2004.

each ENP country an action plan that specifies priorities that should be realised in the short-to-medium term (see Box 2.3 for the EU-Ukraine Action Plan).⁷

Box 3.3 The EU-Ukraine Action Plan 1

The EU-Ukraine action plan was drafted in late 2004 and signed in February 2005. Its objective is to intensify the relations between Ukraine and the EU and to go beyond just co-operating towards gradual economic integration and deepening of political cooperation. The Plan is to be implemented over a period of three years. The Plan sets objectives and priorities in most big policy areas - e.g. in legislation, economic and social policies, trade policies, environmental standards, taxation, transport, energy, education and public health sector - and elaborates on what should be done to achieve them. In the economic domain, the prioritised areas include WTO accession, removal of non-tariff barriers in bilateral trade, improvement of investment climate, tax reform and approximation of the Ukrainian legislation with the European Union legislation. Underlining the EU's firm support to Ukraine's efforts for joining the WTO, the Action Plan also foresees looking at the feasibility of establishing an EU-Ukraine Free Trade Area following Ukraine's accession to the WTO. Priorities in other policy sectors include strengthening democratic institutions and rule of law, ensuring freedom of media and freedom of expression, enhancing EU-Ukraine consultation on crisis management, enhancing co-operation in disarmament, fighting corruption and enhancing transparency, improving migrant workers treatment and rights and enhancing and improving nuclear safety. The EU has promised to increase financial support to Ukraine to help with the implementation of the action plan with the ENPI. The European Investment Bank has promised to support also projects involving infrastructure investments in Ukraine.

In the economic sector of the EU-Ukraine Action Plan targets and methods are set, for example to strengthen the independence of the National Bank of Ukraine, implement privatisation programmes, reduce the involvement of the state in setting prices, enhance the functioning of a market economy, strengthen banking regulation and supervision, reduce regional imbalances and enhance competition policies. The functioning of customs and improvements of food safety, sanitary and phyto-sanitary measures are also objectives in the Action Plan. The objectives in the social sector include enhancement of employment creation, poverty reduction, and improvement of social cohesion, education systems and public health management. Environmental safety and sustainable development are also included in the goals of the Action Plan.

According to the Commission ENP progress report for Ukraine, good progress has been made since 2005, however, implementation of reform strategies has lagged behind since the beginning of 2006, mostly due to long pre- and post-election periods of political instability. Ukraine has succeeded especially in various trade and trade-related improvements and made progress regarding its WTO accession.

3.1.3 Enhanced Agreement

According to the study of CEPS, IFV & ICPS (2006) a deep enhanced agreement between the EU and Ukraine would be most beneficial to both parties. A “normal” FTA agreement would have only minimal positive welfare effects for both parties. The Enhanced agreement is expected to be in line with the ENP and EU-Ukraine Action Plan

⁷ These action plans are the main tool for the ENP implementation. The European Neighbourhood Policy Instrument (ENPI) was introduced to support the financial part of the reforms. The Commission together with the related country monitor the implementation of the action plan with progress reports.

and go beyond the respective WTO obligations for the parties. In general it should be a comprehensive and balanced agreement. This Enhanced FTA agreement is planned to have a five-pillar structure:⁸

- 1) An institutionalised political dialogue on common values in line with mutually accepted general principals governing the future relationship between the EU and Ukraine;
- 2) A WTO compatible FTA for goods and services including binding disciplines in non-tariff and regulatory areas (e.g. intellectual property rights, technical standards, competition, sanitary and phyto-sanitary rules, trade facilitation);
- 3) Specific provisions regarding energy;
- 4) Provisions on cooperation on a broad range of areas of mutual interest;
- 5) An effective implementation structure of the agreement, including a dispute settlement mechanism.

The enhanced agreement is expected to include new commitments in trade-related areas as many as possible. The Commission's objective is to reach an ambitious agreement with Ukraine that will highly integrate both markets and abolish customs duties and quantitative restrictions wherever possible. The Commission's goal is to establish trade relations comparable to those between the EU and countries like Switzerland, Norway or Liechtenstein.

According to the CEPS, IFV & ICPS (2006) report and the CASE (2006) study, one of the main requirements for the enhanced agreement is uncorrupted, transparent and consistent economic governance in Ukraine.

The preparation of the Enhanced Agreement besides other policy measures, boosts the approximation of Ukrainian legislation to the EC environmental *acquis* with a corresponding increase in the level of competitiveness of its economy. Practical implementation steps are being implemented also for investment-heavy EU directives like the Directive 96/61/EC on IPPC. Some legal acts have already been adopted including the Cabinet of Ministers of Ukraine Resolution №206 regarding Kyoto protocol of 22 February 2006, and Resolution №554 regarding the Montreal protocol of 21 April 2006. A detailed list of relevant pieces of legislation and related implementation deadlines is under negotiation.

3.2 Ukraine's WTO Accession Status

Ukraine submitted its official request for joining the General Agreement on Tariffs and Trade (GATT) in late 1993 and the Working Party on the accession of Ukraine to the World Trade Organization (WTO) was established on 17 December 1993. The Memorandum of the Foreign Trade Regime was agreed upon in 1994. During the more than 13-year WTO accession process, Ukraine passed through intensive rounds of multilateral and bilateral negotiations with the WTO members, as well as through substantial legal transformations and trade liberalisation.

⁸ The official start of the negotiations for the enhanced agreement was March 5, 2007. Since the actual trade negotiations will only begin after Ukraine's WTO accession an informal process with Ukraine has started meanwhile.

Presently, the negotiation process on Ukraine's accession to the WTO has approached its final stage as Ukraine has almost concluded its bilateral talks with interested countries and already agreed all import tariff lines for goods (which are reflected in Ukraine's tariff offer), as well as finalised its offer regarding conditions of market access for services⁹. In addition, Ukraine has already introduced a number of legal changes aiming at harmonising its legislation to the WTO rules, as well as at fulfilling Ukraine's accession commitments undertaken during multilateral and bilateral negotiations.

There still remain a few bottlenecks in the negotiation process, such as the level of domestic support to agriculture and bilateral negotiations with Kyrgyzstan, which should be resolved urgently to fully finalise Ukraine's accession to the WTO in the summer of 2007. Besides, to reap more benefits from WTO membership and international economic integration, Ukraine should further continue implementing deep legal and institutional reforms; first of all in areas like sanitary and phyto-sanitary measures, technical standards, intellectual property, and competition policy, aiming at creating a favourable business environment, strengthening Ukraine's competitiveness position and ensuring effective enforcement of national legislation.

More detailed analysis of the status of the major issues regarding Ukraine's negotiation process, namely bilateral negotiations, multilateral negotiations and legal reform, as well as key Ukraine's accession commitments and the status of their implementation can be found in Annex II.

3.3 Existing economic situation and trends in the EU – Ukraine

The trade between the EU and Ukraine has been increasing and currently the EU is Ukraine's biggest trade partner, while Russia used to be the largest one earlier. Ukraine still a rather small trade partner for the EU though.

In 2005, Ukraine exported mainly iron and steel, agricultural products, energy products, chemicals, textiles and clothing and transport equipment to the EU-25. At the same time Ukraine imported mainly chemicals, transport equipment, power/non-electronically machinery, office- and telecommunications equipment and textiles and clothing from EU. Because of intra-industry trade patterns, Ukraine had actually a positive trade balance only in iron and steel, agricultural products and the energy sector in trade with the EU. Overall the trade balance of Ukraine with the EU is negative. The current account in Ukraine has been in surplus since 2002 and in 2005 Ukraine had a surplus of +3.1% of GDP. The official Ukrainian currency, Hryvnia, is floating against the Euro and lately it has been depreciating against it (National Bank of Ukraine).

The structure of Ukraine's trade with the EU-25 is characterised by exports from Ukraine of raw materials and semi-processed goods, and imports by Ukraine of final products, primarily investment goods. The composition of the Ukrainian exports remain highly concentrated with no substantial improvements in the last years: metals and derived products, chemical products, and mineral products made up about 61.7% of Ukrainian

⁹ "Accession Package" of each WTO acceding country consists of: the Schedule of Concessions and Commitments on Goods, the Schedule of Specific Commitments on Services, the Draft Working Party Report and the Protocol of Accession.

exports in 2006. Imports are dominated by mineral resources, namely gas and oil supplied from Russia. In 2006 minerals accounted for 30% of the overall commodity imports.

Trade in services between Ukraine and the EU was larger in total value than any other sector, as EU imported services from Ukraine worth 0.8 billion euros and exported worth 0.7 billion euros. Over the last few years also the stock of FDI from the EU to Ukraine has been growing very rapidly.

In general the Ukrainian economy has been growing well since year 2000 after a sharp decline conditioned by a transitory shock the Ukrainian economy. Throughout 2000-2006 the economy showed an average growth rate of 7.4% (in the EU area growth rate has been between 0.8% and 2.6%) and the economy has went through some structural changes. The following economic trends have been taking place during the last years:

- Strong economic growth, but real GDP still behind pretransition levels;
- Inflation has been high but declining;
- Unemployment has declined to 7.2% (same or even slightly lower than in the EU);
- Real wages have grown rapidly but social payments remain the second largest source of the population income;
- Gross capital formation steady and at a good level;
- Share of services in GDP has been growing significantly while the share of manufacturing and agriculture has been declining (shift towards the structure of the EU economies);
- Most of the recent investments made in the manufacturing sector;
- Large-scale privatisation have been taking place, which have raised the production safety and quality.

The largest industries in Ukraine measured by gross industrial production are: food and agricultural products processing, production of coke and refined petroleum products, metallurgy and processing of metal, machine building and chemicals. In the agricultural sector Ukraine is producing mostly grains, potatoes, sugar beet, milk and eggs. In the service sector, transport and travel services were the largest industries. Currently large companies play a dominant role in the Ukrainian economy: small businesses accounted for about 12% of the overall output in 2006.

More throughout analysis of the Ukrainian and the EU economies can be found in Annex III.

3.4 Existing social situation and trends in the EU and Ukraine

In line with the economic growth in Ukraine, some of the social issues have received more attention and some progress has been made. The main social indicators included in this study are: Labour issues, Poverty, Equality, Education and Health.

In general Ukraine has faced the following trends in the social indicators during the recent years:

- The official unemployment rate is relatively low nowadays, however many workers have just withdrawn from the labour markets due to very big difficulties to find work for years;

- Increasing migration flows;
- Number of trade unions has been rising;
- Working conditions remain bad in some industries (e.g. in mining);
- Large share of population lives still under the poverty line even though the Ukrainian Government has made poverty reduction one of its primary goals;
- The income gap between the rich and poor is widening. Also regional income disparity is increasing in Ukraine (e.g. in agricultural sector the average wage is still only 50 percent of the national average);
- Gender equality in rather good level and Ukraine is committed to improve the remaining issues;
- Education system faces still challenges with unequal access, eroding quality and low efficiency in the use of resources;
- The worst health problems are maternal health and child mortality, the spread of HIV/AIDS and tuberculosis.

In general, in terms of major indicators such as unemployment, labour participation and labour conditions, the Ukraine seems to perform quite well relative to some of the other transition economies and even relative to the EU average. However, Ukraine's performance 'on paper' is better than in practice and some major health issues remain. Especially the rural areas face big problems still with migration, low wages and poor working conditions. Fortunately the Ukrainian government has been working lately to make improvements and they have acknowledged the need to improve the social situation.

In the social issues the EU compares rather favourably to the Ukrainian situation, although within the EU, substantial differences can be observed. This is especially true for the EU enlarged to 27. Averages at the EU level for many indicators were affected by the enlargement, explaining some of the changes since 2003. Among the best performers are the Northern European countries, while Southern member states perform less. New member states' performance more closely matches the performance of these Southern member states. In general, EU enlargement has caused specific social pressures, through for instance migration and structural adjustments. Hence, migration policies are becoming a higher priority among member states and migration management is developing into a balancing act between openness and control, including issues such as the socioeconomic inclusion of migrant populations and measures to prevent discrimination.

The current social situation and recent trends of each social indicator are explained in more detail in Annex III.

3.5 Existing environmental situation and trends in the EU and Ukraine

In general, Ukraine demonstrates negative environmental trends for:

- Consumption of natural resources, including water and land use;
- Pollution of ambient air, water and soil, disposal of waste;
- Destruction of habitats, wild life and natural landscapes;
- Emergency situations; and
- State of public health.

These trends are quite evident though some figures can be disputed and revised. Like other countries in the region, Ukraine retains a traditionally comprehensive and thorough system of state reporting, where every enterprise fills numerous questionnaires on annual or even quarterly basis. But data quality is traditionally very poor, as it was never used for real policy making but rather used to serve unrealistic ambitions. A systematic cross-checks or balances-system is usually not in place or in practice. For example, no Ukrainian annual energy balance has been prepared in Ukraine since independence. Moreover, for such crucial data, different governmental agencies produce their own figures that may differ significantly. Very cautiously should we also treat the official data of motor vehicles emissions, contrary to evident congestion of cars in modern Ukrainian cities, statistics shows several times decreases of such emissions.

According to the Environmental Performance Review of Ukraine (UNECE, 2007, Environment Performance Reviews, Second Review), it definitely strengthened its legislation using integration into international legal area. Ukraine ratified 27 key environmental conventions and, at present time, is a member of discussion around 26 other environmental conventions. At this time, 173 standards that represent European and international standards have been introduced in Ukraine, and this work actively goes on.

The State Committee of Statistics of Ukraine very recently introduced questionnaires for air pollution, waste management and environmental expenditures corrected for harmonisation with EU/OECD classifications and definitions. This questionnaire should significantly improve compatibility and reliability of environmental information.

Improvement of the environmental situation in Ukraine is impossible without the renewal and modernisation of technological infrastructure that aims to approach in its characteristics the EU standards. This will require financial domestic and foreign resources. The capital investment need for providing the fulfilment of priority arrangements related to environmental pollution is about 50-60 billion Euro.

More information of the current environmental situation in Ukraine can be found in Annex III.

3.6 Free Trade Agreement between the EU and Ukraine

As mentioned before, the negotiated Enhanced Agreement is planned to have a five-pillar structure: An institutionalised political dialogue based on common values in line with mutually accepted general principles governing the future relationship between the EU and Ukraine; A WTO-compatible FTA for goods and services, which will also include binding disciplines in non-tariff and regulatory areas; Specific provisions regarding energy; Provisions on cooperation in a broad range of areas of mutual interest; Developed institutional structures to ensure effective implementation of the Agreement, including a dispute settlement procedure.

With Ukraine already being a member of the WTO, and – in line with our analysis of paragraph 3.2 and Annex II – we need to see the FTA as a further deepening on top of Ukraine's WTO commitments, some of which have already been implemented, some take

effect the moment Ukraine enters the WTO and some take effect via transition paths in the time afterwards. We summarise the majority of WTO commitments as follows:

- Lower custom duty rates for many industrial and agricultural goods – increased market access;
- Dropping of minimum prices on imports of alcoholic products;
- Dropping of discriminatory taxes on petroleum and tobacco products;
- SPS related protective provisions eliminated;
- Elimination of discriminatory fees for rail transport;
- Gradual reduction of export duties connected with ferrous and non-ferrous metals, live cattle and leather raw materials;
- Protection of intellectual property rights;
- Lifting of citizenship requirements for performing auditing and attorney services;
- Allowing establishment of branches of foreign banks and insurance companies;
- Elimination of TRIMS and export quotas in the sugar industry;
- Introduction of tariff quotas for importation of raw cane sugar;
- Setting up maximum bound rates of 10% for most industrial goods and of 20% for most agricultural products (exception sugar (50%) and sunflower-seed-oil (30%));
- Application of MFN rate by 2010 of 4.85% for industrial products, 11.16% for agricultural products and 6.28% for products of the nomenclature of the Harmonised System;
- Full liberalisation in mode 1 of service supply: cross-border supply;
- Full liberalisation in mode 2 of service supply: consumption abroad;
- Full liberalisation in mode 3 of service supply: commercial presence for 139 out of 155 sub-sectors;
- Limited liberalisation – in mode 4 of service supply: presence of natural persons (see section on WTO accession Ukraine).

Unresolved issues compared to a full Free Trade Area after the WTO negotiations for Ukraine as for now are among others:

- Effective implementation of all the agreed WTO commitments;
- Level of state support to agriculture;
- Remaining levels of tariffs in agricultural products (sensitive ones) and industrial goods;
- Still custom duty rates;
- Limited liberalisation of mode 4 of service supply: presence of natural persons;
- Limitation on commercial presence in sectors as notary services, education, health services, medical and dental services, postal services as well as insurance, road transport, auditing services and the audio-visual sector;
- Limitations on FDI encompasses news agencies.

As mentioned by the Terms of Reference, the new commitments that are expected to be negotiated as part of the FTA within the framework of the Enhanced Agreement lie in the areas of:

- Trade in goods, including industrial goods, agricultural products, processed agricultural products and fishery products;
- Technical Barriers to Trade and SPS;
- Trade in services (such as financial services, transport and telecommunications), establishment and investment;

- Capital movements and payments;
- Government Procurement;
- Competition;
- Intellectual Property rights;
- Trade facilitation, Customs and Rules of Origin;
- Trade and sustainable investment;
- Energy.

It is the information we obtain from the ‘unfinished issues’ with respect to Ukraine’s WTO accession combined with the information available from the Terms of Reference that we analyse to deduct the main negotiation issues for the FTA. It is also these issues we try to focus on in our analysis and try to incorporate as good as possible into the CGE modelling exercise of Chapter 4. In the next Chapter, we will also summarise the issue-wise analysis of the Terms of Reference below and map it into a modelling exercise.

Trade in Goods

Given the analysis on the outcomes related to the WTO negotiations of Ukraine, which entail a substantial liberalisation in goods and services, we expect the FTA to go beyond this level of liberalisation. In the ambitious scenario, we assume a zero tariffs in all sectors, also steel, agriculture and food. For the less ambitious scenarios we model some products (e.g. agricultural ones) to remain at WTO bind levels.

Energy

The energy sector is of significant importance to Ukraine because of its share in Ukraine’s GDP as well as because of reasons of national security. Ukraine exports energy (electricity) to EU countries in Central and Eastern Europe and even though not very significant amounts, Ukraine intends to increase this share significantly. This makes energy an issue to model because it is likely to be discussed during the FTA negotiations. Not only does the CGE model exhibit ambitious and limited changes to the coal and gas sectors, also the electricity sector is analysed in an ambitious and less ambitious way via significant or less significant reductions in tariffs.

Trade in services

As part of the WTO commitments, service sectors are (partially) liberalised. Regarding trade in services, the most ambitious scenario is a full liberalisation under the FTA negotiations. However, because this is a very sensitive sector for the Ukrainian government, we developed two limited scenarios, one including limited services liberalisation going beyond WTO obligations and one where no further liberalisation takes place on top of the (already implemented) WTO commitments. Also we model barriers to FDI in services that lead to higher costs for foreign (financial) service providers. The extended FTA leads to a much larger reduction in these barriers to FDI than the limited FTAs.

Trade facilitation, Customs, and Rules of Origin

The rules of customs procedures **and practices, integrity**, rules of origin, and other measures of trade facilitation are negotiated with the aim of bringing them largely in line with EU regulations **and standards, where effective control and trade facilitation are properly and sufficiently balanced**. For the customs procedures in particular and trade

facilitation in general, this leads to lower border costs for EU and Ukrainian products thus increasing market access. For the rules of origin, we envisage the FTA leading to lower technical barriers. The ambitious scenario envisages a far-reaching synchronisation and lower border costs and technical barriers while the limited FTA negotiations would lead to less synchronisation and thus higher border costs, technical barriers and smaller FTA effects.

Technical Barriers to Trade and SPS

Starting from the WTO commitments of Ukraine, for trade in goods we envisage the FTA to achieve substantially higher reductions in technical barriers and harmonisation on SPS standards. In both less ambitious scenarios we assume a limited elimination of this kind of NTBs. Harmonisation has to lead to lower preparation and adaptation costs from the side of the exporters both ways. Lower costs lead to more trade. The depth of the FTA determines the depth of the liberalisation in technical barriers and SPS.

Capital movements and payments

Increased capital flows through opening up and further liberalisation of the financial sector is important for obtaining working capital and reducing the costs of trade by reducing capital costs. The WTO commitments imply a partial liberalisation and international opening up of the financial sector, but within the framework of the extended FTA there is room for further improvement. Through tariff equivalent reductions in the financial sector – further-going or not, depending on the scenario – we include this in the CGE modelling.

Government procurement

Improvements in government procurement are important in reducing the costs of doing business and/or carrying out projects and increasing the efficiency of financial flows. In preparation for the WTO, Ukraine passed legislation on improving the process of government procurement in December 2006, so arguably an important step has been made. Depending on the scenario, the FTA could further increase the quality of government procurement by looking at an enforcement of the new legislation or not. Through an increase in NTBs we model this into the scenarios.

Competition policy

Coming from a communist system over 16 years ago, a functioning market economy is a crucial part and goal of transition and a pre-requisite for joining the WTO. Competition policy in itself is difficult to model. However, policy that aims at increasing competition so as to increase efficiency and welfare gains through pro-competitive effects of trade are implicitly modelled in the CGE exercise. The extended FTA entails an ambitious competition policy while the more limited FTA scenarios look at a more modest policy engagement.

Intellectual Property Rights

Improvement Intellectual Property Rights (IPR) will increase security for foreign companies in doing business with Ukraine. An ambitious improvement, not only in legislation but also in implementation of IPR leads to reductions in standard costs – the more encompassing the FTA the larger the reductions.

Trade and sustainable investment

Investments are a main determinant of economic growth. If the FTA can ensure (partial) focus of investments in the direction of sectors that promote sustainable development, trade patterns will also become ‘greener’. A free trade agreement may – through its output and employment effects – have asymmetric impacts on sectors and thus on sustainable development.

4 Macroeconomic analysis

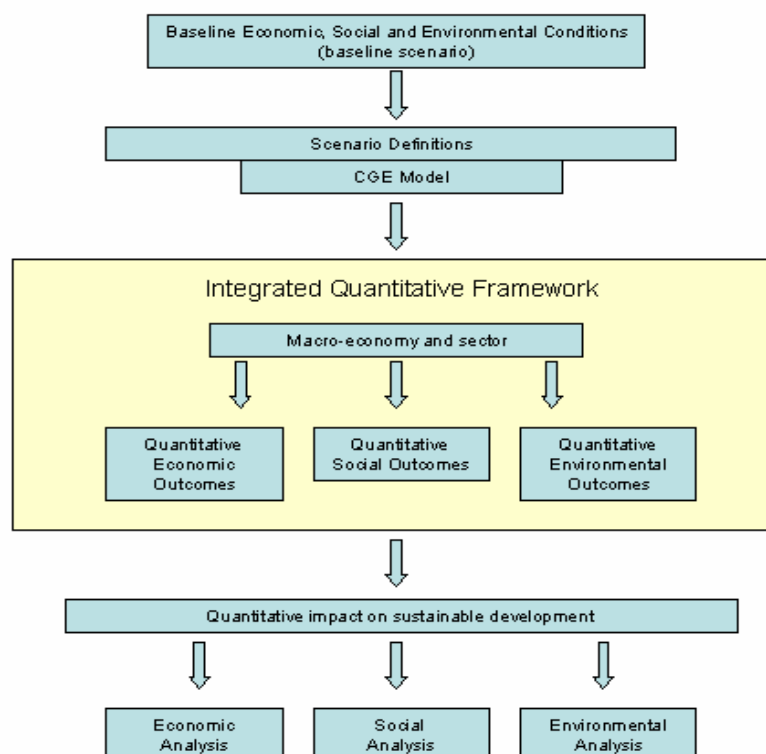
4.1 Macroeconomic analysis

In this section we employ computable general equilibrium (CGE) modelling to analyse the economic consequences of the trade measures negotiated in the FTA between the EU and Ukraine.

We use the Harrison-Rutherford-Tarr (1996) Multi-Region Trade model for this analysis. As mentioned in the Handbook (2006), this CGE modelling aims to quantify the effects of the trade measures concluded in the FTA negotiations. Depending on the different envisaged scenario outcomes, different effects will result. Within the sustainability framework of this study, it is this macroeconomic analysis that provides the first indication of likely sustainability effects resulting from the macroeconomic level.

The indicators that we measure overall are: overall welfare changes, average real income, employment effects, effects on high- and low-skilled wages, price effects and net fixed capital formation. At the sector level – split out into 38 sectors – we investigate the effects of the FTA on sector output and sector employment. Since the sustainability impacts, be it economical, social or environmental, must arise directly or indirectly from an initial economic impact, as is shown in Figure 4.1, the CGE model provides the starting point for the sustainability analysis.

Figure 4.1 CGE Methodology



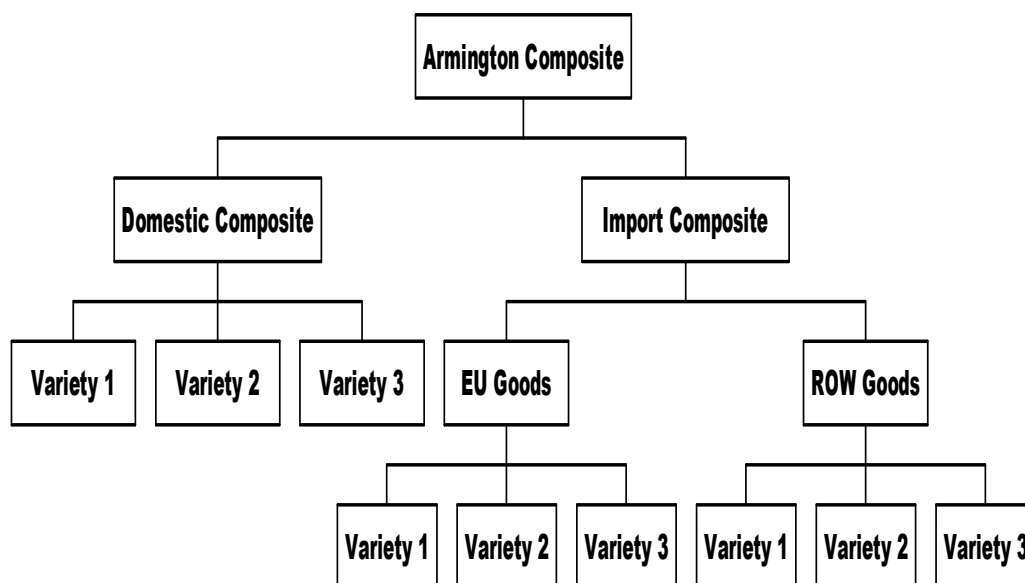
4.2 CGE: The Multi-Region Trade Model

4.2.1 The model

The model employed in this study is a computable general equilibrium model. It includes several price-wedge distortions such as factor taxes in production, value-added taxes, import tariffs and export subsidies. Factor taxes in production and value-added taxes remain unchanged in simulations. Production involves combination of intermediate inputs and primary factors (capital, skilled and unskilled labour). We assume a Constant Elasticity of Substitution (CES) function over primary factors and a Leontief production function combining intermediate inputs with factors of production composite. Primary factors are mobile across sectors within a region, but immobile internationally. Each region has a government, whose revenue is held constant at the benchmark level and a single representative consumer. The trade balance is also held constant in counterfactual simulations.

Demand for final goods arises from a Cobb-Douglas utility function. The demand structure is illustrated in Figure 4.2. Within each region, final and intermediate demands are composed of the same Armington aggregate of domestic and imported varieties. The composite supply is a nested CES function, where consumers first allocate their expenditures among domestic and imported varieties and then choose among imported varieties. In the imperfect competition case firm varieties enter at the bottom of the CES function. This approach allows for the differentiation in preferences for home and imported goods.

Figure 4.2 Demand structure in the IRTS scenario – firm level product differentiation within an Armington aggregate



Source: HRT (1996a).

A detailed description of the model equations, calibration and parameters employed is provided in Annex IV. It is built on the basis of the MRT – Multiregional Trade Model – by Harrison, Rutherford and Tarr (HRT) implemented in their evaluation of the impact of a completion of the Single Market (HRT, 1994 and HRT, 1996a), but has been modified in several ways to fit this analysis. Similar analysis was applied in the study of the Eastern EU Enlargement (Maliszewska, 2003a, 2003b) and Albanian Integration with the EU (Maliszewska and Kolesnichenko, 2004).

The social accounting matrix (SAM) for Ukraine has been prepared by experts from the Center for Social and Economic Research (CASE Ukraine). The original data sources used to construct the SAM include the official input-output table¹⁰; official production statistics; law on import duties and 10-digit import statistics from State Statistics Committee for tariff calculations. The reference year of the official input-output table is 2004, it includes 38 sectors, based on operating Classification of Economic Activities (KVED). The units of measurement are million Ukrainian Hryvnas (UAH). The Ukrainian I-O table is in basic prices, i.e. the elements of intermediate consumption and final consumption expenditures do not include transportation and trade margins and taxes on production and imports, but do include subsidies on production.

The data on the EU has been updated to 2004 based on the structure of the EU27 data in the Global Trade Analysis Project Version 6 database, which includes the national and regional input-output structures, bilateral trade flows, final demands pattern and government intervention benchmarked to 2001. The GTAP protection data for the EU27 has been updated based on Trains data. The benchmark database includes Ukraine, Russia, EU27 and the Rest of the World. It includes 32 sectors out of which 15 are subject to increasing returns to scale in the imperfect competition scenarios.

¹⁰ State Statistics Committee of Ukraine

4.2.2 CGE modelling limitations

CGE modelling is the best tool to evaluate outcomes of policy changes in general equilibrium. It yields outcomes with respect to output, employment wage changes and other macroeconomic variables that are important for policy makers. However we need to caution for very rigid interpretation of the modelling outcomes due to data issues (quality and quantity of data) and modelling issues. With respect to the latter, we present below shortly some of the strongest limitations that CGE modelling encounters and that policy makers need to be aware of. For this reason, the CGE outcomes are further tested during the in-depth analysis.

- There are no transaction costs in the CGE model;
- Economic phenomena like involuntary unemployment, effective demand failures cannot occur because of the assumption of full employment and a fixed trade balance and fixed budget deficit;
- The comparative-static approach allows for the description of the relative changes in the economy when all the necessary adjustments have taken place. It does not provide insights into the specific timing or patterns of adjustment;
- There are no costs of investment necessary to obtain a higher capital stock in the long run.

4.2.3 Dynamics of the model

As mentioned above, the lack of a dynamic nature of the CGE modelling is a limitation that we would like to address. Therefore, even though the CGE model is inherently comparative-static in nature, we add features and flank the model with additional methodologies to address the dynamic nature of the FTA. We have included the following measures:

- First of all, we have modelled two scenarios on top of the WTO – one more limited and one more extended FTA. The more extended FTA can be seen as a long-run goal to maximise welfare for the EU and Ukraine;
- Secondly, for each of the two FTA scenarios, we have modelled a short-run and a long-run version, clearly indicating what are the more immediate and more long-run effect of the FTAs, adding significantly to the dynamism of the results;
- We add a gravity analysis on the concept of FDI, which proves difficult to model, in order to show the change of FDI flows over time in a dynamic setting;
- During the in-depth analysis of sectors and horizontal issues of the TSIA study, we will address the issues of FDI, technology and introduction of new goods in more detail at sector levels making use of Berden & Van Marrewijk (2007) on the introduction of new goods through reducing trade barriers.¹¹

Through these measures we believe the CGE model (and flanking methodological exercises) adequately analyse the FTA scenarios and real-life situation.

¹¹ Berden, K.G. and C. van Marrewijk (2007), 'On static and dynamic costs of trade restrictions', Journal of Development Economics, 2007.

4.2.4 Short-run and long-run effects

The calculation of steady state growth effects in our model follows HRT (1996a). In the short run scenarios the price of capital is allowed to vary within each country, while capital stock is held constant. In the steady state scenario capital stock in Ukraine is allowed to adjust, while the price of capital is held constant at its benchmark level. This approach assumes that there exists an invariant capital stock equilibrium. It is defined as a set of prices, production and investment levels for which the economy is able to grow at a steady rate with constant relative prices.

This approach provides an upper bound of the potential welfare gains as it ignores the adjustment costs and foregone consumption necessary to increase investment. For sufficiently high discount rates the costs of forgone consumption could overturn the benefits of capital accumulation. Although in the steady state scenarios, as well as in the short run scenarios we measure welfare as equivalent variation as a share of GDP, it has to be borne in mind that incorporation of the cost of the investment required to build up the capital stock may substantially reduce the estimates of welfare gains cited below. On the other hand our approach does not incorporate the potential gains due to productivity improvements or endogenous growth theory, for example through learning by doing effects.

This distinction between the short- and the long-run – also mentioned in the previous sections – is an important addition to the analytical strength and realism of the model we use.

4.3 Model inputs for WTO and FTA scenarios

4.3.1 Sector specification for model analysis

The analysis conducted is based on 38 sectors that are partially grouped together. The sector classification is based on the EUs NACE and UN ISIC definitions that are also used in GTAP modelling.¹² This means that our sectors:

- a. Cover the entire economy in line with international standards;
- b. Do not overlap.

4.3.2 Tariff changes following accession to the WTO

The model is set on 2004 data, and that year's macroeconomic and trade variables are the basis for further simulations. The first modeling step is to assess the effects of Ukraine's joining of the WTO. Technically WTO accession will precede the FTA, whatever form it may have. Thus, WTO accession is the benchmark for scenarios describing deeper integration of the EU and Ukraine's economies, i.e. FTA effects are compared to the post-WTO hypothetical macroeconomic and trade values.

¹² <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=17&Lq=1> / http://www.fifoost.org/database/nace/nace-en_2002c.php

The WTO accession scenario envisages tariff and NTBs reductions. **2004 weighted average tariffs are reduced** to be in line with the Ukraine's WTO schedule of concessions and commitments. Noteworthy, most of tariff lines have been changed in 2005-2006 and currently are in full conformity with the WTO schedule. Nevertheless we expect that reduced tariffs effects have long-term nature and tangible results of tariff reduction will come in several years. Thus, we do not impose a new benchmark and **stick to 2004 tariff structure** as the initial point for the modeling. The NTBs are also expected to decrease somewhat as the result of the Ukraine's WTO accession. Ukraine still has to bring technical standards, SPS norms, licensing and customs procedures in line with the WTO multilateral agreements.

Upon WTO accession, Ukraine and the EU work on the FTA. These negotiations – as said – take Ukraine's accession to the WTO as given and aim at further liberalisation beyond WTO requirements. Therefore the two scenarios for the FTA: the extended scenario and the more limited scenario are both going beyond the requirement of GATT Article XXIV, to liberalise 'substantially all trade'.

Table 4.1 Ukrainian tariff changes in WTO and the FTA scenarios (manufacturing)

	2004			WTO				Scenario Extended FTA		Scenario: Limited FTA	
	RUS	EU27	ROW	RUS	EU27	%Red04	ROW	EU27	%Red04	EU27	%Red04
Agriculture, Fisheries, Forestry	0.00	5.25	14.54	0.00	1.84	65%	0.46	0.25	95%	1.29	75%
Coal, Oil, Gas	0.00	0.00	0.00	0.00	0.00	0%	0.00	0	0%	0.00	0%
Minerals NEC	0.00	1.21	1.41	0.00	1.44	-18%	0.78	0	100%	0.00	100%
Bovine cattle, sheep and goats, horse meat products	0.00	2.19	1.29	0.00	2.19	0%	10.89	0.12	95%	1.53	30%
Vegetable oils and fats	0.00	1.74	2.42	0.00	0.60	66%	0.60	0.09	95%	0.42	76%
Dairy products	0.00	18.68	6.71	0.00	10.28	45%	4.10	0.95	95%	7.20	61%
Processed rice, Sugar	0.00	28.45	36.19	0.00	27.96	2%	27.55	1.5	95%	19.57	31%
Food products nec	0.00	6.49	3.77	0.00	4.66	28%	0.79	0.3	95%	3.26	50%
Beverages and tobacco	0.00	20.23	20.00	0.00	10.70	47%	3.35	0	100%	7.49	63%
Textiles	0.00	1.76	2.58	0.00	1.76	0%	2.58	0	100%	0.35	80%
Wearing apparel	0.00	7.88	7.17	0.00	7.86	0%	7.17	0	100%	1.57	80%
Leather products	0.00	11.30	13.49	0.00	9.53	16%	7.49	0	100%	1.91	83%
Paper products, publishing, Wood products	0.00	5.25	3.33	0.00	0.22	96%	0.24	0	100%	0.00	100%
Petroleum, coal products	0.00	0.46	0.00	0.00	0.46	0%	0.00	0	100%	0.00	100%
Chemical, rubber, plastic products	0.00	2.73	2.65	0.00	1.36	50%	1.64	0	100%	0.00	100%
Mineral products nec	0.00	6.11	4.97	0.00	5.03	18%	3.82	0	100%	0.00	100%
Ferrous metals, Metals NEC	0.00	2.65	0.87	0.00	0.24	91%	0.44	0	100%	0.05	98%
Metal products	0.00	4.02	4.20	0.00	2.51	38%	3.00	0	100%	0.50	88%
Motor vehicles and parts	0.00	2.97	2.44	0.00	2.97	0%	2.44	0	100%	0.00	100%
Transport equipment	0.00	1.01	4.43	0.00	0.86	15%	3.45	0	100%	0.00	100%
Electr equipment; Machinery & Equipment	0.00	2.95	3.09	0.00	1.90	35%	1.75	0	100%	0.00	100%
Manufactures nec	0.00	6.76	7.94	0.00	4.62	32%	4.54	0	100%	0.00	100%

4.3.3 Non-tariff barriers

One of the studies ordered by the European Commission before completion of the Single Market looked at the perception of EC producers as to the importance of barriers to be removed by the formation of the Single Market. It showed that the elimination of physical frontiers, costs and delays, harmonisation of national standards and regulations, and government procurement were the most important barriers to trade before 1992. Similar conclusions were reached after a survey of barriers to exports to the EU faced by the Ukrainian exporters (see Jakubiak et. al. 2006). Elimination or lessening of these impediments to trade is also likely to bring major benefits to Ukraine when it gains better access to the Single Market thanks to a creation of a deep FTA. In modeling of a deep FTA we focus on reduction in border costs and delays, as well as reduction in costs of compliance with varying national standards and regulations. In addition we also study an impact of a reduction of barriers to trade in services.

1. Border costs

One of the most observable barriers to trade is due to the existence of borders and customs formalities, which involve delays and various kinds of administrative costs. At the moment all goods from Ukraine exported to the EU and vice versa are stopped at the EU border for customs clearance. Border costs are modelled as additional purchases of a domestic transportation good which includes shipping, handling and warehousing for customs purchases.

Ukrainian border costs are approximated by the costs of customs clearance faced by the **Ukrainian exporters** to the EU in 2006. According to Jakubiak et al (2006) border costs amounted on average to 6% of the value of production. We assume that these costs will be reduced by 50% in the Extended FTA scenario and by 10% in the Limited FTA scenario. We assume that lowering of border costs due to reform of customs procedures or decreases in corruption at the border reduces the costs to exporters to Ukraine from Russia, EU27 and the ROW in the same way.

The EU-Ukraine Action Plan requires Ukraine to revise the Customs Code and other related by-laws in line with the EU legislation. EU-Ukraine “deep FTA” is expected to bring more attention the issue of customs clearance procedures as they remain overregulated and complicated in Ukraine. Although Ukraine reports substantial progress in implementation of EU-aligned legislation, the problem is also in weak implementation of the improving legislation. Exporters and importers surveys reveal great difficulties in passing customs procedures in Ukraine due to corruption and poor infrastructure. Ukraine has no choice but to improve the customs procedures to ensure fulfilment of its international commitments.

Table 4.2 Border costs estimates

	Benchmark (2004)	WTO Accession	Extended FTA (S1)	Limited FTA (S2)
Border costs as a share of the value of exports	6%	6%	3.0%	5.4%

2. Standard costs

The EC has been concerned with the elimination of the technical barriers to trade since its creation. However, the major effort of elimination of barriers to trade imposed by differing national regulations and standards was undertaken with the creation of the Single Market. The Single Market measures consist of 2,556 different mandated standards. This number rises to more than 20,000 when voluntary standards are considered.

Recently, CASE conducted a survey on NTBs faced by Ukrainian exporters to the EU (Jakubiak et al 2006). Among others, respondents (over 500 companies) were asked to assess costs associated with meeting EU technical standards and the duplication of efforts related to compliance with both national and the EU standards (existing for the majority of surveyed firms). Costs of meeting EU standards for Ukrainian producers are presented in Table 4.3.

The issue of technical standards has been given much attention in the EU-Ukraine Action Plan (article 2.3.1) and is likely to be one of the focuses of the trade-related provisions under the new Enhanced agreement. Ukraine made commitment to revise existing Ukrainian standards, providing for harmonisation with international and European ones and progress in this field has been promising so far. Currently Ukraine and the EU are working on four priority sectors that are going to be covered by the Agreement on Conformity Assessment and Acceptance potentially coming into force since 2011. If the Agreement is concluded successfully it is likely to be further extended to cover majority of the sectors.

Table 4.3 Percentage of yearly production costs spent by Ukrainian exporters to the EU in order to ensure products compliance with the EU norms, 2006

NACE	Industry	% of production costs	number of responses
01	Agriculture, hunting and related service activities	14.0	3
02	Forestry, logging and related service activities	7.0	11
14	Other mining and quarrying	n/a	0
15	Manufacture of food products and beverages	10.4	9
16	Manufacture of tobacco products	n/a	0
17	Manufacture of textiles	2.3	3
18	Manufacture of wearing apparel; dressing and dyeing of fur	34.4	8
19	Tanning and dressing of leather; manufacture of luggage, and footwear	5.3	3
20	Manufacture of wood and of products of wood and cork	20.9	22
21	Manufacture of pulp, paper and paper products	15.0	2
22	Publishing, printing and reproduction of recorded media	0.0	0
23	Manufacture of coke, refined petroleum products and nuclear fuel	10.0	1
24	Manufacture of chemicals and chemical products	5.5	4
25	Manufacture of rubber and plastic products	5.6	5
26	Manufacture of other non-metallic mineral products	29.3	6

NACE	Industry	% of production costs	number of responses
27	Manufacture of basic metals	5.0	1
28	Manufacture of fabricated metal products, except machinery and equipment	6.4	5
29	Manufacture of machinery and equipment n.e.c.	4.4	7
30	Manufacture of office machinery and computers	n/a	0
31	Manufacture of electrical machinery and apparatus n.e.c.	11.0	5
32	Manufacture of radio, television and communication equipment and apparatus	10.0	2
33	Manufacture of medical, precision and optical instruments, watches and clocks	20.0	1
34	Manufacture of motor vehicles, trailers and semi-trailers	12.3	3
35	Manufacture of other transport equipment	4.0	2
36	Manufacture of furniture; manufacturing n.e.c.	15.3	4
37	Recycling	5.5	2
Total/average		13.9	109

Source: own calculations based on survey described in Jakubiak et al (2006)

The differences in technical regulations and standards, which vary between domestic and the EU markets, require producers to manufacture or package goods in forms, which are different than for their domestic markets. **Standardisation costs therefore increase the cost of production for exports** and they are **modelled as additional value added in each sector** where trade takes place. This approach ignores the fixed cost elements of implementation of new standards. However, these are mostly one-off investments and their magnitude is not likely to be significant.

These estimates are based on a survey of exporters to the EU. We do not have similar data for the other export destinations for Ukrainian products and in any case the impact of a Ukraine-EU FTA on them would be uncertain. Hence in the simulations we assume that these costs apply only on exports to the EU. Any harmonisation of legislation with the EU, wider availability of conformity assessment centres and with that lower prices of certification that would follow an EU-Ukraine FTA would lead to a reduction of these costs for Ukrainian exporters to the EU. In the WTO Accession scenario these costs are assumed to decrease by 30% in the case of agricultural and food products and by 15% in all other sectors. In an Extended FTA we assume that these costs will decrease by 50% and 35% respectively and in a Limited FTA reductions are assumed to decrease by 40% and 25% relative to their initial level in 2004.

Table 4.4 Standard cost reductions

	Benchmark (2004)	WTO Accession	Extended FTA (S1)	Limited FTA (S2)
Agriculture, Fisheries, Forestry	14	9.8	7.0	8.4

	Benchmark (2004)	WTO Accession	Extended FTA (S1)	Limited FTA (S2)
Coal, Oil, Gas	0	0	0	0
Minerals NEC	0	0	0	0
Bovine cattle, sheep and goats, horse meat products	10.4	7.3	5.2	6.2
Vegetable oils and fats	10.4	7.3	5.2	6.2
Dairy products	10.4	7.3	5.2	6.2
Processed rice, Sugar	10.4	7.3	5.2	6.2
Food products nec	10.4	7.3	5.2	6.2
Beverages & tobacco	10.4	7.3	5.2	6.2
Textiles	2.3	2.0	1.2	1.7
Wearing apparel	34.4	29.2	22.4	25.8
Leather products	5.3	4.5	3.4	4.0
Paper products, publishing, wood products	15	12.8	9.8	11.3
Petroleum, coal products	10	8.5	6.5	7.5
Chemical, rubber, plastic products	5.5	4.7	3.6	4.1
Mineral products nec	29.3	24.9	19.0	22.0
Ferrous metals, Metals NEC	5	4.3	3.3	3.8
Metal products	6.4	5.4	4.2	4.8
Motor vehicles and parts	12.3	10.5	8.0	9.2
Transport equipment	4	3.4	2.6	3.0
Electronic equipment; Machinery and Equipment	10	8.5	6.5	7.5
Manufactures nec	15.3	13.0	9.9	11.5

3. Barriers to foreign trade in services

We base our estimates on the barriers to foreign direct investment in services on the IER's study (see Pavel et. al. 2006). The authors estimate tariff equivalents of barriers that discriminate against foreign service providers of telecommunication, transport and financial services. **We model those barriers as additional purchases of value added in the amount equal to tariff equivalents by exporters or providers of those services from all the remaining regions** (Russia, EU27 and the ROW). Hence we assume that in order to provide financial services (banking insurance) in Ukraine foreign providers face costs that are 28.9% higher than those faced by local providers. The additional costs in the transport sector amount to 16.7% and in communications to 4.9%. In simulations we assume that all providers will face an improved access to the Ukrainian market following and EU-Ukraine FTA. Hence these barriers are also reduced with respect to Russian and ROW providers of services.

Table 4.5 Barriers to trade in services

	Benchmark (2004)	WTO Accession	Extended FTA (S1)	Limited FTA (S2)
Transport nec, Water transport, Air transport	16.7	11.7	0	6.7
Communication	4.9	3.4	0	2.0
Financial services nec	28.9	20.2	0	11.5

We assume that the barriers to foreign providers of services in Ukraine are reduced by 30% with WTO accession and then by a further by 100% in an extended FTA scenario. In the limited scenario these barriers are assumed to go down by 60% relative to the benchmark 2004 level. Scenario specifications are in detail in Table 4.6.

Table 4.6 Scenario overview

Agenda Issues	WTO outcomes (with base scenario is 2004) (base)	Extended FTA (S1)	Limited FTA (including services) (S2)
	Abiding by the principles of non-discrimination and transparency among WTO partners		
Trade in Goods including industrial goods, agricultural products, processed agricultural products and fishery products	Fixing tariffs, mostly at low levels, with the most-favoured nation clause – based on WTO accession analysis: reductions varying between 0% and 100% (see Table 4.1)	Zero tariff in almost all sectors (with 5% remaining in agri-food sectors) extending the zero tariff principle to embrace the free movement of all goods, services, capital and (doubtless with longer transition periods) labour as well	Agriculture reduced by 75% compared to 2004 tariff level, food products reduced by 30%-80%, rest to very low tariffs (not all industrial products to zero – allowing for limited liberalisation in sensitive sectors)
Energy	Reducing barriers to trade in energy sector and related sectors	Zero tariff in electricity, gas & coals sectors	Zero tariff in electricity, gas & coals sectors
Trade in services (such as financial services, transport and telecommunications), establishment and investment	Opening many service sectors to free trade – base on WTO accession analysis – 30% reduction compared to 2004	For trade in services, complete sectoral coverage and convergence on internal market regulatory rules of the EU or best international standards: 100% reduction compared to 2004	Further limited liberalisation of services (but perhaps with only limited liberalisation in some sectors): 60% reduction compared to 2004
Trade facilitation, Customs and Rules of Origin	Adopting rules for customs procedures – no reductions compared to pre-WTO	Rules for customs procedures, trade facilitation and rules of origin largely in line with EU - 50% reduction compared to 2004	Partial adoption of rules for customs procedures – 10% reduction compared to 2004
Technical Barriers to Trade and SPS	Observing rules for non-tariff barriers, with the principle of non-discriminatory 'national treatment' – reduction of 30% in agri-food sector; reduction 15% other sectors	For trade in goods, substantial elimination of non-tariff barriers through harmonisation or mutual recognition of technical standards with those of the EU (or both) – 50% reduction in agrifood sector; 35% other sectors compared to 2004	For trade in goods, limited elimination of non-tariff barriers through harmonisation or mutual recognition of technical standards with those of the EU (or both) – 40% reduction in agrifood sector; 25% other sectors compared to 2004
Capital movements and payments	Liberalisation of the financial sector and opening up of domestic capital markets	Further commitments in opening up the financial sector, including specific professions, reducing capital costs in Ukraine. Increased FDI inflows are expected because of the FTA. In a special gravity estimation this will be analysed further.	A limited increase in FDI flows is expected; in line with further commitments to opening up to foreign capital. In a special gravity estimation this will be analysed further.

Agenda Issues	WTO outcomes (with base scenario is 2004) (base)	Extended FTA (S1)	Limited FTA (including services) (S2)
Government Procurement	Ambitious legislation passed as part of WTO negotiations in December 2006 regarding public procurement.	Ongoing improvements in the process of government procurement especially the focus on implementation. Ambitiously this could lead to a reduction in NTBs of 50%/35% .	More limited success in implementation of improved procedures regarding government procurement. A reduction of 40%/25% of NTBs is envisaged.
Competition policy		Stronger commitments in competition policy, corporate governance and internal market regulation that are anchored to EU practices, and for selective elements of environmental standards	Limited commitments in competition policy, limited improvements in corporate governance
Intellectual Property rights		Improved IPR increases security for companies doing business and resulting in de fact reductions in standard costs. The standard costs are expected to drop by another 20% on top of WTO commitments.	Limited success in protecting IPR and thus limited reductions in standard costs of 10% on top of WTO commitments.
Trade and sustainable investment		Adoption of accompanying policies, including technical assistance, infrastructure investment, education and training	Adoption of accompanying policies, including technical assistance, infrastructure investment, education and training

4.4 Modelling results

Before shortly summarising the results, we would like to emphasise once more that the baseline data are defined to be 2004, so all changes we report are based on this baseline. The effects of the FTA scenarios alone constitute the difference between our outcomes of the WTO scenario and the effects of the FTA scenarios. In the overall changes we look at the WTO scenario, the extended FTA scenario (scenario 1) and the more limited FTA scenario (scenario 2). For the two FTA scenarios we have looked at the long-run and short-run effects to allow for comparative-dynamical effects to become visible. For the definition regarding the short-run and long-run, we refer to section 4.2.4.

4.4.1 Summary of overall macroeconomic changes (welfare, income and wages)

Table 4.7 Summary of macroeconomic changes

Variable	Ukraine	Russia	EU-27	ROW
Scenario: WTO Accession				
Welfare (% change)	0.654	0.018	0.006	0.006
Income (return factors and taxes) (bn US\$)	0.058	0.364	8.526	24.847
Skilled Wage (% change)	0.814	-0.004	0.001	-0.001
Unskilled Wage (% change)	0.839	-0.038	-0.001	-0.001
Scenario 1: Extended FTA (short run) – including WTO				
Welfare (% change)	2.261	0.030	0.007	-0.001
Income (return factors and taxes) (bn US\$)	0.060	0.364	8.526	24.846
Skilled Wage (% change)	2.496	0.049	0.009	-0.001
Unskilled Wage (% change)	3.066	-0.028	0.009	-0.002
Scenario 1: Extended FTA (long run) – including WTO				
Welfare (% change)	5.285	0.071	0.011	0.003
Income (return factors and taxes) (bn US\$)	0.061	0.364	8.527	24.847
Skilled Wage (% change)	4.355	0.059	0.009	-0.003
Unskilled Wage (% change)	4.970	-0.029	0.008	-0.003
Scenario 2: Limited FTA (short run) – including WTO				
Welfare (% change)	1.216	0.004	0.007	0.002
Income (return factors and taxes) (bn US\$)	0.059	0.364	8.526	24.846
Skilled Wage (% change)	1.547	-0.003	0.006	-0.001
Unskilled Wage (% change)	1.789	-0.053	0.006	-0.001
Scenario 2: Limited FTA (long run) – including WTO				
Welfare (% change)	3.295	0.032	0.009	0.004
Income (return factors and taxes) (bn US\$)	0.060	0.374	8.527	24.847
Skilled Wage (% change)	2.817	0.002	0.006	-0.002
Unskilled Wage (% change)	3.093	-0.054	0.005	-0.002

* All values are in billion US\$ unless specified to be in %

Welfare effects (% change)

From the results it becomes clear that the positive welfare effects for all the defined regions in the model are largest in the Extended FTA (Scenario 1) in the long run, where the integration is most far-reaching. Positive welfare effects are 5.285% for Ukraine while 0.071% for Russia and 0.011% for the EU. In the short-run extended FTA scenario these amounts are 2.261% for the Ukraine and 0.007% for the EU. In the limited FTA, these effects are smaller: 3.295% for Ukraine in the long-run and 0.009% for the EU. It must be noted that – even though relatively the largest positive welfare effects occur in the extended FTA – the magnitude of welfare changes for the EU are – as we expected – very small. This is due to the relative sizes of the Ukrainian versus the EU economies (0.63%). What also is worth mentioning is that every FTA scenario leads to larger welfare gains than just the WTO accession does for the EU and Ukraine and that in the long run the welfare effects are greater than in the short-run for both FTA scenarios. This is the case because in the long run the Ukrainian capital stock is allowed to adjust (FDI inflows for example). These outcomes reflect the pro-competitive effect of trade as well as the increased use of comparative advantage between the European Union and Ukraine. Overall the FTA appears to be a non-zero-sum game with the more extended FTA leading to larger welfare gains than the more limited scenarios.

Income measured as return on factors and taxes

The income, measured as return on factors and taxes is not expected to change for the EU or other geographical areas, except for the Ukraine. For Ukraine, we observe higher factor incomes the more deep the FTA and the longer the run. This is in line with what is to be expected when in the long run capital is allocated most efficiently across the Ukrainian economy.

Wage effects for low- and high-skilled workers

We observe a significant increase in the real wages of both skilled- and unskilled workers in Ukraine and the EU as a consequence of the FTAs. Compared to 2004, the WTO scenario would predict an increase for high-skilled workers of 0.814% and for low-skilled workers of 0.839%. The FTAs including the WTO accession reach levels of 4.355% and 4.970% respectively for the extended FTA (long run) and 2.817% and 3.093% for scenario 2. This can be seen as a small but clear increase in the real wage rate in Ukraine. The FTA also has a positive effect on EU wages, albeit much smaller in terms of % change. Whereas in the WTO the low-skilled workers in the EU would experience a tiny wage decline, for the FTA scenarios these effects are clearly positive: 0.008% for the extended FTA and 0.005% for the more limited FTA.

4.4.2 Summary of sectoral effects (prices, output, imports, exports and employment)

Tables 10.1 – 10.8 in Annex VI present the most important outcomes for the various FTA scenarios that we analysed.

Price changes per sector

If we focus on price changes in sectors, we observe that price changes in the European Union are very small, all below the 2% change compared to the WTO scenario we set as the border for a significant price impact.

For the transport equipment sector in Ukraine, the scenarios lead to price decreases of 10.8% and 10.9% respectively though this is not a significant increase on top the WTO scenario that is showing a 10.6% increase – see Annex VI. A significant decrease in prices occurs in **processed rice and sugar** (-3.8%, -3.7% and -2.1% for the extended scenario (LR and SR) and the short-run version of the limited scenario, **wearing apparel** (-3.8%, -3.7% and -2.8%), **leather products** (-6.7%, -6.7%, -5.8%). In the extended FTA in the long run there is also a substantial decrease in the price levels in the **wood products, paper products and publishing sector** of 3.3%, of **textiles** of 3.2% in the **financial services nec and insurance sector**, that do not occur in the more limited scenario.

Output changes per sector

For output changes, we observe overall that there are only very small output effects for the European Union 27 regardless of the scenario that is simulated, with the largest increase being in the sugar sector, showing an increase of 0.4% in the extended FTA (SR and LR). We have presented the results in Annex VI if the expected impact was larger than +/- 0.05%; any smaller share we have rounded off to zero. Also for Russia and ROW the output changes are very small. However, for the production structure of the Ukrainian economy, WTO accession and the three FTA scenarios do have significant results – which is important because we want to look at the direct economic impacts as well as the indirect economic, social and environmental impacts. We classify production changes to have a significant impact on the production structure of sectors and the Ukrainian economy if there is an impact effect of the scenarios that leads to a change in production of 3.5% compared to the WTO outcomes.

For the agriculture, fisheries and forestry sector, there is a significant positive impact though not very large compared if we look at the share of the effect that belongs to WTO accession. For **bovine cattle, sheep and goats, horse meat products** the extended FTA shows a significant increase in production in the short-run but a strong negative impact in the long run. For the **vegetable oils and fats** the same applies. **Processed rice and sugar** show a very significant production drop as a consequence of the proposed FTA compared to WTO accession. In general, the agricultural production does not change tremendously compared to the WTO scenario because most agricultural tariff liberalisation has already taken place. Indeed, in the sectors where liberalisation has not gone so far (e.g. processed rice and sugar or vegetable oils and fats) the effects seem to be largest because there is still sufficient scope for liberalisation. Compared to the WTO scenario, there is a very large production increase in the **textiles sector** (43.7% and 50.4% for scenario 1) as well as in **wearing apparel** (185.1% and 197.9%) and **leather products** (23.9% and 29.6% for SR and LR respectively compared to 2004). In the extended FTA also the **wood products, paper products, publishing** (SR – 5.8%), **petroleum and coal products** (4.5% and 6.8% for SR and LR respectively), **chemical, rubber and plastic products** (8.6% and 10.5%), **metal products** (7.1% and 8.2% for SR and LR in extended FTA respectively), **electronic equipment and machinery** (17.5% and 20.2% in the extended FTA) and **manufactures nec** (7.7% and 9.3%) show significant production increases. The sector **motor vehicles and parts** shows an increase compared to the WTO scenario also, where this increase is largest for the extended FTA and smallest for the short-term limited FTA. The **transport equipment sector** is shrinking compared to the 2004 base data but not compared to the WTO accession scenario. **Transport nec** shrinks in the

extended short run FTA but in the long run and limited scenario this is not the case. Finally, a sector that will be negatively affected by the extended FTA both in the long run and in the short run (-18.3% / -15.1%) and the limited FTA (-9% and - 6.7%) is the **financial services nec and insurance sector**.

If we do not only look at the output changes in percentages, but include the relative size of each sector, i.e. combining the results percentage changes in output with the absolute size of the sector. We note that especially **financial services nec and insurance** and **transport nec, water transport and air transport** show significant absolute losses (up to kUS\$ 821) while sectors like **agriculture, forestry and fisheries, wearing and apparel, textiles, chemicals, rubber and plastic products** as well as **ferrous metals and metals nec, trade and electronic equipment, machinery equipment** gain substantially in production (up to kUSD 1157). The results are presented in Annex VI.

Export % value changes per sector

Looking at the percentage changes in the value of exports from the countries in the model to the rest of the world, we define a significant change in export structure as a change of +/- 10%.

Overall what is interesting to observe from Annex VI is that WTO accession in any of the FTA scenarios leads overwhelmingly to significant *increases* in Ukrainian exports. There are some exceptions though that show negative export growth both in the long and short run of the extended FTA. These sectors are: **coal, oil, gas** (-11%, -12%), **electricity** (-12%, -11%). For the limited FTA these deviations do not occur. Furthermore, in the short run, **trade (-12%)**, **transport nec, water transport and air transport (-14%)**, **as well as communication (-17%) and business services (-14%)** are among the shrinking sectors. In the longer run these effects are partially mitigated. We also see that the FTA between the EU and Ukraine has a negative impact on Russian exports for certain sectors like dairy products, processed rice and sugar and beverages and tobacco. For the EU the percentage change in the value of exports because of the FTA is positive in general (with the exception of the sector processed rice and sugar) but relatively small.

More specifically, we note that the positive percentage change in exports from Ukraine to the rest of the world is most pronounced in **bovine cattle, sheep and goats, horse meat products** (33% 34%, 25%, 26% for both scenarios in SR and LR respectively), **vegetable oils and fats** (41%, 43% for the extended FTA), **dairy products, food products nec** (28%, 29%), **textiles** (53%, 59%), **wearing apparel** (273%, 288% for the extended FTA and 136% and 143% for the limited FTA), **leather products** (34%, 39%), **wood products, paper products, publishing** (31%, 34%), **petroleum & coal products** (20% and 22%), **mineral products nec** (53%, 53 for SR and LR of the extended FTA scenario), **motor vehicles and parts** (18% and 20%) and **manufactures nec** with respectively 47%, 47%, 30% and 30% increase in the value of exports compared to the 2004 base data. Also **electronic equipment and machinery increases** strongly. Overall, sectors where there is most room for further liberalisation and where Ukraine has a comparative advantage, we see the largest export value increases. Some export value increases are only significant over 10% in case of the Extended FTA scenario: **chemical rubber and plastic products** (14% and 16%) and **metal products** (11% and 12%).

Import % value changes per sector

Looking at the percentage changes in the value of imports from the countries in the model from the rest of the world, we define a significant change in import structure as a change of +/- 10%.

The Ukrainian sectors show positive percentage changes in the value of imports for Ukraine as is to be expected as a consequence of further trade liberalisation. Most pronounced are **agriculture, fisheries and forestry** (42% and 45% for the extended FTA in SR and LR respectively), **coal, oil and gas** (48%, 75%), **dairy products** (15% and 16%), **processed rice and sugar** (36%, 38%), **textiles** (46% and 51% but also in the limited FTA), **wearing apparel** (61%, 68%), **leather products** (46%, 51%), **mineral products nec** (35%, 40%), **manufactures nec** (22% and 25% in the extended FTA). In **processed rice and sugar** we clearly see a drop in Ukrainian domestic output combined with an increase in imports. In the service sectors we see increased value of imports in **recreational, entertainment, cultural and sporting activities and social activities** by 239% and 276% in SR and LR of the extended FTA respectively. For **financial services nec and insurance** the model outcomes are implausibly high which is due to the very small base upon which the trade measures are modelled. In case of a small base, any absolute increase (or decrease) will have a very large relative (%) effect. We therefore opt not to present these results.

Employment changes for high- and low-skilled workers per sector

The last effect we look at for each specified sector is the change in employment for high- and low-skilled workers. Any 'large' change in employment signifies a more than 2% change in the production structure of the Ukrainian economy, making it more likely for the sector to be analysed for economic, social and/or environmental impacts. We model the impacts for high- and low-skilled workers whereby both categories are defined as done by the International Labour Organisation (ILO) whereby the high-skilled workers are managers and administrators and professionals. Low-skilled workers are trade persons, salespersons, clerks and personal service workers, plant and machine operators, labourers and drivers as well as farm workers (Dimaranan and MacDougall, 2002).

In general we observe small differences between changes in employment for high- and low-skilled workers. As could be expected, in sectors like **agriculture**, where the employment opportunities are decreasing, the decrease is larger for the low-skilled than the high-skilled workers. Employment in the **financial services nec, and insurance** sector on the other hand decreases more (%-wise) for the high-skilled than the low-skilled workers. Overall we see a trend that employment changes for high- versus low-skilled workers are related to the skills-level required to work in this sector. Also we note that from the general macroeconomic analysis we observed that wages of the low-skilled workers rise more relatively than do wages of high-skilled workers.

The largest negative employment impacts, measured as the percentage change in the wage bill (i.e. percentage change in employment) are to be found in the **processed rice and sugar sector** (-8.2%, -6.0% for the extended FTA) and the **financial services nec, and insurance sector** (-18.8%, -15.8%, -9.2% and -6.9% for both scenarios in short and long run). Also for the Extended FTA the **transport nec, water transport and air transport sector** shows a decrease in employment (-4.7%). Also **minerals nec** shows a

short-term negative employment effects beyond WTO. Other sectors show – when correcting for the WTO accession scenario – increases in employment: **bovine cattle, sheep and goats** (9.8% and 12.5%), **vegetable oils and fats** (9.3%, 12.3%), **wearing apparel** (189.7%, 206.5%), **leather products** (24.%, 30.9%), **chemicals, rubber and plastic products** (8.8%, 11%), **electronic equipment and machinery equipment** (18%, 21.1% for SR and LR in the extended FTA respectively). Similar but slightly different changes apply to the low-skilled workers % changes.

In absolute value of employment change – that is an increase or decrease in the number of people working in a sector, i.e. we combine the percentage changes with the absolute levels of employment in each sector to calculate the changes in number of persons employed. The results are presented in Annex X. We see that for skilled workers (that are a much smaller part of the total working population than unskilled workers), only the sector **financial services and insurance** has an negative impact larger than 15.000 jobs disappearing. With respect to the unskilled workers the effects are quantitatively much larger due to the fact a much larger share of the population is classified as ‘unskilled’ (93.8%) according to our definition. Negative – and quantitatively significant – employment impacts occur but it depends on whether or not we take the WTO into account or not. If we do not, for example the **agricultural sector** actually creates a lot of employment in the years to come (136.499 jobs). Jobs are lost in **coal, oil and gas** as well as in **minerals nec** sectors. Also in **transport nec**, jobs are lost in the short- and long run (-177.000 and -80.000 respectively). In most sectors, however, there is a strong increase in employment: **bovine cattle, sheep and goats, horse meat products, food products nec, textiles, wearing apparel, chemical, rubber and plastic products, ferrous metals, metals nec, metal products, motor vehicle parts, electronic equipment; machinery and equipment, construction and trade**, all gain over 15.000 jobs per sector each.

The presented results under this heading need to be interpreted with caution. Because the CGE model assumes full employment at all times, there are no increases or decreases in the level of employment. Instead there is a re-allocation of personnel inter-sectorally without affecting the total. Though not entirely realistic, this is a consequence of the model specifications used.

4.4.3 Summary of cumulative effects

In order to check for cumulative effects we carried out the following analysis. First of all we looked at scenario 1 (the extended FTA) overall – and at the effects. Secondly, we looked at the effects the individual measures had: tariff changes, standard cost changes, barriers to trade in services changes and border cost changes. Any difference between the sum of the individual measures and the overall scenario outcomes would be ‘interactions’ between the individual measures. When carrying out this analysis, we however ran into the limitations of running a non-linear CGE model while assuming additively of the individual trade measures would work. The summations did not yield any reliable or significant results, nor could they be interpreted as estimations of the individual trade measure.

4.5 Tables summarising modelling results

In Annex VI we summarise the CGE modelling outcomes in the various tables. For each of the tables we provide the effects for Ukraine, for the EU-27, for Russia and for Rest of the World (ROW).

Given the defined three scenarios (including WTO), the tables provide the following information, based on the 2004 base scenario:

- Summary of macroeconomic changes (Annex VI);
- Price changes (Annex VI);
- Percentage changes in output (Annex VI);
- Changes in absolute value of output (including WTO and on top of WTO) (Annex VI);
- Changes in exports (Annex VI);
- Changes in imports (Annex VI);
- Employment changes (Annex VI);
- Absolute value of employment changes (including WTO and on top of WTO) (Annex VI).

Because of the uncertainties regarding the WTO accession of Ukraine, we have taken the year 2004 as the base year, executed the CGE study for the WTO accession as well as on the two scenarios. This implies that the presented results of the scenarios need to be read as WTO inclusive – which is exactly what the Terms of Reference require us to do.

4.6 Gravity estimates on FDI in Ukraine

This part of the report is devoted to the estimation of the impact of an FTA between the EU and Ukraine on potential FDI inflows into Ukraine. An important aspect of trade linkages is involvement or potential involvement in free trade agreements, customs union and supra-national economic structures, such as the European Union. Third party countries may invest into such regions to avoid tariffs on exports, while the enhanced growth and trade from the economies of scale of integration provide a demand stimulant to FDI. Within the EU context, the prospect of an EU-Ukraine FTA might be viewed by potential investors as reducing country risk; both because it serves as an external validation of progress in the reform process, and because it signals higher macro-economic, institutional, legal and political stability. In our econometric work, we therefore analyse the indirect impact of EU-Ukraine FTA via business-environment risk on FDI in Ukraine.

We make our forecasts based on a gravity model, which we estimated for 12 developing/transition countries (countries-recipients) and 31 OECD countries (countries-donors). For a fuller description of the model please refer to Annex VIII. FDI inflows into a host country are modelled to be a function of both source and recipient countries' GDP and geographical proximity; coupled with traditional FDI determinants like labour costs, a degree of openness of the economy, the friendliness of business environment and the WTO membership.

Our key matter of interest in this analysis is the impact of a business environment index (BEI), which enables us to estimate the impact of an FTA with Ukraine at a later stage. We find that the Economist Intelligence Unit (EIU) business environment index plays an important part in explaining bilateral FDI flows in our sample. The index ranks countries (with lower values standing for less friendly countries) according to 10 aspects of business environment, including market opportunities, macroeconomic environment, political environment, infrastructure, private enterprise policy, labour market, tax regime, financing, foreign trade and exchange regime, and policy environment for foreign investment.

The results of our model are consistent with the conclusions of other studies analysing determinants of FDI in transition/developing countries. In line with previous research we find the gravity factors (GDP of home and host countries, and distance between the two countries) to have a significant effect on FDI flows. We also find the level of the domestic debt, degree of country's openness and labour costs to affect significantly FDI flows. The impact of the EIU business environment index is significant and positive, which is in line with our expectations.

The estimated coefficients are in line with the estimates in the comparable studies, CEPS (2002) in particular. CEPS estimated an impact of FTA with Russia on FDI using the same methodology as applied in this study to find out that one percent increase in the BEI results in 1.23% increase in FDI flows to Russia. According to our estimates for Ukraine, one percent increase in the value of the Business Environment Index (BEI) will result in 1.38 percent increase in the amount of FDI inflow into Ukraine. This is a considerable increase given the model is estimated in flows and this increase is expected to happen every year.

As was stated above, the impact of an FTA with Ukraine is approximated by the impact of change in its business environment to the level of CEE countries. We believe this is a reasonable assumption as a deep FTA will ultimately require (and trigger) a significant improvement in the institutional and political climate in Ukraine. The Ukrainian government will only be willing to engage in FTA if it is set to significantly benefit from it (i.e. have free access to the EU market). However, the EU should also be able to benefit from the FTA with Ukraine as well – not only the EU companies should have free access to the Ukrainian market, but also the Ukrainian government should provide corresponding institutional and legal systems that will facilitate their operations in Ukraine. And these systems should be of standard that is very close to the one at home for the companies to have enough confidence to conduct business in Ukraine. Hence, we see that the dual pressure (from Ukraine to the EU and back) should prompt the Ukrainian government to conduct deeper institutional and political reforms.

Hence, we estimate a change in FDI inflows to Ukraine considering its business environment improving by 10%, 20% and 30% respectively. Correspondingly, an increase by 10% in Ukraine's EIU business environment index (from 4.6 to 5.06) brings its business quality to the level of Kazakhstan, whereas an increase of 20% (from 5.06 to 5.52) corresponds to Ukraine being perceived by international investors nearly as business friendly as the Russian Federation. The largest improvement considered in this study is 30% (BEI value of 5.98). It sets Ukraine's business climate above that of

neighbouring Turkey, yet it is still quite far away from that of the Eastern European advanced transition economies like Poland, Slovakia and Hungary. Please see Table 4.8 for corresponding values of the EIU Business Environment Index.

Table 4.8 EIU Business Environment Index, 2005

Country	2005
Brazil	6.50
Bulgaria	6.00
China	5.70
Czech Republic	7.10
Hungary	6.80
India	5.50
Kazakhstan	5.10
Poland	6.80
Russia	5.50
Slovakia	6.90
Turkey	5.70
Ukraine	4.60

Source: Economist Intelligence Unit

As a result, the amount of potential FDI inflows into Ukraine are estimated to increase by 14%, 29% and 44% respectively (see Table 4.9). In absolute terms it means that annual FDI flows into Ukraine will increase from the current level of USD 9,137mln (OECD countries, 2003) to USD 9,554mln (increase of USD 417mln) if the business environment improves by 10%, and to USD 9,607mln (increase of USD 470mln) and USD 9,662mln (increase of USD 525mln) if the business environment improves by 20% and 30% correspondingly. This is, of course, a lower bound estimate for FDI as it does not include potential changes in other variables (which have a sizeable impact also), like, for example, GDP, GDP per capita etc.

Table 4.9 Estimated changes to FDI flows to Ukraine

BEI change	% increase in FDI flows to Ukraine	Estimated FDI flows, OECD countries, USD mln
10%	14	417
20%	29	470
30%	44	525

FTA impact on stock of FDI

Furthermore, we have estimated an impact of the FTA with the EU on the stock of FDI in Ukraine until 2020. According to our estimates, FDI stock will increase from USD 17,311 mln in 2005 (NBU) to USD 19,911 mln; 36, 407 mln and 140,472 mln in 2020 or 85%, 110% and 612% increase of the current value according to our three BEI improving scenarios (please see Table 4.10).¹³ Again, this is a lower bound estimate of an increase in

¹³ These estimates are obtained assuming that FDI inflows increase annually according to our estimates starting 2005 until 2020.

FDI stock due to the impact of the EU-Ukraine FTA only (not considering changes in the GDP and related variables).

Table 4.10 Estimated changes to FDI stock, Ukraine, 2020

BEI change	% increase in FDI stock in Ukraine	Increase in FDI stock, OECD countries, USD mn
10%	85	19911
20%	110	36407
30%	612	140472

Thus, a free trade agreement with the EU is likely to have a substantial impact on FDI inflows into Ukraine. If economic, institutional and political reforms are entrenched and enhanced (resulting in the overall business environment improving to the level of neighbouring CEE countries), Ukraine will enjoy a sizeable increase in FDI inflows. It is obvious that the level of domestic reform has a significant impact on the improvement of the business environment and, as a result, on FDI inflows between Ukraine and the EU. Hence, a free trade agreement with the EU should not be regarded as a substitute for domestic reforms, but as a complement and, as a matter of fact, a consequence of internal institutional and economic development of Ukraine.

The increased projected FDI flows, are expected to have an additional effect on trade flows, especially intra-firm and intra-industry trade flows in sectors that experience economies of scale like food processing and manufacturing industries. At a later stage we will elaborate further on this matter.

5 Screening & Scoping

5.1 Overview of screening

The purpose of screening is to identify those sectors or issues that are considered to be worth examining further to find if there is a potential causal link to a sustainability impact. In order to carry out the screening exercise, we have gathered the information in Chapter 2 and carried out the CGE modelling in Chapter 4. There are several criteria for selecting a sector or activity as explained in the Inception Report as well as in the Handbook (2006). They will each be discussed a little further on.

The evaluation of the overall macroeconomic situation and sectors that are of major importance to the Ukrainian economy was made in Chapter 2. The evaluation of the initial economic effects of the trade agreement is made through the CGE framework, namely the Multi-Region Trade Model model based on earlier work by Harrison, Rutherford and Tarr (1996a). Making use of utility and profit maximisation, the multi-region trade model is a tool for analysing market- as well as inter-market transactions. The important characteristic of the model is its ability to quantitatively assess the impacts of economic policy changes on the industrial structure, resource allocation, income allocation, and other items through changes in relative prices and the changes in the behaviour of economic entities in response to relative price changes.

On the basis of the overall macroeconomic situation and the macroeconomic CGE analysis, it is possible to determine which sectors are likely to be the most economically affected by the trade agreement. If some sectors are affected in terms of their production structures, there may be indirect economic, social and/or environmental effects. In the latter case, a screening exercise may also be worth conducting.

The screening exercise is conducted on the basis of the results of the macroeconomic model. In this part, we identify those sectors where a sustainability impact is likely to occur. In-depth assessments concerning these sectors have then to be undertaken. The scoping exercise aims to determine the objectives and methods of the in-depth assessment studies that are intended to produce the information required for the social and environmental assessment of potential sustainability impacts. Its basis is the outcome of the screening exercise, which has established a link between the trade agreement or other policy change under study and economic consequences in the areas it considers to be of interest.

In order to identify the sectors and horizontal issues, which should be studied further, a large number of sectors and horizontal issues are assessed with the screening criteria. For the screening the sectors and horizontal issues are partially grouped. The screening

criteria provide the first identification of the potential sustainability impacts that result from the trade measures or measures that are related to the sector/issue. The screening criteria were selected in order to get as much valuable information as possible for the selection. The selection sectors and horizontal issues for further analysis will take place at the end, taking into account all of the criteria. Five sectors will be selected for further study out of a total of 12 sectors in the screening part. Similarly there will be 3 horizontal issues selected out of a total of 9 issues.

The screening of the five sectors and three horizontal issues takes place, making use of the following criteria:

- a. The (macroeconomic) importance of a sector/horizontal issue for Ukrainian – EU relations (e.g. through share of GDP, employment);
- b. The size of the expected impact of the FTA within the context of the EA between the EU and Ukraine;
- c. The expected economic, social and/or environmental impact of the sector for the EU and Ukraine;
- d. The comments and feedback from the consultations with key stakeholders and civil society.

First criterion: The macroeconomic importance of the sector/horizontal issue for EU-Ukraine relations measured by output, employment, growth and trade shares.

The first criterion that will be used is measuring the importance of the sector/horizontal issues. As an indicator of the importance of the sector/horizontal issue, we will use the share of total output created by the sector, number of people employed in the sector, recent growth rates and share of total trade. The values are checked for both the EU area and for Ukraine. For example a sector with big output and employment share can be considered important to study further even if the effects of the EA-FTA seem to be small in percentage for that sector as even small percentage changes can have then relatively large effects.

Second criterion: The projected sustainability impact of the trade measures in the FTA, calculated with the CGE model.

The results of the CGE model will be used as a criterion as well for the selection of the sectors/horizontal issues to be studied further. If the expected impact of the trade measures in the FTA will be large in some sectors in either the EU area or in Ukraine according to the models results, it can be an indication that the effects in that specific sector/issue should be studied in detail. The CGE model will calculate the impacts for both areas and all the effects will be considered during the selection.

Third criterion: The expected economic, social and environmental impact on the sector/issue.

The expected impacts, based on the CGE model and other information, on the different sustainability indicators will be assessed for both the EU and Ukraine. In the selection of the sustainability indicators, coverage, exclusivity and balance of the indicators was used as selection criteria. Every theme of sustainable development has many core indicators (i.e. sub-themes) in order to guarantee this coverage. The core economic indicators include real income, fixed capital formation, trade and government finance. The social effects are assessed for poverty, health, education, gender equality and labour issues. The

environmental effects are assessed for atmosphere, land, biodiversity, environmental quality and fresh and wastewater. Large estimated changes in any of the sustainability indicators will be taken into account in the selection process.

Fourth criterion: The comments and feedback received from stakeholders and civil society through the consultation process.

The consultation process and the comments and feedback from different key stakeholders and civil society are considered as a very important source for information as well. All of the information gathered via the consultation process is taken into account, when choosing for the sectors and horizontal issues that are studied in detail during the in-depth studies of the project. Especially the comments of key stakeholders of the studied sector from both the EU and Ukraine will be valued.

5.2 Sustainability impact indicators and dimension

When screening for a likely sustainable economic, social and/or environmental, the following Table 5.1, summarises the variables and specific indicators this study has taken into account.

Table 5.1 Sustainability impact indicators

Area	Core Indicator	Specific Indicators
1. Economic	a) Real Income b) Fixed capital formation c) Trade	GDP per capita, Net value added, consumer effects, effect on prices, variety of goods and services Gross fixed capital formation, Private and public capital formation, FDI Balance of trade in goods and services, Volume of trade in goods and services, Terms of trade
2. Social	a) Poverty b) Health c) Education d) Labour issues (incl. Employment and decent work) e) Equality	People living under poverty line, GINI index, regional effects Life expectancy, Mortality rates (maternal, child), Access to health services, sanitation, nutritional levels Primary, secondary and tertiary enrolment rates, literacy rates Unemployment, Productivity and quality of work, Rights at work, Employment opportunities, wage effects, self-employment Gender equality in employment and employment opportunities, gender equality in education, social protection, social dialogue
3. Environmental	a) Atmosphere	CO2 emissions, air quality, quantity

Area	Core Indicator	Specific Indicators
	b) Land	of dangerous chemicals in atmosphere (dangerous to ozone layer or to humans)
	c) Biodiversity	Land use in agriculture, forest, desertification, urbanization, natural resource stocks
	d) Environmental quality	Number of species, protected areas, ecosystem
	e) Fresh and waste water	Waste management, energy resources
		Quantity of water use, Access to safe drinking water, Water quality, Quantity of waste water, Cleaning of waste water, Water supply

We will screen the horizontal issues on the basis of hypotheses. From the impact of the FTA on the issue a causal chain is presupposed through a change in the production structure to a potential social or environmental sustainability impact. If there is no impact of the FTA on the horizontal issue that leads to hardly any change in the production structure or production methods we assume that there will be no effects on social and environmental sustainability. In this case the horizontal issue or area will not be selected for further study.

5.3 Screening for major sectors in the EU-Ukraine trade relationship

Looking at the first criterion, we have to identify the major sectors in the EU-Ukraine trade relationship. As mentioned in the inception report we look at the share of sectors in total Ukrainian output as well as the share of employment of each sector in total Ukrainian employment. Based on these two criteria, we can make a rating of most important sectors. In order of importance these are:

Table 5.2 Most important sectors in Ukraine (employment share in Ukrainian output)

Nr	Sector	Percentage share of sector in Ukrainian employment
1	Agriculture, Fisheries, Forestry	18.34
2	Public administration, Education, Health, Sewage, cleaning of streets and refuse disposal	14.42
3	Transport nec, Water transport, Air transport	8.39
4	Trade	7.55
5	Construction	5.78
6	Ferrous metals, Metals NEC	5.43
7	Coal, Oil, Gas	4.59
8	Business services nec, Renting	4.14
9	Electricity	3.29
10	Electronic equipment; Machinery and Equipment	2.94

Table 5.3 Most important sectors in Ukraine (output share in Ukrainian output)

Nr	Sector	Percentage share of sector in Ukrainian production
1	Agriculture, Fisheries, Forestry	10.70
2	Trade	9.56
3	Ferrous metals, Metals NEC	9.11
4	Public administration, Education, Health, Sewage, cleaning of streets and refuse disposal	8.07
5	Transport nec, Water transport, Air transport	6.95
6	Petroleum, coal products	5.11
7	Business services nec, Renting	4.83
8	Construction	4.68
9	Electronic equipment; Machinery and Equipment	3.78
10	Chemical, rubber, plastic products	3.42

The sectors **agriculture, forestry and fishing, Public administration, Education, Health, Sewage, cleaning of streets and refuse disposal, transport nec, water transport, air transport, trade, construction** as well as **ferrous metals and metals nec, business services nec and renting, and electronic equipment and machinery equipment** are present in both columns and thus are of significant importance for the Ukrainian economy both in terms of output and in terms of employment.

Within the agricultural sector, various subsectors can be identified. These are presented in Table 5.4.

When screening these for output and exports/imports impact, we find that cereals, wheats & grains, meat, edible meat offal, animal & vegetable fats, fruits and nuts and beverages, spirits and vinegar are important agricultural and food subsectors.

Table 5.4 Agricultural sub-sectors and their relative importance

		Exports, thnd. USD	% in total exports	% to 1-24 group exp	Imports, thnd. USD	% in total imports	% to 1-24 group imports
01	Live animals	440.61	0.0%	0.1%	12481.56	0.13%	1.94%
02	Meat and edible meat offal	16.53	0.0%	0.0%	60249.54	0.63%	9.37%
03	Fish and crustaceans, molluscs and other aquatic invertebrates	1953.47	0.0%	0.3%	21079.37	0.22%	3.28%
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, nec	21227.58	0.2%	2.8%	16223.28	0.17%	2.52%
05	Products of animal origin, not elsewhere specified or included	10378.23	0.1%	1.4%	1104.46	0.01%	0.17%
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	51.74	0.0%	0.0%	12907.34	0.13%	2.01%
07	Edible vegetables and certain roots and tubers	22013.6	0.2%	2.9%	3197.3	0.03%	0.50%
08	Edible fruit and nuts; peel of citrus fruits or melons and watermelons	45545.42	0.4%	6.1%	6337.78	0.07%	0.99%
09	Coffee, tea, mate and spices	626.55	0.0%	0.1%	12993.59	0.14%	2.02%
10	Cereals	188977.15	1.7%	25.3%	30121.36	0.31%	4.68%
11	Products of the milling industry; malt; starches; inulin; wheat gluten	4410.34	0.0%	0.6%	12911.7	0.13%	2.01%
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds; industrial/medicinal plants	91419.58	0.8%	12.2%	18360.23	0.19%	2.85%
13	Lac; gums, resins and other vegetable saps and extracts	266.25	0.0%	0.0%	9664.9	0.10%	1.50%
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	1464.65	0.0%	0.2%	18.12	0.00%	0.00%
15	Animal, vegetable fats and oils and cleavage products; prepared edible fats; animal/vegetable wax	196057.82	1.8%	26.3%	66072.11	0.69%	10.27%
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	7.32	0.0%	0.0%	12395.31	0.13%	1.93%
17	Sugars and sugar confectionery	8753.72	0.1%	1.2%	19212.83	0.20%	2.99%
18	Cocoa and cocoa preparations	4580.72	0.0%	0.6%	36065.8	0.38%	5.61%
19	Preparations of cereals, flour, starch or milk; pastrycooks' products	6677.79	0.1%	0.9%	7748.44	0.08%	1.20%
20	Preparations of vegetables, fruit, nuts or other parts of plants	19046.6	0.2%	2.6%	23014.08	0.24%	3.58%
21	Miscellaneous edible preparations	15933.3	0.1%	2.1%	126443.3	1.32%	19.66%
22	Beverages, spirits and vinegar	25880.42	0.2%	3.5%	13123.45	0.14%	2.04%
23	Residues and waste from the food industries; prepared animal fodder	80109.04	0.7%	10.7%	45079.08	0.47%	7.01%
24	Tobacco and manufactured tobacco substitutes	949.83	0.0%	0.1%	76470.8	0.80%	11.89%

Results Criterion 1:

Based on the first criterion, agriculture and food products, petrochemicals & chemicals, metallurgy, machinery and electronics, energy, transport, distribution services and construction are presented as having a significant impact in Column 1 of Table 5.5. As horizontal issues, SPS, technical standards for industrial products, competition policy, government procurement and intellectual property rights are of significant importance. Also based on Criterion 1, cereals, wheats & grains, meat, edible meat offal, animal & vegetable fats, fruits and nuts and beverages, spirits and vinegar are important agricultural and food subsectors.

5.4 Screening for major output and employment impacts, i.e. changes in production structure, as a consequence of the FTA

The second criterion for screening is the size of the direct economic impact, measured by output and employment impacts as a consequence of the FTA negotiations and resulting trade measures. These impacts, as shown in Chapter 4, can be measured in terms of percentage changes or in terms of absolute changes in employment and output. An additional factor to take into account is the fact that we have modelled two likely outcomes of the FTA negotiations: the extended FTA and a more limited FTA. For the screening purpose and focus of this study we will present the most extended FTA effects only (for the outcomes on the other scenario we refer to the Tables in Annex VI) because it has the most extreme outcomes in terms of employment and output. The less ambitious FTA remains inside the boundaries of the extended FTA scenario, meaning its effect is in any case more limited.

Percentage changes in output

When analysing the economic impact, we find that **wearing apparel, textiles, electronic equipment and machinery equipment, leather products, motor vehicles and parts, metal products, bovine cattle e.a, vegetable oil and fats, manufactures nec** as well as **metal products, chemical, rubber and plastic products** are among the sectors with the largest positive percentage change in output while the sectors **processed rice and sugar as well as financial services nec and insurance, transport equipment and agriculture, fisheries and forestry** are among the sectors with the largest negative percentage change in output. Also aggregate investment flows are set for significant increases.

Absolute changes in output

We find that the largest absolute changes in output occur in the following sectors as presented in Annex VI: **electronic equipment, machinery and equipment, ferrous metals, metals nec, wearing apparel, metal products, chemical, rubber and plastic products, agriculture, fisheries and forestry, financial services nec and insurance and processed rice and sugar.**

Absolute changes in employment

The largest absolute changes in employment occur in the sectors as presented in Annex VI. Clearly the absolute impact occurs most among the unskilled workers. with one exception: **financial services nec and insurance**, that shows a significant decrease in employment in absolute terms. The largest decrease in employment comes from the

sectors **financial services nec and insurance** and **transport nec**. Sectors that show large employment increases in absolute terms are **electronic equipment and machinery and equipment, food products nec, ferrous metals and metals nec, wearing apparel, chemical, rubber and plastics, metal products, electricity** (long run), and **construction** (all over 15.000 jobs of employment increase).

Relative changes in employment (%)

The largest absolute changes in employment do not necessarily coincide with the largest percentage changes in employment. Some small sectors show large percentage changes but in absolute terms are not very important. For example, **agriculture, forestries and fishery** unskilled employment decreases by only 2.2% yet the absolute employment impact is over – 110.000 jobs. However, if we take the WTO as finished, this sector will again increase employment as a consequence of the FTA with +53.000 jobs.. The **processed rice and sugar** sector decreases by 8.7% in relative terms and by – 9.060 jobs only due to its much smaller relative size.

The largest relative changes in employment occur in the sectors **wearing apparel, textiles, electronic equipment and machinery equipment, bovine cattle e.a**, as well as **leather products, metal products and motor vehicles and parts**. Also large relative – negative – changes in employment occur in **processed rice and sugar, financial services nec and insurance and transport equipment**.

Results Criterion 2:

Financial services nec and insurance, transport equipment, wearing apparel, textiles, electronic equipment and machinery equipment, bovine cattle e.a., food products, metal products, motor vehicles and vehicle parts, and processed rice and sugar are presented as experiencing significant impacts from the FTA which is summarised in Column 2 of Table 5.5.

5.5 Screening for resulting social and/or environmental impacts as a consequence of the FTA

5.5.1 Social impacts

If we combine the current social situation of Ukraine as described in section 3.4 with the output and employment changes and the characteristics of the various industries a general picture of indirect social impacts starts to emerge.

With changes in production structures in various sectors, we expect certain social impacts to occur. First of all, when we look at poverty, a decrease in employment and output for the **agriculture, fisheries and forestry** sector – mainly located in the already poor western parts of Ukraine – combined with an increase in production in **chemicals, rubber, ferrous metals and coal** production – mainly located in the eastern parts of Ukraine, may lead to further geographical income disparities inside the country in favour of the eastern parts. Secondly, overall for Ukraine, given the positive wage effects for the unskilled workers we expect the FTA to contribute to Ukraine alleviating people who currently live on an income below the poverty line. Thirdly, with an expected increase in

the quality of production methods to meet EU technical standards, attention to sanitary- and phytosanitary measures and conditions for employment, we imagine a possible positive effect on the health levels in Ukrainian society. Fourthly, through the FTA we expect the EU and Ukraine to agree on standards for quality of work that lead to improvement of the working conditions, especially in manufacturing industries like **ferrous metals, metals nec, chemical, rubber and plastic products, electronic equipment, machinery equipment and petroleum and coal products**. The improvement of the quality of work is the more important because most of the aforementioned sectors are expected to increase upon negotiating an FTA. Even though the CGE model assumes full employment, we imagine that in the short-run for the sectors with large expected negative changes in employment, social issues related to unemployment will become more pronounced and need to be dealt with. This involves sectors like **agriculture, fisheries and forestry, financial services nec and insurance, transport, processed rice and sugar and transport equipment**. Finally, with respect to gender equality, an increase in the wearing and apparel, leather and textiles sectors will lead to larger employment of women in Ukraine – since these have been traditionally the sectors where many more women find jobs than men.

5.5.2 Environmental impacts

If we combine the current environmental situation of Ukraine as described in section 3.5 with the output and employment changes and the characteristics of the various industries an general picture of indirect environmental impacts starts to emerge.

Several air polluting industries like **electronic and machinery equipment, metal products, ferrous metals and metals nec, chemical, rubber and plastic products** are expected to grow as a consequence of the FTA, both in relative and in absolute terms. This will have a negative impact on air emissions (CO₂, SO₂, small particles) and makes it likely these industries will account for more than 40% of air emissions in the future unless action is taken related to the methods of production.

An increase in the use and production of energy (**petroleum and oil products**) will lead to an increase in the use of coal for the production of **electricity** which will also have an environmental impact, both for the quality of the air and for the use of energy resources.

With **agriculture, forestries and fishery** and **processed rice and sugar** among the sectors that will shrink most, both in terms of employment and in terms of output as share of Ukrainian GDP, there will be environmental impacts via land use in agriculture and natural resource stocks.

Overall, if the (extended) FTA leads to a relative increase in the share of polluting industries, there will be negative environmental consequences that need to be analysed and discussed at a later stage.

When looking at the agricultural subsectors, we see that cereals, grains & wheat has an important impact socially and environmentally (land use) and so do the intensive

industries like meat & edible meat offal, sugar, fruits and nuts, beverages, spirits and vinegar, animal & vegetable fats, and tobacco and tobacco substitutes.

Results Criterion 3:

Agriculture and food products, petrochemicals and chemicals, metallurgy, automotive, motor vehicles, machinery and electronics, energy, transport, distributions services, construction, trade in services, and environmental goods/technologies all have significant social and environmental impacts because of a change in production structure. This is presented in Column 3 of Table 5.5.

5.6 Screening based on consultation with key stakeholders and civil society

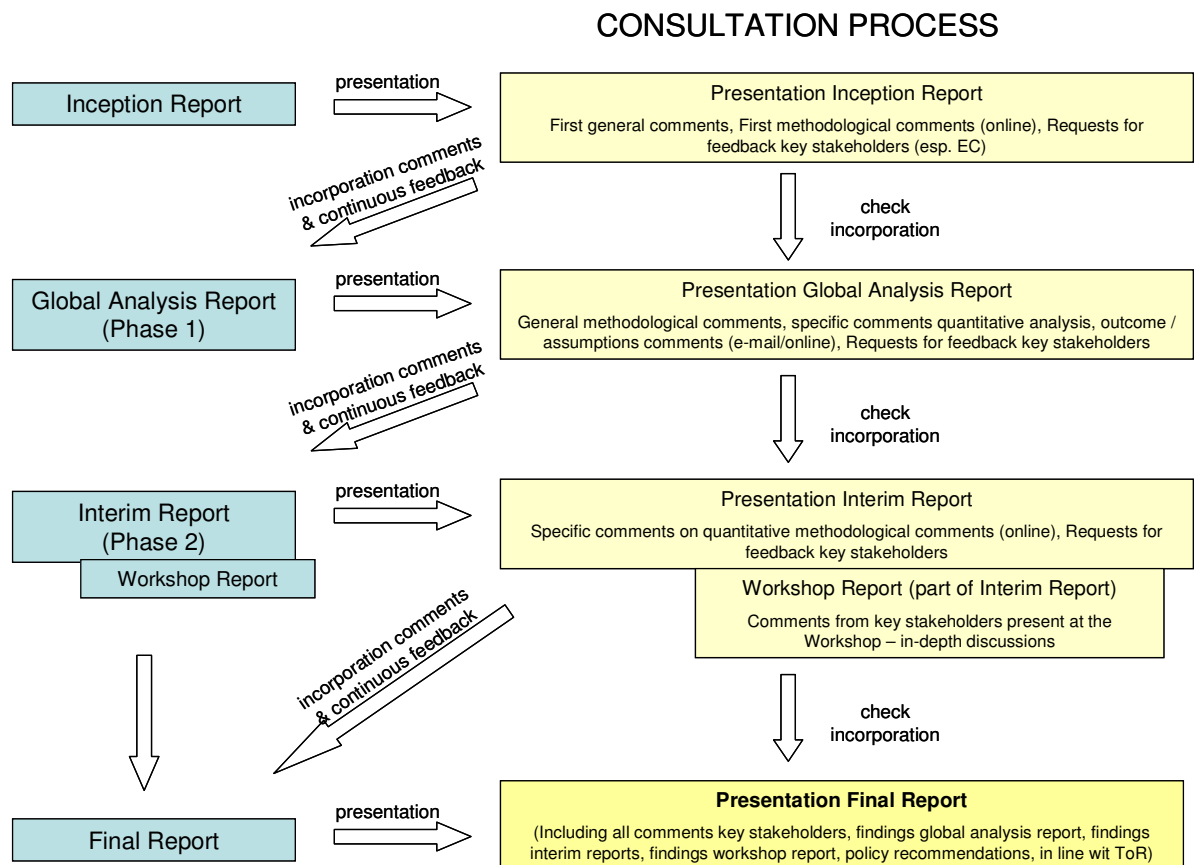
The consultation process is part of the Trade Sustainability Impact Assessment (Trade SIA) and it is conducted in parallel to the other parts of the project. The purpose of the consultation process is to increase transparency, involve key stakeholders and the general public, support the consultants, improve the recommendations and increase credibility and legitimacy of the Trade SIA. The consultation happens via the collection of feedback from TSIA EU Ukraine stakeholders, dissemination of information and reports, engaging in two-way dialogue, organising of meetings and continuous dialogue between and with in the consortium and all stakeholders. Figure 5.1 below shows the consultation process in line with the other parts of the project and how the comments are incorporated in the process. All received information and feedback is gathered and processed and the consultation of stakeholders influences e.g. the selection of sectors and horizontal issues to be studied in-depth as well as mitigating and enhancement recommendations.

A large number of key stakeholders are contacted and invited to take part in the consultation process. We have made the list of contacts as exhaustive as possible to guarantee a balanced coverage of all parties. Therefore it includes for example branches of the Ukrainian government, a large number of European Union Institutions, civil society, producer and consumer organisations and regional experts. The general public is also encouraged to take part in the consultation process. Civil society in this context includes business people, academics and different NGOs (environmental and social NGOs in Ukraine and in the EU). A database is created to manage the consultation process and to help to process all the received comments. On the 29th of June 2007, a public meeting was organised with civil society in Brussels and a one-day Workshop for Ukrainian stakeholders on the 9th of July 2007. The debates, discussions and constructive comments are included in this report and a separate workshop report will be published as part of the TSIA Methodology.

In addition to the contacts with the key stakeholders, other tools are used as well for the dissemination of information, collection of feedback and keeping up of the dialogue. First of all, the website www.trade-sia.ecorys.com is operational for the collection and dissemination of information. All important information from the consortium to stakeholders as well as all the reports are published on the website and the website has a feedback form for the comments of stakeholders and other interested parties. The website has also an online forum for online conversations between the different stakeholders of

the Trade SIA. Many meetings with different stakeholders are also organised. These include e.g. the working meetings with the Commission, working meetings with the Ukrainian government and key stakeholders, public meetings in EU and meeting with civil society in Ukraine. A workshop is organised in Ukraine on 9th of July for key stakeholders.

Figure 5.1 Consultation process



The main conclusions and points from our engagement with key stakeholders and civil society are the following points – the deduced sectors/horizontal issues can be found back in Column 4 of Table 5.5:

- How the EU trade barriers are modelled – and whether they are reduced symmetrically with Ukrainian tariffs or not;
- How trade between Ukraine and Russia is modelled – is this through an FTA or via other means;
- More clearly present aggregate statistics on changes in output, exports, imports, prices etc. otherwise it's difficult to judge on the overall FTA effects;
- How are the effects on agriculture and given the 'black soil' in Ukraine, what potential does the agricultural sector and its sub-sectors have? Especially with respect to cereals, sugar and derived products;
- Clearly think of the transport sector – as an enabling industry – and its effects on the Ukrainian economy;

- What are the changes in trade volumes with the EU? Not just with the rest of the world in general. Currently results on overall changes of export and imports are presented, but also changes in Ukraine-EU trade are needed.

For a more detailed overview of our consultations with civil society and key stakeholders, we refer to the minutes of the Workshop report.

Results Criterion 4:

During the public meeting as well as during the Workshop in Kyiv, the emphasis by civil society and key stakeholders, taking into account questions and comments, including explicit mentioning of sectors and issues, wants the study to look at agriculture and food products, metallurgy/steel, automotive, motor vehicles, machinery and electronics, energy, strongly suggesting to look at transport, telecom and environmental goods & technologies. These – as well as competition policy, SPS and technical standards – have been noted down and are presented as having a significant impact in Column 4 of Table 5.5.

5.7 Final sector and horizontal issue selection

Having worked through the four screening criteria for sectors specified in as much detail as possible and horizontal issues as taken from the ToR, we can now summarise and select the sectors and horizontal issues of importance for the negotiations of this FTA..

Regarding the sectors, they have been discussed above in detail. The horizontal issues have been linked to individual sectors wherever we felt the issues were important, but mostly they have been used as inputs into the CGE model where we split the trade measures into tariffs, standard costs (e.g. sanitary and phyto-sanitary measures or government procurement), border costs (e.g. customs duties, border controls) and barriers to FDI and trade in services.

In sum the screening criteria for the selection of sectors are based on the importance of the sector, the economic changes at sector level and finally the linkages between output and employment at sector level and social and environmental sustainability. The screening criteria for the selection of horizontal issues are based on the importance for the various scenarios in the FTA, the calculated effects on output and employment as well as environmental and social impacts of the horizontal issue. As mentioned before, the involvement of key stakeholders and civil society is to be carried out after the creation of this draft Global Analysis Report.

Table 5.5 summarises the findings regarding sectors and horizontal issues with respect to the pre-defined screening criteria.

Table 5.5 Screening and selection of sectors and horizontal issues

	Cr1: Importance of sector/issue	Cr2: Economic Impact (output / employment)	Cr 3: Social / environmental effects	Cr4: Comments civil society
Sectors				
Agriculture (meat, dairy) and food products	√	√	√	√

	Cr1: Importance of sector/issue	Cr2: Economic Impact (output / employment)	Cr 3: Social / environmental effects	Cr4: Comments civil society
Petrochemicals and chemicals	√	√	√	
Pharmaceuticals				
Textiles	√	√		
Metallurgy	√	√	√	√
Automotive, motor vehicles		√	√	√
Machinery and electronics	√	√	√	√
Energy	√	√	√	√
Transport	√	√	√	√
Distribution services	√		√	
Construction	√		√	
Banking				
Telecom	√		√	√
Trade in services	√	√	√	
Environmental goods / technologies			√	√
Horizontal Issues				
Investment conditions		√		
Sanitary- and Phytosanitary measures	√	√	√	
Technical standards for industrial products	√	√	√	√
Government procurement	√	√	√	√
Competition policy	√	√	√	√
Intellectual property rights	√		√	

Based on the above Table that summarises our screening criteria – conditional upon feedback from civil society – we propose to analyse the following sectors and horizontal issues:

Selected sectors

The largest absolute changes in employment do not necessarily coincide with the largest Sectors:

- Agriculture (split out into subsectors cereals, wheats & grains, meat, edible meat offal, sugar, animal & vegetable fats, fruits and nuts and beverages, spirits and vinegar);
- Metallurgy/steel;
- Machinery and electronics;
- Energy;
- Trade in services (split out into subsectors transport, distribution services, telecommunications, financial services).

Selected horizontal issues

- Technical standards for industrial products;
- Government procurement;
- Competition policy.

Having selected the sectors and horizontal issues for further research, we now turn to the scoping part in order to determine the objectives and method for further research of the selected sectors and horizontal issues.

5.8 Overview of scoping

The evaluation of the initial economic effects of the trade agreement is made through a Computable General Equilibrium (CGE) framework. This CGE analysis has a nearly comprehensive coverage of the economic impacts. The Screening exercise is subsequently conducted on the basis of the results of the macroeconomic model. In the Screening part the sectors and horizontal issues for further research are selected.

The Scoping exercise then aims to determine the objectives and methods of the in-depth assessment studies of screened sectors and horizontal issues that are intended to produce the information required for the social and environmental assessment of potential sustainability impacts. As said, the basis of the scoping exercise is the outcome of the screening exercise, which has established a link between the trade agreement or other policy changes under study (e.g. WTO accession) and economic consequences in the areas it considers to be of interest.

5.9 Sectors

As part of the first part of the study, we have extensively scoped every sector and horizontal issue for impacts and important issues. In this section, we present a summary of those findings.

5.9.1 Agriculture and food processing

Ukraine is endowed with natural resources which creates a good basis for the potential development of the agricultural sector. Over 40 million hectares of land could be used for crop production with more than 50% of the area consisting of high quality chernozem soils ('black earth'). The favourable resource environment defines the role of the sector within the Ukrainian economy.

For agriculture, we need to look carefully at the economic impacts (output and employment) that involve large numbers of unskilled workers in areas that are already among the poorest in Ukraine. Next to the real income effects, we need to look at labour issues, ie. the social impact of unemployment, decent work and wage effects. Also horizontal measures of SPS and technical standards in agricultural production – that are likely to be part of the FTA – will have to be further investigated. Environmentally, effects on the production structure of agriculture may have effects on the land use and natural resource stocks. In more detail we have to look at the identified sub-sectors with respect to employment effects, technical standards, including SPS.

For the food industry the main issues to be covered are technical standards (quality in health and safety) as well as reductions in border costs. Increases in production are

already under way but need to be continued further. Next to the direct issues, the popularity of the food industry with foreign and domestic investors also warrants a detailed analysis regarding FDI and barriers to FDI. The food sector is closely related to the agricultural sector since the former is a downstream industry of the latter. Also the ISIC definition quickly classifies matters as food products instead of agriculture. This is why we propose to analyse both the food as well as agricultural sectors together in more depth.

5.9.2 Metallurgy/Steel

Metallurgy is a key sector of Ukraine's industry. Metal is the most important export article of Ukraine and its production is an important input factor for machinery and metalworking industries. In 2005 Metallurgy and metal processing contributed with 32.6 percent to total exports. It produced 5.1 percent of GDP while employing 3 percent of the working population.

Given the significant impact of the metallurgy sector on the Ukrainian economy and its importance for EU-Ukrainian trade relations, we propose to analyse this sector further. Though several obligations will be dropped upon Ukraine joining the WTO, several important issues remain. The metallurgy sector receives significant subsidies and shows large anticipated impacts from the FTA in terms of increases in output and employment. Also the metallurgy sector is one of the more polluting ones which may warrant an environmental impact assessment. Social impacts focus on poverty reduction, and mostly labour issues like productivity, upgrading the production facilities and inflow of FDI. The latter means we investigate the barriers to trade in services and FDI effects. This is why we propose to select this sector for deeper analysis.

5.9.3 Energy

The energy sector comprises the production and distribution of electricity, heat and gas¹⁴. This sector can be identified as significant under economic criteria, because its contribution to GDP and gross output in 2005 was at 4.2% and 3.5% respectively. The importance of these activities is also highlighted in terms of national security. In total production sold by the sector¹⁵, electricity generation and distribution take a major share of 85% (electricity production - 27%, and distribution at 58%), gas and heat account for only 9% and 6% respectively.

¹⁴ Under 'gas' we mean gaseous fuel

¹⁵ The volume of products sold, UAH

The energy sector is highly sensitive to environmental sustainability issues, because 45% of electricity is produced in Ukraine by thermal power stations, which together with heat producers are one of the largest emitters of CO₂. The major reasons are the high level of equipment depreciation and outdated networks, which result in heat and electricity losses. Moreover, the energy sector is of strategic importance for Ukraine but also – in terms of energy throughput – for the European Union. Next to the strategic importance, the FTA also suggests considerable impacts in terms of output and employment changes for the energy sector. We propose to further analyse the sustainability effects in the next part of this study, including the environmental and social effects of improvements in production coupled to a larger energy sector.

5.9.4 Machinery and electronic equipment

Machinery construction plays a vital role in the economic development of any country because it is an industry that produces the intermediate parts needed for final goods production. Therefore, machinery construction has a direct influence on the development of other sectors of the economy.

Next to a thorough analysis of the economic impacts in terms of employment, we also envisage the large expected changes in the production structure to have social sustainability effects (employment, quality of work and productivity effects) as well as environmental effects – this sector has an effect on the atmosphere and environmental quality (energy resources). Improvement of productivity and means of production can have sustainable development effects while generating growth in parallel. This is why we propose to select this sector for deeper analysis.

5.9.5 Trade in services

In the last five years services accounted for 17.5% of the overall Ukrainian exports and 7.4% of total imports. Russia is the leading importer of Ukrainian services (41.8%), the EU follows next with a share of 30%. Ukraine benefits from its geographical position and provides transportation services by water, roads, railways, and pipelines which all in all account for 71% of the overall services exports. Having a huge transit potential, Ukraine aims to improve the quality of services and modernise the transport infrastructure. So far, the progress has been quite limited, however. Many long-term infrastructure projects failed to start as the government could not develop a coherent development strategy. Attempts to attract private capital for infrastructure projects were not successful because the country lacked an effective regulatory regime and long-term investment risks remain too high.

Trade in services is a key issue for the EU-Ukrainian partnership. The liberalisation scenarios show that an extended FTA will have major economic and social impacts through changes in the production structure of Ukraine. The sector financial services, nec, and insurance will shrink substantially in terms of output and employment under the extended FTA assumptions but less under the less ambitious scenarios. This will cause social sustainability issues regarding employment and employment opportunities because

the decrease will affect both high-skilled and low-skilled workers in terms of employment and wages. It also poses questions for the educational system. This is an important sector for further analysis. Also the transport sector, with its environmental impacts and communications as well as distribution services are important. To gain focus, we look at these various sub-sectors of trade in services in more detail.

The importance of the transport sector in the Ukrainian economy is beyond doubt, with Ukraine being a transit country in various ways. Also the importance of transport as an enabling industry and the focus of civil society on this issue means that – in spite of the fact we do not identify major changes in the production structure as a consequence of the FTA, we will analyse the sector nonetheless. Important factors to look at are the social and environmental impacts directly and indirectly through effects in other sectors, for the Ukrainian economy. Indirectly, an improved transport sector may lead to more cars and vehicles on the roads, but it may also lead to more public transport and more efficient cars which means that we have to look in more detail at the dominating effect on environmental impact.

Because of the large size of the distribution sector in the Ukrainian economy, its enabling character and links to other sectors that we research further. Given the expected impacts environmentally, we propose to continue with this sector. Furthermore, we will analyse the impacts of other sectors on the distribution sector and subsequent environmental and social impacts.

Given the domestic nature of the telecommunication sector, the relatively small share in Ukrainian output and employment and small expected changes in wages, output and employment with subsequent small sustainable impacts to be expected, we have decided not to propose this sector for further analysis. This, in spite of an existing social impact that relates to the unevenly spread telecommunications network which causes divisions between the cities and the countryside.

5.9.6 Mining/extraction

Ukraine is well endowed with mineral fuels, ferrous and non-ferrous minerals. Mineral fuels include coal, gas and oil; together they account for 63% of total production sold by the mining sector (coal takes 40% and gas and oil 23%). Domestic extraction provides for 25% of Ukraine's gas, 25% of oil and 82% of coal consumption. The ferrous minerals production is highly developed in Ukraine (it accounts for 30% of total mining production sold). Ukraine is the world's second-largest producer of manganese ore and the fifth-largest producer of iron ore.

Currently the sector employs 3.7% of total labour but as a consequence of the FTA under negotiation this may increase. We will not further analyse this sector because of similar environmental effects as the metallurgy sector that we research and because part of this sector – regarding fossil fuels – is looked at in the 'energy' analysis.

5.9.7 Textiles

After its dramatic decline during the 1991-99s (by more than 92% in physical terms), the role of the textile industry in the Ukrainian economy remains rather limited. In 2005, textiles (including clothing) and leather industries accounted only for 1.6% of gross output produced in the country and for 1.4% of its GDP, even though the FTA indicates large percentage changes in output and employment as likely effects. The industry started recovering since 2001 (mainly, as a result of abolishing the EU quantitative restrictions on imports of textiles from Ukraine) and revealed positive growth dynamics over the recent period. However, in 2005 its growth again slowed down to a meagre 0.3% compared to the previous year. The industries finished 2006 with a negative growth rate of 1.9% compared to the previous year¹⁶ (in particular, the textile industry decreased by 4.8%, while leather goods production grew by 10.3%). The number of employed people in these industries has been gradually declining over the last decade: only 1% of the Ukraine's labour force was employed in textile and leather industries in 2005 (1.9% in 2000).

With respect to a further analysis, we do not recommend textiles to be included. Even though we expect significant positive impacts on output and production from the FTA and textiles are subject to various issues like technical standards, border limitations and parallel market competition, the absolute size of the sector is too small to generate major impacts in the Ukrainian economy. Also compared to other industries, the anticipated environmental and social sustainable impacts are moderate.

5.9.8 Chemicals

Manufacturing of chemicals and chemical products is one of the basic industries in Ukraine. In 2005 it accounted for 2.7% of GDP and 4.1% in gross output of Ukraine. This sector is basically export-oriented – 43% of total output was exported in 2005. Besides, it takes a considerable share of Ukrainian total exports (8.9% in 2005), as well as in exports to the EU countries (7.0% of Ukraine's export to the EU in 2005).

The sector is subject to environmental sustainability issues because nitrogen production yearly generates several millions of CO₂e emissions of nitrous oxide.¹⁷ Gas price increases in 2006 have already pushed chemical enterprises to launch energy-saving projects, that may lead to improved environmental conditions. In spite of these arguments we propose not to further pursue analysis with respect to this sector due to the limitations of the study and the fact two other major manufacturing industries are being analysed – allowing for parallels to be drawn between the sectors.

¹⁶ This negative tendency is due to the decline of the textile production under "cut-and-made" arrangements (due to introduction of new administrative barriers), as well as from the expansion of official and unofficial imports of textile products from Asian countries into Ukraine. The increase of the official import levels was triggered by the reduction in import tariff rates for textile products undertaken by the Ukrainian Government in 2005 (in line with Ukraine's WTO commitments).

¹⁷ CO₂e – CO₂ equivalent

5.9.9 Construction

Construction is a medium size sector in Ukraine contributing 4.4% to GDP (2006) and employing about 0.9 million of Ukrainians which is 4.5% of the employed population. The role of the government in this area is limited. Mostly private companies are operating in this sector (98% in 2005).

The sector does not play a significant role in foreign trade. Ukraine used to be a net importer of construction services although the situation has changed recently. Currently the account on these services is almost balanced. And the volumes of both exports and imports was only 2.0% of total exports/imports of services. We do not propose to further investigate this sector.

5.10 Horizontal issues

Next to sector selection and scoping for deeper analyses regarding sector studies, the Terms of Reference also clearly specify the selection of at least three horizontal issues for further analysis. In the above sections some issues have been addressed, but below we focus on the horizontal issues specifically.

5.10.1 Government procurement

Recently the stance with government/public procurement underwent significant improvements in terms of the repeal of domestic preferences. The procurements are regulated by the Law of Ukraine “On Government Procurement of Goods, Works and Services”. The law is applied to purchases above UAH 20 thousand for services and UAH 50 thousand for works and is not related to the purchase of monopoly originated goods or services like natural gas, communal utilities etc.

Notwithstanding the recent changes in the legislation on public procurement, widespread alleged corruption and an inefficient court system are still strong impediments for equal competition. Court reform and administration reform are essential for enforcement of the amended law on procurements. The legislative amendments are still subject to pernicious regulatory hurdles and other shortcomings (especially from the institutional side). Government procurement – on top of this – is for the EU a very important issue and further analysis on this issue needs to be carried out. The rationale for this is that having a more detailed look at the significance for EU-Ukrainian current and future bilateral trade is huge. According to the World Bank, government procurement in Ukraine amounted to US\$ 4.1 billion in 2005 (that is, roughly 5% of GDP) and this is expected to be on the low side. Of course, this figure is likely to grow hand in hand with economic development in Ukraine. Besides, some events such as the Euro2012 may boost the state's procurement activities (need to build and improve infrastructure). The FTA could provide a platform for EU companies to access Ukraine's procurement market (and vice versa), and for Ukraine to achieve budget savings through more open, transparent and competitive tender procedures. We therefore propose to further investigate this horizontal issue.

5.10.2 Competition policy

Part of economic reforms of the EU-Ukraine Action Plan (Action Plan) stipulate Ukraine's commitments to establish a *fully functioning market economy*, which implies market based price formation, effective control of state aid and a legal environment that ensures fair competition between economic agents¹⁸. Furthermore, in the area of competition policy Ukraine committed itself to approximating its legislation with respect to antitrust and state aid to that of the EU¹⁹, as well as to ensuring a credible enforcing of this harmonised legislation and maintaining well-functioning independent competition authority²⁰.

In its conclusions to the legal comparative analysis, the State Department for Legislation Approximation reports about the low level of approximation of the Ukrainian state aid legislation to the EU law²¹. Ukraine's state aid system proves to be inefficient and not transparent; it provides additional possibilities for corruptive actions and prevents structural restructuring of the economy. Therefore, Ukrainian state aid policy is among the first that needs significant legal and policy transformations in the framework of Ukraine's European integration process. This is indispensable for establishing a fully functioning market economy in Ukraine, and enhancing efficiency and competitiveness of Ukrainian enterprises and industries. We therefore propose this issue for further study.

5.10.3 Technical standards

Compliance with universally acknowledged quality standards is crucial for producers working in both domestic and international markets. Ukraine admits to the necessity to modernise the sphere of technical regulation in line with the WTO and the EU requirements. In particular, currently Ukraine is in the process of implementing the WTO TBT Agreement and intends to ensure full compliance of domestic norms with respective international regulations by the end of the transition period envisaged by the WTO accession agreement.

Given the possible non-tariff barrier that comes from differences in technical standards and in line with the argument that with lowering tariffs technical standards may become – relatively – an even larger impediment to EU-Ukrainian trade, we propose this horizontal issue for further study.

¹⁸ EU-Ukraine Action Plan, Article 2.2.

¹⁹ Ibid.

²⁰ **The same commitments are repeated in the Partnership and Cooperation Agreement between the EU and Ukraine, 1998.**

²¹ State Department for Legislation Approximation, 2007. Overview of the Status of Approximation of Ukrainian Legislation to *acquis communautaire* — K.: «Professional», ISBN 966-370-034-3 — 544 p. (<http://sdla.gov.ua/atachs/ADAPT.pdf>).

5.10.4 Investment conditions

Ukraine aims to create a free market economy in which private capital would play a role in the economic development of the country. In this respect, it recognises the importance of FDI and hence it seeks to create an enabling investment climate for its attraction.

However, there are certain restrictions for foreign investors in the fields of insurance, publishing, information agencies, broadcasting and the manufacture of weapons and alcoholic spirits. Mostly these restrictions are the juridical limitation concerning the rights of establishment or maximum percentage rate of the foreign investments in the statutory fund of the enterprise.

Ukraine's International Investment Framework includes multilateral and regional instruments, as well as bilateral treaties. Ukraine is a party to many multilateral and regional instruments such as the Paris Convention for the Protection of Industrial Property of 20 March 1883; the Declaration on International Investment and Multilateral Enterprises, adopted by the Council of the Organization for Economic Cooperation and Development on 21 June 1976, etc. Bilateral treaties aimed at promotion of investments include bilateral investment treaties (BITs) and bilateral treaties for the avoidance of double taxation. As of June 1, 2006 Ukraine has signed BITs with 61 countries, including 24 countries of the European Union.

Following a drop in 1999, FDI inflows to Ukraine resumed their upward trend in 2000. By 2001, FDI inflows recovered and even exceeded their 1998 level. Since then, FDI to Ukraine has been steadily growing. Cumulative FDI estimated as of January 1, 2007 equals US\$ 21,186.0 million, which is 25.4 % more than in the beginning of 2006.

Since FDI is analysed at various occasions and given the limited scope of this study, we do not propose investment conditions to be further analysed.

5.10.5 Sanitary & Phyto-Sanitary measures

An increase of food safety for consumers and reforms and modernisation of the sanitary and phytosanitary measures are the main objectives of the EU-Ukraine Action Plan (Action Plan) in this area. This is to be achieved through implementation of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures, carrying out a comparative assessment of the sanitary and phytosanitary control systems in Ukraine and the EU, implementing a legislative approximation and policy convergence in this area (namely, in regard to general food safety principles and requirements, food hygiene and food traceability), the HACCP system at enterprises and controlling bodies, modernizing the national laboratory network and appropriate methods of analysis and preparing their accreditation in compliance with ISO standards²².

We propose to analyse this issue further with respect to the agricultural and food sectors where SPS is most useful, but not as a general issue.

²² EU-Ukraine Action Plan, Article 2.3.1. (32).

5.10.6 Intellectual Property Rights

The legislation on intellectual property (IP) develops simultaneously with the development of technology and science. The main objective of legal regulation in this area is to secure the protection of intellectual property rights. The development and improvement of a normative and legal basis in the sphere of intellectual property is one of the principal activities on the way to strengthen Ukraine as a democratic state.

Given the above, one may conclude that Ukraine has a rather extensive legislative base in the sphere of intellectual property rights. In practice, however, this legislation fails to effectively combat piracy and counterfeiting of goods and trade marks, which continue to be widely spread in Ukraine. There remains an urgent need for better enforcement and implementation of existing laws, including the establishment of institutions in that area. The solutions of these problems in the present-day global digital environment should be based on an agreed system of national and international legal rules.

6 Agriculture

In this Chapter of the report, we provide an overall description of and policy issues related to agriculture and its sub-sectors. Also the EU agricultural sector and SPS related issues are presented here. For an extended impact elaboration, we refer to Annex IX.

6.1 Overall description of the agriculture sector in Ukraine

Ukraine is endowed with natural resources that create a good basis for the potential development of the agricultural sector. Despite this favourable resource environment, performance of the sector remains rather weak.

At the aggregate level, agriculture is the fourth largest sector of the economy after manufacturing, transportation and trade in services. On average, the value-added from agriculture comprises more than 10 percent of GDP. The main output is created from grain, crops and vegetables in crop production plus meat in animal production (see Table 6.1). The majority of output is produced by the private sector as more than 60 percent of agricultural production is supplied by rural households.

Table 6.1 Structure of gross agricultural production, relative shares (%)

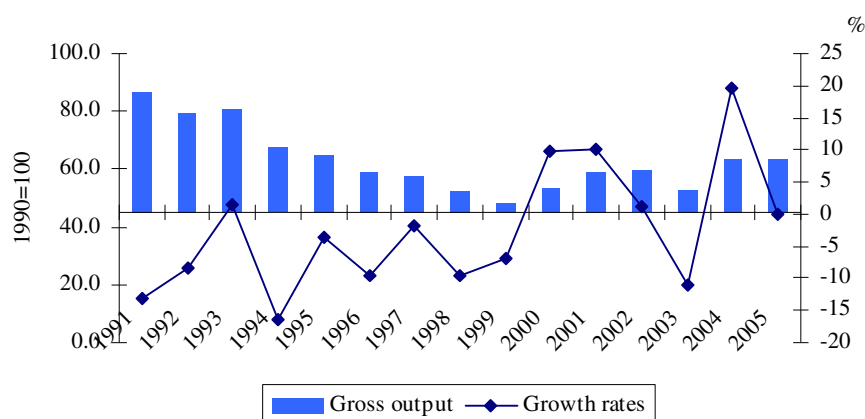
Categories	1990	1995	2000	2001	2002	2003	2004	2005
Crop production	50.2	56.7	60.4	61.6	59.9	57.7	64.4	62.7
Grains	21.2	20.9	19.5	28.3	27.3	16.4	27.7	25.3
Industrial crops	7.3	7.7	6.7	5.5	6.0	7.5	6.2	7.5
Potatoes, vegetables, cucurbitaceous	10.5	16.6	25.5	21.3	20.4	25.3	23.4	22.9
Fruits, berries, grapes	3.8	3.7	4.2	3.0	3.1	4.7	3.9	4.1
Fodder crops	6.6	5.9	3.6	3.3	2.9	3.1	2.6	2.5
Other crop production	0.7	1.9	0.9	0.2	0.2	0.6	0.5	0.4
Animal production	49.8	43.3	39.6	38.4	40.1	42.3	35.6	37.3
Livestock and poultry breeding	29.0	21.3	19.2	18.6	19.3	19.4	16.2	17.2
Milk	15.4	16.9	15.0	14.5	15.0	16.4	13.7	13.7
Eggs	3.7	3.3	3.8	3.8	4.4	5.0	4.3	4.7
Wool	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Other animal production	1.6	1.7	1.5	1.5	1.3	1.5	1.4	1.6
Gross agricultural production	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: State Statistics Committee of Ukraine

The average growth rate of agricultural output for the last fifteen years was minus 3.0 percent per year. The major impediments for the development of the sector include the

lack of efficiency of markets for agri-products, the monopoly of large traders, the poor quality of meat products compared to European and international food safety regulations, the inefficient subsidising system and the absence of a land market in combination with a moratorium on agriculture land sales.

Figure 6.1 Gross agriculture output, 1991-2005



Source: State Statistics Committee of Ukraine

Although performance of agriculture was rather weak, a large part of the Ukrainian labour force is still engaged in the agri-production which means changes in this sector have significant (social) impact effects. The sector officially employs over 4.5 million people, which is close to 20 percent of the employed population. Unofficially the sector probably employs a much larger share of the working population as approximately 10.7 million people within the economically active age (2006) reside in rural areas. Low sector productivity translates into low incomes. Large numbers of rural inhabitants live below the poverty level (37 percent in 2001, World Bank 2004). Traditionally, rural wages are about two times lower than the average wage for Ukraine.

Agricultural external trade decreased substantially during the initial transition parts. Despite a slow recovery in more recent years, exports still amount to less than 25 percent of gross output, while the total volume of agriculture exports constitutes a mere 12.2 percent of merchandise exports (1-24 HS) in 2006. Import volumes comprise only 7.0 percent of merchandise imports. The key export item is grain while fish and tobacco are the most significant imported products.

Agricultural exports to the EU increased by 25 percent in 2005, while agricultural imports from the EU increased by 43.5 percent. In the same year, Ukraine became a net importer of agricultural products from the EU. The main reasons for this were on the one hand increased domestic demand and on the other hand limited competitiveness of Ukrainian goods, failure to comply with international quality and safety standards (SPS) and existing legal and practical barriers to trade.

All in all, the sector is recovering after a period of decline, but it still shows major weaknesses in terms of productivity, efficiency, and product quality (including

weaknesses in the quality control systems). In the remainder of this chapter we will focus on the potential impact of an FTA in the light of this overview, while focusing, where relevant, on a number of sub-sectors.

In the first part of the TSIA, a number of product categories were screened for further analysis. These fall under a number of sub-sector headings, which we will consider in more detail in this Chapter. They include:

1. Cereals, grains and oil seeds;
2. Meat and edible meat offal;
3. Sugars and sugar confectionary;
4. Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes;
5. Edible fruits and nuts, citrus fruits, water melons; and
6. Beverages, spirits and vinegar.

6.2 Overall policies and issues

Overall issues affecting trade and competitiveness of the Ukrainian agriculture and food sector, in part described above, include:

- Lack of free access to land;
- Underdeveloped infrastructure;
- Poor access to finance;
- Weak and inefficient State policy for agricultural development;
- Low quality of goods, particularly livestock;
- Long and overly regulated custom procedures;
- SPS and weakness of the quality control systems; and
- Low efficiency.²³

In addition, a number of specific trade barriers can be distinguished in the area of customs procedures and VAT reimbursements, as well as quota barriers. The specific issues and policies may differ per sub-sector. The relative importance in terms of trade of the six sub-sectors in trade with the EU is presented in Table 6.2 below.

Table 6.2 Export and import of agriculture and food products, EU-Ukraine, 2004²⁴

Sub-sector	Description sub-sector item	Exports to EU, USDx1000	% total exports to EU	% group* exports to EU	Imports from EU, USDx1000	% total imports from EU	% group imports from EU
2	Meat and edible meat offal	16.53	0.0%	0.0%	60,249.54	0.63%	9.37%
5	Edible fruit and nuts; peel of citrus fruits or melons and watermelons	45,545.42	0.4%	6.1%	6,337.78	0.07%	0.99%
1	Cereals	188,977.15	1.7%	25.3%	30,121.36	0.31%	4.68%

²³ See also International Centre for Policy Studies (2007) Free Trade between Ukraine and the EU: An Impact Assessment."

²⁴ It must be noted that although these statistics are slightly outdated, they provide a detailed overview, specifically for trade with the EU. More recent publicly available statistics do not provide such detailed information but only provide data for all countries.

Sub-sector	Description sub-sector item	Exports to EU, USDx1000	% total exports to EU	% group* exports to EU	Imports from EU, USDx1000	% total imports from EU	% group imports from EU
1	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	91,419.58	0.8%	12.2%	18,360.23	0.19%	2.85%
4	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	196,057.82	1.8%	26.3%	66,072.11	0.69%	10.27%
3	Sugars and sugar confectionery	8,753.72	0.1%	1.2%	19,212.83	0.20%	2.99%
6	Beverages, spirits and vinegar	25,880.42	0.2%	3.5%	13,123.45	0.14%	2.04%

* Group of 24 agriculture and food sector categories

Source: State Statistics Committee of Ukraine

6.3 The agricultural sector in the EU-27

The European Union is the biggest wine producer in the world and accounts for 70 percent of the exports and 65 percent of global production. Currently, the EU is reforming the whole wine sector so the FTA effects on wine production in EU are relevant at the moment.

The EU has started also large reforms in the fruit and vegetables sector in order to bring this sector in line with the rest of the reformed Common Agricultural Policy. The reform is hoped to improve the competitiveness and market orientation of the F&V sector, reduce income fluctuations resulting from crises, promote consumption and thus contribute to improved public health, and enhance environmental protection. Currently the fruit and vegetable sector in the EU is suffering from high competition from increased imports with good quality and low price and from the highly concentrated retail and discount chains, which play a major price-setting role. The reform will enter into force in 2008. Fruit and vegetable production currently accounts for 17 percent of total EU agricultural production.

Cereals and oil seed production accounts for around 40 percent of total agricultural production in the EU. The restrictions on subsidised exports by the WTO and the high price of cereals in the EU have made it difficult to focus on exports. EU production is relatively efficient and due to high quantities produced it can be difficult to import to the EU market.

Meat production in Europe is expected to decrease gradually and meat exports have already been declining so much that in 2005 the EU became a net importer of meat products except for pig and poultry meat. The pig meat industry is still rather protected

from external competition and it represents the biggest production share (47 percent) of meat products. Poultry meat has also a large share of total meat production, while beef production, on the other hand, is expected to slightly decline.

The sugar sector in the EU is also under reform and the EU is opening it up slightly to face global competition. Even though sugar accounts for a mere two percent of total agricultural production, it has been a traditionally much protected industry and the EU has been a big sugar exporter due to the large protection, minimum price guarantees and consequent overproduction. The EU is also a relatively big exporter and importer of tobacco products and there are considerations to reform the tobacco sector in the EU as well.

Out of the group “Animal and vegetable oils”, the EU is producing mostly olive oil. The production is naturally concentrated in the Mediterranean area and currently the EU is the leading world producer, accounting for 80 percent production and 70 percent consumption of the world's olive oil. The FTA with Ukraine involving agriculture leads to increased competition – the more since also Ukraine focuses a lot on oil production, albeit from oil seeds.

Box 6.1 Institutional relations in agriculture

There is no particular agreement between the EU and Ukraine pertaining to agriculture. However a Memorandum of Understanding in the field of agro-production was signed between the EC and the Ministry of Agriculture of Ukraine (October 19, 2006). The resulting EU/Ukraine dialogue has met twice since then. Matters for discussion were market policies, bio-energy, statistical cooperation and rural development. In the Action Plan, agro-issues are mentioned in the context of SPS measures. In this field some progress was already achieved within implementation of WTO requirements according to “The agreement on the application of Sanitary and Phytosanitary measures” but a lot more efforts are needed (see section 6.4). The major complaints related to the domestic SPS system relate to non-transparent requirements (the absence of scientific justification), mandatory standards and overlapping responsibilities of controlling institutions. These drawbacks are considered non-tariff barriers to international trade in certain agricultural products. Another side of the SPS issue is related to food safety of exported agro-products. At the moment, Ukraine is only approved to export some animal products (equine and honey), but the procedure for approval for other products of animal origin is ongoing in order to be authorised and listed on the list of third countries eligible to export to the EU such specific products. This status is granted after passing a list of compulsory procedures, certification of veterinary laboratories according to the EU requirements and certification of potential exporters.

6.4 Horizontal issues: sanitary and phytosanitary measures (SPS)

SPS issues potentially have a large impact on Ukrainian and EU agriculture. With SPS issues, it is important to not only look at legal harmonisation but also to implementation and enforcement of SPS rules and regulations.

WTO obligations

Ukraine already signed the WTO Agreement on SPS measures and is thus committed to align its domestic SPS system according to the principles of proportionality, harmonisation to international standards, scientific adequacy, justification, transparency and non-discrimination. The country already made big progress in this field so far (e.g.

certification of some laboratories). However, still lots of efforts and investments are required to upgrade SPS standards further (and thus facilitating Ukrainian export trade). The major complaints related to the domestic SPS system concern:

- Non-transparent requirements (absence of scientific justification);
 - Mandatory standards and overlapping responsibilities of controlling institutions;
- These drawbacks are considered as non-tariff barriers to international trade.

SPS in the FTA

Another side of the SPS issue is related to food safety of exported agro-products which could be much more important in the context of the FTA creation. As mentioned before, tariff reductions only provide for limited space for further liberalisation and economic gains while one of the crucial bottlenecks in agricultural trade between Ukraine and the EU is currently to be found in the area of regulatory approximation of Ukrainian standards and the existence of administrative capacity and controlling infrastructure of high level accredited laboratories and trained personnel, that would guarantee the implementation of the controls and their enforcement provided for in Community legislation, to which eventually the Ukrainian legislation is expected to become aligned.

A special veterinary agreement could be a possibility as part of the FTA, but this would involve significant and fast improvements of Ukrainian food safety standards, that may go beyond the time and scope of the FTA. Especially livestock and animal products (including by-products like skins, hides and semen) could be included and would benefit from an agreement. The significant and fast improvements needed, will need substantial investments because the state of administrative capacity, and level of infrastructure of laboratories – trained personnel and modern monitoring systems – is not at EU levels by far.

To work towards establishing a mechanism for recognition of equivalence is of the utmost importance.

In Table 6.3 below, we have summarised the agricultural sub-sectors, the SPS situation and consequence for EU-Ukrainian trade as well as the likely FTA impacts on this situation.

Table 6.3 FTA agricultural impacts related to SPS

Agricultural sub-sector	Current situation with respect to SPS and related EU trade	FTA impacts related to SPS
1. Cereals, grains and oil seeds	Domestic certification is internationally recognised and approximated to EU legislation	No SPS related impact from the FTA is expected
2. Sunflower seed oil	Domestic certification is internationally recognised and approximated to EU legislation	No SPS related impact from the FTA is expected
3. Meat and edible meat offal and animal fat	Ukrainian animal products are not all allowed to be exported at present due to lack of standards in productions (SPS). If granted approved 'Third Country' status	FTA will include measures for regulatory approximation to EU SPS standards – certification of veterinary laboratories, further pressure to comply with residue monitoring and

Agricultural sub-sector	Current situation with respect to SPS and related EU trade	FTA impacts related to SPS
	this is expected to improve. Latest progress involved inclusion of eggs and milk in the residue monitoring plan.	veterinary standards and procedures. Impacts: lifting of the ban on imports, leading to more trade, growth of meat producing sector, employment, wage increases, higher value added for meat sector, increased productivity.
4. Sugars and sugar confectionary	Domestic certification is internationally recognised and approximated to EU legislation	No SPS related impact from the FTA is expected
5. Edible fruits and nuts, citrus fruits, water melons	Domestic certification is internationally recognised and approximated to EU legislation	No SPS related impact from the FTA is expected
6. Beverages, spirits and vinegar	Domestic certification is internationally recognised and approximated to EU legislation	No SPS related impact from the FTA is expected

As the Table shows, many products of animal origin are not allowed to be exported to the EU, but this situation will change when Ukraine obtains the approval and is listed under the list of Third Countries eligible to export to the EU such type of products of animal origin. This status is granted after passing a list of compulsory procedures, certification of veterinary laboratories according to the EU requirements and certification of the potential exporters. Specifically, the procedures include (i) Residue monitoring, and (ii) Answering standard EU questionnaires on veterinary standards and procedures (IER, 2006). Some progress was achieved in this direction when on February 12, 2007, the European Commission approved Ukrainian residue monitoring plans for eggs and milk. Further listing may be carried out in 2008.²⁵ After passing the requested procedures (that do not only include legal harmonisation but also implementation and enforcement) these products could be allowed for exports to the EU market.

Regulatory approximation to the EU food safety and food traceability standards can be a part of the FTA agreement but may go beyond it. We expect that controlling and standardisation requirements will meet no objection from the Ukrainian side. Moreover, given the potential economic benefits, the authorities may emphasise fulfilment of these FTA provisions. This will inevitably lead, not only to legal approximation of Ukrainian legislation, but also to policy measures that focus on implementation and enforcement of SPS standards. This will be elaborated upon later.

With respect to meat processing plants, Ukraine may claim for an extension of period on compliance with EU SPS standards since the majority of meat producers will not be able to afford costly modernisation and certification of their products in the short run. During this period, such products can not be exported to the EU market. Moreover, the highly

²⁵ Generally speaking, the EU listings classify three broad categories: A, B and C. If a country is given Category A status, its agricultural products enjoy unrestricted access into the EU. Countries in Category B may export agricultural products but not raw products to the EU. Finally, countries in Category C, like Ukraine, is much more restrictive. For example, countries may only export doubly pasteurised and doubly heated and treated (milk) products to the EU.

competitive EU market could discourage some Ukrainian meat producers at this stage of their development. Therefore, we do not expect immediate effects of food safety requirements for all sub-sectors to be taking place at once, albeit the long run need is obvious and the process inevitable.

6.5 Impact assessments

The agricultural sector is a very broad one with many sub-sectors. The envisaged FTA can have significant but widely diverging impacts on the sector and these sub-sectors.

Overall, it is clear that the FTA is expected to have positive **economic impacts** on the post-WTO agricultural sector in Ukraine and a negligible impact on the EU agricultural sector (depending on sectors and regions chosen). In the short run, due to adjustment problems, we expect unemployment to increase at first. In the long run, the FTA is likely to have positive growth and development effects, facilitates the inflow of domestic and foreign investments, causes wages to rise, lowers prices for agricultural products due to competition, cause employment to increase and GDP per capita in the agricultural sector to go up. Also trade flows can significantly increase and overall Ukraine's trade balance will improve, especially with the EU. But this does not come without serious investment costs and legal commitments. Three important aspects need to be kept in mind. First of all, the more extended the FTA, the larger the long run gains for the agricultural sector. This is the economic reason to argue for an extended FTA scenario that includes significant to full tariff liberalisations, and reductions in standard and border costs through regulatory approximation and reductions in corruption and bureaucracy as part of the Enhanced Agreement. Second, the more extended the FTA, the larger the short-run adjustments and restructuring are. These can temporarily depress the long run forecasts or have even negative effects like temporary negative investment effects, lower levels of profitability, unemployment effects, unintended migration flows and a drop in production and exports. Third, regulatory approximation of SPS is important but only the first step of a significant commitment to allow clearance of Ukrainian products for the EU markets. Implementation and strengthening of enforcement capabilities to guarantee food quality are the necessary next steps. This requires short- and long-run investments that are significant. Prioritisation of investments is needed here.

For the EU – as said – the overall agricultural impacts are negligible. However, we do expect increases in exports from the EU to Ukraine in the areas of wine and beers as well as sugar and fruits. Furthermore EU capital owners could benefit through investment opportunities in agriculture. Cereal imports from Ukraine as well as meat and fats are expected to increase, the latter if SPS standards are met and implemented. Two important overall effects in agriculture are that, firstly, prices for EU consumers are expected to drop in several agricultural product categories and secondly, a potential market for EU products is opening up.

The **social impacts** are closely linked to the economic impacts and predict employment increases (though the CGE outcomes may present an upper limit to this effect) and wage increases. Employment increases are expected to be lower initially and also the nature of employment in the agricultural sector may be subject to change due to capital-labour

increases and mechanisation of agriculture, as a consequence of FDI inflows. Also the high share of workers not in the labour market may depress the figures. Wage increases are important in the light of differences in regional income distribution in Ukraine. The employment and wage effects can lead to lower levels of poverty and may have a mitigating effect on labour migration. Again, the predicted effects are much stronger in the long run in an extended FTA than in the short-run. Also overall, the FTA is expected to lead to an improvement of working conditions, health & safety standards (via regulatory approximation) and quality of work. This does require significant investment levels and FDI inflows that can originate from the EU. Growth potential in the agricultural sector, due to its relatively minimum efficient scale requirements, may increase entrepreneurial activities and self-employment.

The **environmental impacts** relate mostly to problems with eutrophication and the use of chemicals, dangerous pesticides and the like in agricultural production. These effects are expected to be negative though less so in the long run than in the short run through production upgrading and the use of cleaner production technologies. Also we expect a limited problem of wastewater management and continuing issue of land use, soil remediation and nature conservation.

For the Ukrainian cereals sector, the FTA is expected to have positive impacts in terms of sector growth, increases in exports and investment in production efficiency increases if quotation of exports and TRQs are sufficiently reduced by both Ukraine and the EU. This can also lead to employment increases in Ukraine, higher wages for the workers in the sector and increases in both productivity and working circumstances. For the EU there is a small but negligible impact envisaged on exports of grains and cereals to Ukraine. The FTA is also expected to lead to small price decreases in this market, which may benefit consumers. Fertiliser and pesticide increases may have negative impacts on the environment and biodiversity in Ukraine.

The production of sunflower-seed oil likely stands to gain from trade liberalisation though only in a limited way. Tariffs are already low and Ukrainian products are accepted according to EU standards already. Ukraine may want to keep its export tariffs to support domestic sunflower producers. For the EU, Ukrainian oil production may become more important as a product for bio-fuel production. Trade in oils will intensify between the two trade partners.

The impacts on meat production and animal fats depend to a large extent on the regulatory approximation efforts of Ukrainian SPS standards to the EU *acquis* but are expected to be positive. In case of deep integration (far-going regulatory approximation), the sector is expected to grow into a major exporter of meat, meat products and animal fats into the EU. Growth will go up, employment will increase and so do wages. In the short-run costly investments in productive capacity and upgrading of outdated machinery to comply with EU food safety requirements will be necessary. Employment effects are predicted to be positive by the CGE model, but sector experts point at limitations not included in the quantitative analysis: gross inefficiencies of many pig-breeding and cattle-breeding enterprises and outdated production methods. We still imagine the overall effect to be positive in spite of these limitations. Furthermore, adherence to SPS standards, will increase the quality of meat production, which is expected to have positive health effects

in Ukraine. Environmentally, the FTA may lead to increases in bio-industry production of meat.

The effects on the sugar and confectionary markets depend on the depth of the FTA agreement. The sugar sector is heavily protected by the EU and Ukraine. Reductions in tariffs would likely lead to significant changes in trade patterns and a reduction in output of the Ukrainian sugar sector. Prices for sugar are expected to drop significantly which is positive for consumers and for the confectionary industry. Lower tariffs are also expected to lead to increases in product varieties in the confectionary industry.

Fruit production is expected to face strong competition in the short-run, which may have an initial suppressing growth effect but will benefit significantly from the FTA in the longer run, also because in this sector EU SPS standards are met. Investments would then go up, and so would employment and wages. This sector is expected to show an increasing trade surplus with the EU because of the FTA. Like in the cereals sector, increased fruit production may lead to increased use of fertilisers and pesticides in order to increase fruit production output. This will have adverse environmental effects. There is also a trend to export fruits processed to fruit juices.

The beverage sector in Ukraine may get hurt by the FTA agreement because of the strong competitive position of the EU in the production of beer and wine. Liberalisation can cause the EU to increase its market share of these products in Ukraine at the expense of domestic Ukrainian producers. Whether this will lead to FDI and thus production fragmentation in which Ukraine will be included, remains to be seen. Vodka production – on the other hand – is expected to increase slightly. Overall a consequence of the FTA is increased levels of investment in new technologies and equipment and increased competition.

The summary of the expected impacts of the agricultural sector are presented below in Table 6.4 in line with the Handbook indications.

Table 6.4 Summarised sustainable impacts on the agriculture sector²⁶

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	△	--	△	Yes	L/H
Fixed capital formation	△	-	○	No	L/H
Trade	△	-	○	Yes	L/H
Social					
Employment & decent work	△	+	△	Yes	M
Poverty	△	--	△	Yes	M/H

²⁶ A. Overall direction and magnitude of change from baseline (WTO accession) to scenario; B. Extent of existing economic, social and environmental stress in affected areas; C. Equity of change: how it affects different sectors of the population; D. Potential for irreversibility; E. Regulatory and institutional capacity to implement ameliorating measures.

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Equality	▲	--	△	Yes	M/H
Health	△	-	▲	No	M
Education	△	-	△	Yes	M
Environment					
Atmosphere	▽	--	▲	No	M/H
Land	?	-	?	Yes/No	L/H
Bio-diversity	?	-	▲	Yes	L/M
Environmental quality	△	--	▲	Yes	L/H
Fresh and waste water	▽	-	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the effects for the agricultural sector (and sub-sectors). These effects are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

7 Metallurgy

In this Chapter of the report, we provide an overall description of and policy issues related to metallurgy sector as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex X.

7.1 Description of the metallurgy sector

Sector overview and recent developments

Metallurgy is a key industry for Ukraine's economy. Metal is the most important export article of Ukraine and an important input for machinery and metalworking industries. In 2005 metallurgy and metal processing contributed 32.6 percent to total exports. The industry produced 5.1 percent of GDP while employing 3 percent of the working population²⁷.

The Ukrainian steel industry depends to a large extent on export demand because only one quarter of domestic steel production is needed to satisfy domestic demand. Ukraine has one of the world's lowest unit costs to produce steel, but is technologically old-fashioned and needs substantial amounts of investment to improve its infrastructure and quality and efficiency. Material expenses in 2005 constituted 82.5 percent of the final costs of the product, while labour remuneration accounted for 7 percent only. Metallurgy has become one of the most attractive industries for foreign investors.

Due to high market prices and geographical proximity, the EU plays a vital role in Ukrainian steel exports. In 2005 Ukraine increased its export to the EU to 4.5 million tons of ferrous metals and correspondingly up to 5.1 million tons of all metals. The country occupies the third place among main steel exporters into the EU after Russia and China. As the export to the EU of some articles of Ukrainian metal-roll export is limited by quotas, growth in trade is achieved mostly due to increases in non-quota products, such as semi manufactured steel and cast iron. It must be noted that the precise volume of Ukrainian steel exports to the EU is hard to determine because part of it is exported through third countries (off-shore).

²⁷ Within the context of the TSIA, only the influence of the FTA on ferrous metallurgy will be analyzed, while non-ferrous metallurgy will not be included. There are two major reasons for this decision: i) non-ferrous metallurgy plays insignificant role in Ukrainian economy in comparison with ferrous one, ii) current tariff on all non-ferrous metals is zero with an exception of copper (2.8 percent) and aluminium (0.01 percent) both are to be zero after the WTO accession. The metallurgy sector is considered here to consist of two product groups: "ferrous metals, metals nec" and "metal products."

Institutional & market structure

The basis of Ukrainian ferrous metallurgy is formed by twelve integrated steel making plants that provide 96 percent of total output. The metallurgy market is highly concentrated with the four largest plants producing around 58 percent of total output.

Major issues that are influencing the development of the sector include:

- *Significant gas prices increases.* Metallurgy is the largest consumer of natural gas in Ukraine.²⁸ Investments in energy saving have already started on seven major plants with most improvements expected to take place in 2008 -2009. Most of the projects provide for introduction of pulverized-coal injection technology;
- *Steel production technology is outdated.* 45 percent of steel is produced in open-hearth furnaces – a method no longer used in Europe – of which 87 percent is operated after service life period;
- *Lack of investment in the post USSR time.* The first plants were sold for US\$ 50-70 per ton of production capacity and were not viewed by the new owners as targets for new investments. Intensive exploitation of existing production facilities with insignificant investments allowed to maintain competitiveness of the industry, but lowered its efficiency; and
- *Increases in railway fares* for internal transportation of metallurgy products. In 2007 internal transportation costs increased by 42 percent and export fares grew by 19 percent.

7.2 Current policies and crucial sector issues

WTO commitments and progress towards these commitments

Ukraine has committed itself to bringing its metallurgy tariffs in accordance with WTO requirements. Currently Ukraine applies tariffs on both ferrous metals and ferrous metal products. As for the metals the average level of tariff in 2006 was 2.13 percent while the bound tariff rate for this position is 1.51 percent. However, as internal Ukrainian prices are lower than at the international market, this insignificant reduction in tariffs is not likely to damage the industry. WTO commitments are not expected to have any impact on ferrous metal products production, as the currently used tariff rate (2.81 percent) is lower than the bound rate (3.02 percent). Additionally, Ukraine still applies high export taxes on ferrous scrap which are not in line with WTO requirements. This is an issue that is expected to be addressed during the WTO negotiations.

Subsidies and anti-dumping issues

Distinctive features of the Ukrainian metallurgy sector are government subsidies. The authorities began providing metallurgy with subsidies after the collapse of the USSR – mostly in the form of tax immunity. The effect of this policy on prices led to quota restrictions applied by the EU. In addition, in February 2000 the EU imposed anti-dumping measures on imports into the EU of seamless pipes and tubes from Ukraine. In 2005 the EU increased the level of antidumping duties for Ukrainian exporters further.

²⁸ It takes five times more energy to produce a ton of steel in Ukraine than it does in the European Union, the average gas consumption per ton of steel constituted 0.26 thousand of cubic metres.

In June, 2006 the European Union adopted the Council Regulation which imposed the final antidumping measures on imports into the EU of certain seamless pipes and tubes from iron or steel originating from Ukraine.

The levels of the antidumping duties established by the Regulation ranged from 12.3 percent to 25.7 percent. Products of some Ukrainian plants were under the risk of antidumping measures also in Russia. Recent issues have been solved by voluntary self-restriction policies adopted by Ukraine.

Until now, the Ukrainian authorities have been subsidising or giving “state aid” to the metal industry with the help of state regulations on prices and subsidies for coal industry, power utilities and the oil and gas complex FEC. Especially the restructuring of the FEC is currently a matter of attention for the Ukrainian authorities in order to avoid further anti-dumping measures from the EU.

EU-Ukraine relations and agreements pertaining to metallurgy

Since the collapse of USSR, exports of ECSC steel products from the Ukraine to the EC have been restricted, at first by autonomous EC measures, later by bilateral agreements between the EC and Ukraine. The most recent agreement covering 2007 was signed in Luxemburg between the Ukrainian authorities and the European Union in June 2007.

The 2007 Agreement shall be automatically renewed year by year provided that neither Party gives the other Party written notice of denunciation of the Agreement at least six months before it expires. With each renewal, quantities in every product group shall be increased by 2.5 percent, while in 2007 a one-time greater increase was allowed to compensate Ukrainian exports for the enlargement of the EU to Romania and Bulgaria. In the event that Ukraine joins the World Trade Organisation (WTO) the Agreement shall be terminated and the quantitative limits shall be abolished as from the date of accession. The agreement provides that trade in ferrous scrap is free. However, in 2002, Ukraine introduced an export tax of 30€/tonne. This was countered by the EC by a 30% reduction of the quota applied on steel products from the Ukraine. Therefore, the agreement does not reach its full potential in terms of exports of Ukrainian steel products to Europe. Elimination of the export tax would have resulted in an increase of the quota of 42%. This is not reflected in the quotas and their usage are given in Table 7.1.

Table 7.1 Ukrainian deliveries of quoted steel to the EU

	2003	2004	2005	2006	2007
Quota	184.5	606.8	988.9	1,004.5	1,320.0
Delivered	118.0	549.4	922.0	1,097.3*	
Percent of quota used	64%	91%	93%	98%	

*including quota remaining from 2005

The EU-Ukraine Action Plan doesn't concentrate specifically to the metallurgy sector, but it does list the following issues, which relate directly to it:

- Take action to ensure good environmental management;
- Adopting environmental plans for priorities in investments in each sub-sector;
- Adopt state aid policies, which don't distort the trade between EU and Ukraine; and
- Establishing of transparency regarding state aid.

Ukraine produces large amounts and different types of steel and metal objects with outdated equipment. For instance more than half of the world's outdated and energy wasting open hearth furnaces are now in this country, and about 47 percent of Ukrainian steel is produced with their use. Only 24 percent of steel is produced with continuous casting. As a result steel making plants and related coke production and metal mining are responsible for about 40 percent of hazardous air emissions from stationary sources in Ukraine.

Polluted water discharges are about 800 million m³ or 23 percent of the overall amount of polluted water, about 300 million m³, that is discharged without any treatment. Metallurgy is responsible for the annual formation of about 1 billion tonnes of solid waste or 41 percent of the overall amount. This waste is frequently accumulated in huge landfills on site. Even in comparison with similar Russian plants, specific Ukrainian consumption of coke and iron ore is 10.3 percent higher.

Nevertheless, even with inefficient and polluting production methodologies, Ukraine has a great number of freely Assigned Amount Units (AAU, in tonnes of CO₂eq) within the framework of the Kyoto Protocol, which Ukraine ratified in February 2004. It therefore has the opportunity to earn up to 10 billion US\$ by selling the quotas. Ukraine plans to sell about 1-1.2 billion tons of the AAU during the budget period of the Kyoto Protocol in 2008-2012. The mechanism for such quota sale is fulfilled within the framework of so-called "green" investments: funds received by the state should be directed to environmental projects, which will decrease emissions of CO₂ and other greenhouse gases, in Ukraine arranged through the National Agency of Ecological Investments of Ukraine.

With a carbon quota deficit in the EU and its very ambitious plans beyond the Kyoto period, the Ukrainian steel industry may benefit from being late in its previous development and jump to the most efficient innovations with EU support and thus capitalise on its huge potential to create top competitive conditions for the (Ukrainian) steel industry. In fact, the sector has no alternative for drastic improvements of its environmental performance and corresponding increase of competitiveness.

Substantial help in this process may be provided by the current process of implementation of the European concept of best available techniques in accordance with the European Union's Directive 96/61/EC on Integrated Pollution Prevention and Control (IPPC). The draft Ukrainian Law on IPPC should be prepared already in 2007. Ferrous metallurgy is chosen as pilot sector, and the two first permits should be issued for a steel plant and a coke plant already in 2008.

7.3 Conclusions

Summarising the in-depth impact assessment of the FTA on the metallurgy sector, we conclude that the **economic impacts** are significant and positive. The EU already applies a tariff of 0%, but the elimination of tariffs also by Ukraine and of the import restrictions currently applied by the EU for Ukrainian steel products, will lead to more trade between the EU and Ukraine (elimination of EU quotas on steel products will take place already

upon Ukraine's accession to the WTO). Increased competition also leads to lower prices and in the long run a drive to upgrade production methodologies. Investments in the sector may lead to increases in productivity and better and more environmentally friendly production in the longer run. The issue of state subsidies for this sector remains an important issue though, partially offsetting these positive impacts.

As a consequence of increased production, also employment, a **social impact**, is likely to increase because of the FTA, so do wages. This could lead to lower poverty levels among the formerly unemployed and low-skilled workers. Improvements in production methods and machines may lead to higher levels of work safety and improved working conditions in general in line with decent work directives of the ILO. Also a positive impact on health could be possible due to cleaner and better work circumstances.

The **environmental impacts** of changes in the production structure of the metallurgy sector are significant and among the most important of the FTA. Increased production will lead to more greenhouse gas emissions, lower quality of the air and higher levels of dangerous chemicals in the air and in the water. Wastewater may pollute (international) waters and increase in quantity. Flanking measures may offset some of these impacts. The sustainable impacts are summarised in Table 7.2 below.

Since Ukraine is currently below the allowed pollution ceiling agreed in the Kyoto protocol, EU metallurgy production (where there is a pollution deficit) may move to Ukraine, which leads to increases in production and employment, albeit at the cost of more pollution.

Table 7.2 Summarised sustainable impacts on the metallurgy sector²⁹

Core indicator	Overall direction magnitude	Existing conditions	Equity	Reversibility	Capacity to change
Economic					
Real income	▲	+	▲	Yes	M/H
Fixed capital formation	▲	+	▲	No	M
Trade	△	+	▲	Yes	M/H
Social					
Employment & decent work	▲	0	△	Yes	M/H
Poverty	▲	-	△	Yes	M/H
Equality	△	-	△	Yes	M
Health	△	--	△	Yes/No	M
Education	?	0	△	Yes	M
Environmental					
Atmosphere	▽	--	▲	No	M/H
Land	△	-	?	Yes/No	L/H

²⁹ A. Overall direction and magnitude of change from baseline (WTO accession) to scenario; B. Extent of existing economic, social and environmental stress in affected areas; C. Equity of change: how it affects different sectors of the population; D. Potential for irreversibility; E. Regulatory and institutional capacity to implement ameliorating measures.

Core indicator	Overall direction magnitude	Existing conditions	Equity	Reversibility	Capacity to change
Bio-diversity	?	-	▲	Yes	L/M
Environmental quality	○	-	▲	Yes	L/H
Fresh and waste water	○	-	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the sector picture, but they are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

8 Machinery & Electronics

In this Chapter of the report, we provide an overall description of and policy issues related to machinery & electronics sector as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex XI.

8.1 Description of the machinery & electronics sector

Machinery and electronics play a vital role in the economic development of Ukraine – and for that matter in any country – because it is an industry that produces the intermediate parts needed for final goods production. Therefore, machinery construction has a direct influence on the development of other sectors in the economy and is as such an *enabling* industry.

In 2005 machine building, repair and assembly of machines and equipment provided 4.7 percent of GDP, while employing 5.5 percent of the labour force. Even though substantial, this share could have been much larger if not for the economic crisis of 1991-1997. During these years machinery construction experienced one of the biggest recessions of any sector in the Ukrainian economy. Production of some of the outputs decreased by 90-95 percent compared to their Soviet time levels. The main reason for this downturn was the discrepancy between the asked price and low quality of goods produced.

In the ‘machinery and electronics’ sector both domestic and foreign firms produce a wide variety of products designed for industries and households. The home appliance market is the most competitive one with an overwhelming dominance of imported commodities. On the other hand, heavy machinery demand is met by local producers. They maintain close ties with their (company) clients in associated sectors or are a part of larger business groups.

The structure of machinery production underwent substantial changes during the period 2001-2005. While transport vehicles and their parts and components comprised 25.3 percent of overall sector production in 2001, this share grew significantly to 42.5 percent in 2005. On the other hand, the share of machinery equipment declined to 34.8 percent in 2005 from 47.5 percent in 2001, although real output grew over that period. Electronics

and electric equipment constituted 22.7 percent of the sector's output in 2005 and 26.2 percent in 2001.³⁰

During the last years the highest growth rate was demonstrated by the manufacturing of parts and components for the automobile industry, which was mainly due to foreign investments and growth of internal demand. Manufacturing of household appliances and manufacturing of office and computing equipment also increased, due to growth in income of the population, an inflow of investment, increases in bank credits and the availability and need to renovate capital assets. However domestic demand for large machines, such as agricultural machines, trucks and tractors remains low; this leads to growth in unused production capacities, which – at some places – reaches levels of 40-50 percent. Lower investment activities have had a negative impact on the industry and so did late payments for machines taken on lease by agricultural companies.

As the export to output ratio for the sector (34.6 percent in 2005) and the import to output ratio (65.8 percent in 2005) show, the sector is involved substantially in international trade. However, the geographical structure of exports is far from being balanced. Out of all Ukrainian exports of machinery and equipment about 17.4 percent goes to the EU, while imports from the EU-25 in 2005 exceeded 75 percent of the total machinery imports..

8.2 Current policies and crucial sector issues

In the machinery & electronics sector, the following crucial issues are identified:

- Outdated equipment and low productivity;
- Protection of the car and road vehicles sector;
- Ecological issues; and
- State aid.

Outdated equipment and low productivity

Ukraine's trade policy relating to the machinery & electronics sector is characterised by a twofold approach. On the one hand, Ukrainian industries badly need new equipment and technologies for renovation of production capacities. This requires opening of the market and a reduction of trade barriers for machinery imports. On the other hand, most of the local machinery sector's companies can hardly stand competition with acknowledged world leaders in the domestic market.

Protection of the car and road vehicle sector

The car and other road vehicles sub sector is the most protected one against international competition in the machinery & electronics sector. The lobby of car producers remains one of the strongest in the Ukrainian parliament, thus the industry benefits to a large extent from artificial competitive advantages. Currently Ukraine charges 25 percent import tariffs on cars, 20 percent on most types of trucks, and 2-12 percent on special

³⁰ Because of international definitions, we look at machinery and electronics as well as at transport equipment and motor vehicles and parts because the latter two are also part of machinery production, and we have analysed these sub sectors in the CGE analysis with outputs worth mentioning.

purpose vehicles. As part of its WTO concessions schedule Ukraine has committed to reduce the maximum tariff rate on vehicles to 10 percent, which is likely to affect prices in domestic market.

Another measure affecting international trade in vehicles was prohibition to imports of cars older than 8 years, which was a clear violation of the WTO norms. The restriction was abolished by Parliament in December 2006. Instead, another discriminatory measure – a fee for the first-time registration of road vehicles – was introduced. The fee is related to the engine volume and age of a car (it is higher for older cars with greater engine volumes).³¹ The formal justification for introducing such kind of limitation was to prevent imports of old cars polluting the environment. According to governmental officials, such an arrangement is compatible with Ukraine's schedule under the WTO.

However, it is mostly likely to be changed under the FTA agreement. Environmental protection measures are to be enforced through ecological standards, not through discriminatory registration fees.

Ecological issues

The ecological aspect of vehicles production and exploitation is one of the most important in the context of FTA. Ukraine substantially lags behind the EU in terms of implementation of modern ecological standards. Since July 2007, Ukraine switched to the Euro-2 standard, while Euro-5 is currently being implemented in the EU. This immense gap in ecological standards may potentially complicate free trade in cars between Ukraine and the EU and lead to biased trade flows (i.e. many more exports of EU produced cars to Ukraine than vice versa). There is fear is that a premature introduction of higher standards will be too costly and burdensome for Ukrainian road vehicle producers. However, care should be taken in order to ensure in-time introduction of later generation ecological standards. Producers should be provided with reasonable and credible timelines in order to switch to production technologies that meet high ecological standards.

For efficient environmental regulation of production activities Ukraine has started the implementation of provisions of the European Union's Directive 96/61/EC on Integrated Pollution Prevention and Control (IPPC). Main Ukrainian installations of the sector should be under the new system, there are several hundreds of them. It envisages as well consideration of other relevant European directives and international regulations. One of them is The Waste Electrical and Electronic Equipment Directive of the European Community (WEEE Directive 2002/96/EC) on waste electrical and electronic equipment, which introduces a product cycle approach for all types of electrical goods. The directive imposes the responsibility for the disposal of waste electrical and electronic equipment on the manufacturers of such equipment. It may help to find the solution for some of the acute environmental problems in Ukraine.

State aid

The issue of state aid for “machinery & electronics” has received special attention from the Ukrainian authorities in the latest years. A number of state aid programmes was

³¹ The fee for registration of a new car with an engine of 1600 cm is 16 USD, while the fee is 960 USD for a similar car older than 8 years.

approved in 2001-2002. As most of them had few positive effects on the long-term sector development and lead, instead, to possible corruption and inefficient resource allocation, they were abolished by Parliament in March 2005. Currently, the only beneficiaries of state aid in the machinery and electronics sector are road vehicles producers. Most of them enjoy subsidies in the form of tax exemptions (which are actionable subsidies under the WTO SCM Agreement). The Decree of Cabinet of Ministers of May 24, 2007 allows import of materials (according to the approved list) and intermediate products free of import tariffs and value added tax.³² Such Decree provisions are in direct conflict with the EU “*acquis*” as they create a discriminatory regime in the car market. Subsidies in the form of tax exemptions proved to be utterly non-transparent and stimulating various forms of fraudulent behaviour. Although the Decree expires by the end of 2007, tax privileges are likely to be lobbied further in Parliament.

In this situation, the design of a state aid strategic programme is one of the key things to be done urgently. On the one hand, discriminatory norms should be avoided in the future, while on the other hand, Ukraine should learn to effectively implement a state aid programme compatible with the EU ‘*acquis communautaire*’ in order to enhance competitiveness of local producers. State aid should be focused on development of long-term competitive advantages of the sector, rather than supporting current activities of companies. Among the state aid priorities are:

- Research and development;
- Environmental protection;
- Company restructuring; and
- Implementation of international (the EU, primarily) technical regulations.

Technical regulation in machinery & electronics is another important issue. The companies’ ability to export depends on the products compliance with international norms. One striking example is the aircraft construction sub-sector functioning in accordance with the 7200 normative technical documents designed in Soviet times. The progress in aligning domestic technical regulations with the EU ones is quite modest so far. Discrepancy between Ukrainian and EU technical regulations is one of the reasons of Ukraine’s geographical export bias towards the CIS markets. The CIS countries’ and Ukrainian technical norms stem from the same Soviet documents and this substantially reduces technical barriers for exporters and importers in the trading countries.

One of the possible ways to boost the machinery construction sector in Ukraine lies in improvement of the technological levels of large agricultural machinery, the production of modern and ecologically cleaner engines, and the use of metals with modern protection against corrosion.

EU-Ukraine relationship in machinery and electronics

The EU-Ukraine Action Plan defined some priorities in reforming of Ukrainian machinery and electronics sector, among them are:

- Alignment of Ukrainian legislation in the automobiles sector with the PCA provisions;

³² Tax privileges were abolished by the Cabinet of Ministers on July 20, 2005, but approved again on May 24, 2007 following ruling of the court.

- Elimination of discriminatory treatment in the use of promissory notes;
- Adoption of state aid legislation with a principle of prohibition of state aids which distort trade between Ukraine and the EU;
- Adoption of good environmental governance and national programmes and plans for key environmental sub-sectors;
- Fighting corruption;
- Approximating legislation involving improvements in quality of products.

The Partnership and Cooperation Agreement (PCA) provides for the following actions in relation to the machinery & electronics sector:

- Restructuring of policies to fully incorporate environmental considerations;
- Develop industrial co-operation in the fields to technology, industrial production standards and environmental protection.

8.3 Impact assessments

The **economic sustainable impacts** in machinery & electronics are expected to be positive with a significant sector growth, lower prices of intermediate and final consumption goods and projected increases in FDI in the long run that lead to upgrading of the machine park and increases in production. Lower tariff protection and subsidies beyond Ukraine's WTO commitments can lead to more competition from abroad and more efficiency in the sector. As a consequence of symmetrical reductions in tariffs, Ukraine's trade balance with the EU in machinery & electronics is likely to improve as exports to the EU grow faster than imports from the EU. Because of increased openness to trade, we also expect Ukraine and the EU to enjoy an increased variety in types of machinery. One should note, however, that production upgrading may take years and is a costly endeavour for the industry.

Social impacts of the FTA in the machinery & electronics sector include expected positive employment effects in the short run and stronger employment effects in the long run, increases in wages in the industry, upgrading of factories and production sites with improved worker safety and health standards at the workplace, and reduced levels of poverty. We expect FDI to play a significant role in this sector because of resource reallocation and production fragmentation of large multinationals that want to make use of Ukraine's comparative advantages like cheap labour and geographical location. This FDI is expected to have positive social effects by using clean production technologies, improve social workers' rights, and the health situation at factory floors.

The overall **environmental sustainable impact** of the FTA in machinery & electronics in the EU is considered to be negative but small in magnitude, also in the long run. Waste management is one of key concerns for machinery and electronics industry. There is evidence of increased (though for the EU negligible) SO₂ and NO_x emissions, in spite of production upgrading. Also increased production of finished products based on intermediate products supplied from Ukraine can have a negative environmental impact.

The overall impact effects of the FTA are summarised in Table 8.1 below.

Table 8.1 Summarised sustainable impacts on the sector machinery & electronics³³

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	▲	-	▲	Yes	M
Fixed capital formation	▲	+	▲	No	M
Trade	▲	+	▲	Yes	M
Social					
Employment & decent work	▲	-	▽	Yes	M
Poverty	▲	-	▽	Yes	M
Equality	▲	0	▽	Yes	M
Health	▲	-	▽	Yes/No	M
Education	△	-	▽	Yes	M/H
Environment					
Atmosphere	▽	--	▲	No	M/H
Land	○	-	?	Yes/No	L/H
Bio-diversity	○	-	▲	Yes/No	L/M
Environmental quality	△	--	▲	Yes	L/H
Fresh and waste water	○	--	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the sector picture for machinery & electronics, but they are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

³³ A. Overall direction and magnitude of change from baseline (WTO accession) to scenario; B. Extent of existing economic, social and environmental stress in affected areas; C. Equity of change: how it affects different sectors of the population; D. Potential for irreversibility; E. Regulatory and institutional capacity to implement ameliorating measures.

9 Energy

In this Chapter of the report, we provide an overall description of and policy issues related to the energy sector as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex XII.

9.1 Description of the energy sector

Energy markets in Ukraine have inherited the production capacities and technologies from Soviet times, but since Ukraine's independence they underwent a number of substantial changes in organisational and ownership structure.

9.1.1 Gas market

Traditionally, Ukraine has been importing gas, because its own extraction covers only 25 percent of total domestic needs. In 2006, the major part of gas (about 85 percent) was imported from Asian countries such as Turkmenistan, Uzbekistan and Kazakhstan while the rest came from Russia. In January 2006, average import prices were almost doubled overnight, while a further 35 percent increase was introduced in early 2007. The initial increase was preceded by a tough dispute with Russia on the terms of gas transit via Ukrainian territory and import gas price for Ukraine.

The gas market in Ukraine is *highly monopolistic*. Gas import to Ukraine is monopolised by a single intermediary, Swiss-registered company Rosukrenergo. Ukrainian gas extraction is extracted by state companies incorporated into the Naftogaz structure. Private companies operate mostly as joint ventures or under production sharing agreements.

Wholesale gas distribution on Ukraine's territory is also carried by one company, Ukgazenergo, a joint venture of Naftogaz and Rosukrenergo. Transmission and distribution gas pipelines are owned by the state and are prohibited from privatisation. The Ukrainian gas distribution sector is characterised by chaotic market developments, unregulated legislation and lack of transparency, allowing for corruption and non-payments.

9.1.2 Oil market

Ukraine is extracting and refining oil and produces yearly about 11 million tons of petroleum products. Domestic extraction is at about 4-4.5 million tons and covers up to 20 percent of total supply, and the rest comes from Russia.

The bulk of domestic extraction is provided by *state-owned* Ukrnafta and Chornomorhaftogaz (97 percent), which are incorporated in the Naftogaz structure.

Most proven oil reserves have already been developed, and the remaining fields are classified as difficult-to-develop. *Oil refinery* reached its highest point in 2003-2004, when Ukraine became a net exporter of petroleum products. But starting from 2005, oil refinery has suffered a sharp decline, related primarily to the cancellation of import duties on refined products in May 2005. This resulted in the increase of imports of oil products from 5 percent to 30 percent in the Ukrainian market. Oil is refined at six oil refineries with a designed capacity of about 51 million tons, the majority of which became privately-owned in 1999-2000. Four out of six plants are owned by Russian companies.

9.1.3 Coal market

It is known that coal production is not competitive as the quality is not good and the extraction practices are substandard; however coal mining still employs large numbers of workers in Ukraine and it is not clear what the prospects are. There are important drawbacks from the use of coal as it is a significant contributor to greenhouse gases. Apart from CO₂ released by coal burning, methane gas is released by coal extraction. Despite the limited competitiveness of the coal sector, it is likely to remain an important source of fuel for thermal power stations – especially now that gas prices have gone up sharply.

9.1.4 Electricity sector

Electricity is produced in Ukraine by nuclear (47 percent), thermal (42 percent) and hydropower plants (7 percent). The share of renewables, with the exception of hydropower (7%) is very low. Ukraine is a net *electricity exporter*, and export volumes have been growing over the last few years. In 2006 the major recipients of Ukrainian electricity were Hungary (33.8 percent of total electricity exports from Ukraine), Belarus (24 percent) and Moldova (23.7 percent). Electricity export to Russia heavily depends on the political relations between the two countries. Overall future export potential is limited by the lack of investments and limited modernisation of the power networks.

Electricity generation capacities are mostly state owned and nuclear and hydropower stations are prohibited from privatisation; thermal power stations are owned by four state companies and one private company. Currently Ukraine's electricity market is organised according to the model of a "single buyer": total electricity produced is purchased by Energorynok, a wholesale electricity market administrator. Energorynok sells the electricity to distributing companies and independent suppliers who in their turn supply

electricity to retail customers. Furthermore, the electricity generation market is divided into two segments: a ‘competitive’ market (32 percent – as an upper limit) and a regulated market (68 percent including nuclear and hydro plants).

Furthermore, the nuclear plants used for electricity generation cannot be privatised according to Ukrainian law, but Ukraine receives a lot of support to maintain nuclear safety and receives nuclear fuel from Russia, potentially giving it an unfair competitive advantage.

Private capital is more present in *electricity distribution*. Out of 27 distribution companies, six are privately owned and seven are privately controlled, the rest of the companies are controlled by the state. In April 2007, the State Property Fund of Ukraine announced a further privatization of 25-27 percent shares in six companies.

9.1.5 Environmental issues in Ukraine related to the energy sector

The Ukrainian energy sector has many environmental problems. Power installations were put into operation in the 1960-1970s by design and norms of 1950s, which means that currently they are physically and morally obsolete, albeit still in operation. Some of the plants are operated for social reasons only (employment effects), even when nearby there are more efficient facilities available that still have reserve capacities.

In addition, there is poor dust control at the power plants resulting in high emissions of particulates, including heavy metals. Control of SO₂ emissions is absent entirely and the problem is aggravated by a high content of sulphur in Ukrainian coal. Finally, low levels of re-use of combustion residues and by-products result in water contamination and land use problems.

Numerous governmental programmes for improving the situation have so far failed. The situation doesn’t allow for further delays with restructuring of the sector and it needs drastic improvements in environmental performance.

9.2 Current policies and crucial sector issues

9.2.1 Sector issues

- *Security of gas supplies* is one of the most critical issues for Ukraine given its high gas imports dependency. Considering that Ukraine has currently the second lowest gas price among CIS countries, one can not exclude further and substantial gas price increases. By August 2007, Ukraine’s officials have not yet reached any agreement with Russia on gas prices for 2008;
- The *monopoly position in gas imports* is a matter of concern from the point of view of energy security. Spring cut-offs of a range of industrial enterprises from gas supplies by Rosukrenergo and its daughter company Ukgazenergo showed that these companies do not hesitate to abuse their monopoly position and can do considerable harm to the Ukrainian industry. The Ministry of Fuel and Energy is not addressing this issue;

- *Outdated production and transmission equipment is common* across all segments of Ukraine's energy market. Lack of investment in oil and gas transmission capacities has resulted in accidents and pipeline ruptures. Low investment in exploration and drilling does not allow increasing oil and gas production. On the electricity market, Ukraine lacks capacity to provide for peak supplies, which causes technical difficulties with stable electricity supply;
- *Domestic tariffs for electricity and gas are complex and cross-subsidised.* Electricity and gas tariffs for households, budget-financed institutions and communal enterprises are still below the cost coverage level despite the increase of electricity tariffs for these groups twice by 25 percent, and gas tariffs – by 25 percent and 78-85 percent in 2006. This causes a complicated system of cross-subsidies by industrial enterprises;
- *Indebtedness of the sector.* The level of accumulated arrears in the electricity and gas sectors are very high. Up to 2005, the gross debt of Energorynok to its creditors amounted to US\$ 3.6 billion, with almost US\$ 2 billion owed by consumers to distribution companies. The Ukrainian authorities have approved a roadmap for debt restructuring, but it has already fallen behind the implementation scheme. In the gas market, the level of payment to Gaz Ukrainy, a company which supplies gas to households and budget organisations, was 81.5 percent in 2006;
- *The nuclear sector* is of a special nature due to the fact that Ukraine receives a lot of support to maintain nuclear safety and gets its nuclear fuel from Russia;
- *The state of play in the coal sector.* Coal production is not competitive and polluting, however it is likely to be increasingly used by thermal power plants for which gas has become very expensive – at least in the short run. The long run use of coals is not certain;
- *The oil market faces major impediments.* The major bottleneck for further oil market development are high oil export duties from Russia, low import duties on refined products and the lack of competitiveness of Ukrainian refined products due to low quality. Besides, most of the Ukrainian oil products do not meet European emission standards (EURO 1-5), which include requirements to fuel quality.

9.2.2 Current EU-Ukraine Policy issues

Within the context of the EU-Ukraine Action Plan of the ENP, EU-Ukraine relations have substantially intensified in the energy sphere. Previous co-operation was based on initiatives such as the Partnership and Cooperation Agreement (PCA 1998) and the Interstate Oil and Gas Transport to Europe (INOGATE) programme (1999/2000). Within the ENP framework, the most significant energy initiative is the Memorandum on Energy Cooperation. Deeper cooperation between the EU and Ukraine – beyond the ENP – is still possible within the Energy Community Treaty.

The Memorandum of Understanding on Cooperation in the Field of Energy

On 1 December 2005, Ukraine and the EU signed the *Memorandum of Understanding on Cooperation in the Field of Energy*. The memorandum envisages quite an ambitious agenda of cooperation and integration, aiming at the ultimate integration of the Ukrainian energy sector with that of the EU. In particular, it envisages gradual adoption by Ukraine of the EU energy *acquis* and sets roadmaps in four areas:

- *Nuclear safety*: Ukraine should meet internationally recognised nuclear safety and environmental standards. Currently, nuclear safety remains, according to the EU, the troublesome area and the one in need of urgent action. While overall nuclear safety has improved thanks to a range of joint EU-Ukraine initiatives, the safety of the Chernobyl shelter remained of major concern, as the construction of a new shelter was delayed;
- *Electricity and gas markets*. The roadmap envisages integration of the Ukrainian electricity and gas markets into the European Union's internal energy market. To achieve this, the roadmap suggests that Ukraine should implement key elements of the EU *acquis* on energy, environment, competition and renewables. The level of integration also depends on Ukraine's accession to the Union for the Coordination of Transmission of Energy (UCTE) and implementation of related technical specifications like the line load limits, load frequency control, line losses, parallel path flows and location matters;
- The roadmap on *energy security and transit* envisages, inter alia, conduct of audit and monitoring of the Ukrainian hydrocarbon transit and supply network, identifying and promoting additional sources and supply routes for gas and oil, harmonisation of technical norms and standards in the Ukrainian hydrocarbons sector with EU industrial practices, and development of a framework for the management of Ukraine's strategic oil reserves in line with EU practices;
- The roadmap on the *coal sector* speaks of the necessity to continue the reform and restructuring of the Ukrainian coal industry, including enhancing mines safety and improving the environmental impact of coal combustion towards EU levels;
- The Memorandum of Understanding also anticipated the development of a roadmap on energy efficiency, renewables and measures to tackle climate change. Such a roadmap has now been prepared corresponding to EU and Ukrainian priorities.

The Energy Community Treaty

Ukraine's accession to the *Energy Community Treaty* is declared as a medium-term objective of the EU-Ukraine energy cooperation; it is also a tool for deeper integration of the Ukrainian energy sector with the European one. At the moment, Ukraine has an observer status to the Treaty.

The Energy Community Treaty (signed in 2005), is a framework for integration of the South Eastern European (SEE) countries into the European markets for gas and electricity. The main three routes that the Treaty prescribes for the achievement of this goal are the implementation by the Contracting Parties of the *acquis* communautaire on energy, environment, competition and renewables; setting up of a unified regulatory framework; and creation of a common market in energy (called Network Energy) without internal frontiers.

The list of the energy *acquis* necessary for adoption includes all fundamental legislation that governs EU internal energy market: Directive 2003/54/EC on common rules for the internal market in electricity, Directive 2003/55/EC concerning common rules for the internal market in natural gas and Regulation 1228/2003/EC on conditions for access to the network for cross-border exchanges in electricity. The list on the environmental *acquis* includes Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, Directive 1999/32/EC on reduction in the

sulphur content of certain liquid fuels, Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants, and Article 4(2) of Directive 79/409/EEC on the conservation of wild birds. In addition, the parties commit to endeavour to ratify the Kyoto Protocol and to implement Directive 96/61/EC on integrated pollution prevention and control.

In the area of competition, the contracting parties should be guided by the competition articles of the EU Treaty (Articles 81, 82, 86 and 87). Finally, in the area of renewables, the parties should implement Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market and Directive 2003/30/EC on the promotion of the use of bio fuels or other renewable fuels for transport. In addition, the Treaty requires that SEE countries adopt EU technical standards on energy and related spheres that are needed to ensure safety and efficiency of the common network. Adoption of the *acquis* requires also the creation of transparent market regulation through independent regulators. Currently, the National Electricity Regulatory Commission (NERC) of Ukraine has a rather weak capacity to deal with monopolies and anti-competitive behaviour and the lack of a proper legal base for its activity creates problems and unpredictability in its regulatory decisions.

Creation of the common energy market involves abolishment of all tariffs and quantitative restrictions on exports and imports of energy. The treaty also has provisions on mutual assistance in case of disruption of energy supplies and on development of common external energy policy towards third parties.

We assume that the agenda of the envisaged Free Trade Agreement in the area of energy is going to be built along the lines of a (deep) Memorandum of Understanding. By no means should the FTA scenarios be confused with the entirely separate process of negotiations for the Energy Community Treaty between the EU and Ukraine.³⁴ For the purposes of our analysis we distinguish between two scenarios: the less ambitious FTA³⁵, involving implementation of the Memorandum of Understanding on energy; the extended FTA, involving a further reaching Memorandum of Understanding. This is roughly in line with the modelling exercise.

The below Table 9.1 presents how these EU-Ukraine policy initiatives have been taken into account in the scenarios.

Table 9.1 Overview of scenarios for the energy sector

Scenario	Description of the envisaged changes	Model assumptions (from GAR)
Base scenario	Coal, oil and gas production: Tariffs: current export/import tariffs are equal to zero No major barriers to trade in energy products. NTBs: There are some barriers to oil exports, as Ukrainian-produced	Current tariffs = 0 Current border costs = 6% of the value of exports from Ukraine to

³⁴ This is furthermore important because the only link between the MoU and the Energy Community Treaty is the conditionality on nuclear safety.

³⁵ Here we follow the terminology of the report, with less ambitious being called "Limited FTA" and more ambitious option – "Extended FTA".

Scenario	Description of the envisaged changes	Model assumptions (from GAR)
	oil is of low quality and does not satisfy EU standards. There are no non-tariff impediments to gas exports. Coal industry is uncompetitive and heavily subsidized.	EU (as for all other sectors); Current standard costs = 0
	Electricity: Tariffs: current export/import tariffs are equal to zero NTBs: trade between the EU and Ukraine is limited due to lack of network synchronisation	- Exports of electricity from Ukraine to the EU27 face NTBs of the order of 10%.
WTO accession	Coal, oil and gas production: - Tariffs equal to zero (i.e., no change in tariffs) - WTO membership is unlikely to have any significant effects on the non-trade barriers faced by the Ukrainian exporters in the EU, because these barriers are quite low already. Moreover, WTO does not have any energy-specific provisions. - Indirect effects expected through changes in state trading enterprises, price formation and freedom of transit. - No significant effect on coal subsidies is expected, as WTO accession does not demand their removal.	Change in tariffs = 0 Border costs = 6% (i.e., no reduction in border costs) Standard costs = 0 (no change)
	Electricity: No major changes in barriers to electricity trade are envisaged. Tariffs are not going to rise, i.e. they should remain zero. Non-tariff barriers are not going to subside because WTO membership does not envisage harmonisation with EU standards or synchronisation	- Exports of electricity, from Ukraine to the EU27 face NTBs of the order of 8.5% (reduction by 15%)
Limited FTA	Coal, oil and gas production: - Tariffs equal to zero (i.e., no change in tariffs) - Ukraine adopts selected <i>acquis</i> on energy, environment, competition and renewables. - Energy transport infrastructure is substantially upgraded (safety improved, border metering stations installed). This translates into reduction in border costs. - Restructuring of coal sector and improvement of environmental protection	Tariffs = 0 (no change) Border costs = 5.4% (reduction by 10%) Standard costs = 0 (no change)
	Electricity: The same as for Coal, oil and gas production	Tariffs = 0 (no change) - Exports of electricity from Ukraine to the EU27 face NTBs of the order of 7.5% (reduction by 25%)
Extended FTA	Coal, oil and gas production: - Tariffs equal to zero (i.e., no change in tariffs) - In addition to implementing key elements of the EU <i>acquis</i> on energy, environment, competition and renewables, Ukraine adopts the EU common regulatory framework and starts negotiations to eventually become a part of the common market in energy (Network Energy).	Tariffs = 0 (no change) Border costs = 3% (reduction by 50%) Standard costs = 0 (no change)
	Electricity: The same as for Coal, oil and gas production and additionally	Tariffs = 0 (no change) - Exports of electricity

Scenario	Description of the envisaged changes	Model assumptions (from GAR)
	becoming a member of the UCTE	from Ukraine to the EU27 face NTBs of the order of 6.5% (reduction by 35%)

9.3 Impact assessments

A key conclusion from the **economic impact** assessment to date is that the Ukrainian energy sector is likely to restructure significantly – with an FTA even more than without. This implies that new investments will come in, with new economic opportunities as a possibility however also with job losses as a likely consequence – especially so in the case of privatisation of coal mines. A key determinant will be the energy mix – including the one for electricity production. Nuclear energy from Ukraine is expected to be rather competitive due to international support for nuclear safety and low prices for nuclear fuel from Russia, with subsequent impacts for the EU. An increase in gas prices will further stimulate the use of coal in the short run, which may have severe negative environmental and social consequences if not accompanied by measures. EU energy security is likely to increase because of stronger and deeper levels of cooperation.

The **social impacts** of the FTA are potentially very large, especially in the coal sector where worker safety and health issues for miners need drastic improvements. Through restructuring and modernisation, FDI and approximation it is expected that such improvements will be initiated. Employment effects are mixed with an increase in employment in electricity and decreases in employment in coal, oil and gas. Large redundancies in these sector have substantial social effects, the more since the coal industry is regionally concentrated, well organised in terms of concentrated worker's power and alternative jobs are not readily available. Also changes in the energy mix could have great social impacts because of employment reallocation, worker conditions and safety standards.

The **environmental effects** of the FTA in the energy sector take place in the bigger picture of rising gas prices. If gas prices continue to rise, a shift to coal – also hinted at in Ukrainian development plans by the Ukrainian authorities – will lead to significant polluting effects. Coal mining is very polluting and old-fashioned production methods used do not do the environment any good. Also aerial pollution is significant with greenhouse gas and SO₂ and NO_x emissions into the atmosphere that are likely to increase unless the FTA clearly breaks with past Ukrainian energy production methods and sets new standards. Moreover, since air does not stop at borders, these environmental effects also partially spill over to the (eastern) EU.

The framework conditions (e.g. the MoU) are of vital importance, and the links between this initiative and the FTA deserves full attention, especially given the importance of this sector for Ukraine and its neighbours as well as its social and political sensitivity.

The overall impact effects of the FTA are summarised in Table 9.2.

Table 9.2 Summarised sustainable impacts on the energy sector³⁶

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	▽	+	▽	Yes	L/M
Fixed capital formation	△	-	▲	No	M
Trade	▽	+	▽	Yes	L/M
Social					
Employment & decent work	?	+	▽	Yes	M
Poverty	▽	0	▽	Yes	M
Equality	▽	-	▽	Yes	M
Health	?	--	△	Yes/No	M
Education	?	0	?	Yes	M
Environment					
Atmosphere	▲	--	▲	No	M/H
Land	○	--	△	Yes/No	L/H
Bio-diversity	○	--	△	Yes	L/M
Environmental quality	△	--	△	Yes	L/H
Fresh and waste water	○	--	△	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the sector picture, but they are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

³⁶ A. Overall direction and magnitude of change from baseline (WTO accession) to scenario; B. Extent of existing economic, social and environmental stress in affected areas; C. Equity of change: how it affects different sectors of the population; D. Potential for irreversibility; E. Regulatory and institutional capacity to implement ameliorating measures.

10 Trade in Services

In this Chapter of the report, we provide an overall description of and policy issues related to the trade in services sector and its sub-sectors as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex XIII.

10.1 Overall description of trade in services

10.1.1 Recent developments in services trade

Over the last five years, services accounted for 17.5 percent of the overall recorded Ukrainian exports and 7.4 percent of total imports. Russia (41.8 percent) and the EU (30 percent) are the leading export markets for Ukrainian services. Ukraine benefits from its geographical position and provides transportation services by water, roads, railways, and pipelines, which collectively account for 71 percent of the overall services exports. Pipeline transportation is a major source of export revenues and in 2006 Ukraine earned about US\$ 2.5 billion in 2006 transporting Russian gas and oil to Europe. The export of professional and technical services has been steadily increasing over the last decade and currently they account for about 11.3 percent of total service export value; construction services provide for 3.4 percent. Despite its huge potential, the tourism sector in Ukraine plays a modest role; according to the estimates of the State Statistics Committee, tourism services exports amounted to a modest US\$ 0.25 billion in 2006.

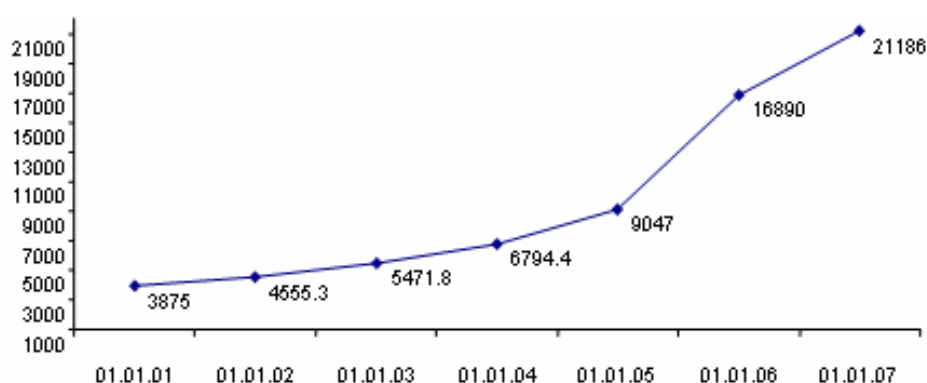
Services imports from the EU account for nearly half of Ukraine's total service imports, while the share of Russia is around 16 percent. Professional and technical services are the most important import group (18.3 percent of overall volumes). Financial services remain the second most important import group, reflecting increased spending by Ukrainian companies involved in international trade for access to high-quality foreign banking and insurance services.

10.1.2 Foreign investment (commercial presence) in services

Foreign, and in particular EU companies, are increasing their presence in most service sectors. For instance, the last-year wave of mergers and acquisitions made the EU the largest FDI holder in the Ukrainian banking sector. Besides, Ukrainian companies owned by EU residents are playing a more and more important role in retail and wholesale trade, insurance, transport and telecommunications. Following a drop in 1999, FDI inflows (for all sectors) to Ukraine resumed their upward trend in 2000. Cumulative FDI estimated as of January 1, 2007 equalled US\$ 21,186.0 million, which is 25.4 percent more than in the

beginning of 2006 (see Figure 10.1). The share of FDI from the European Union (EU) to Ukraine in total foreign direct investment has been increasing rapidly from 54 percent (US\$ 4,946.3 million) in 2004 to 75 percent (US\$ 15924.0 million) in 2006; the leading EU investors are Germany, Cyprus, Austria, United Kingdom, and The Netherlands. An FTA that further facilitates FDI generates further mutual economic benefits.

Figure 10.1 Cumulative FDI into Ukraine (million US\$)



As of January 1, 2007, the financial sector had the largest share of accumulated FDI and in 2006 the sector was also the leader in FDI inflows. The lion's share falls under banks' acquisitions by foreign financial groups. The financial sector is followed by wholesale trade and real estate sectors, for which the FDI stocks as of January 1, 2007 amounted to US\$ 2,264 million and US\$ 1,773.4 million respectively. The summary of the Ukrainian services imports and exports for 2006 are presented in Table 10.1 below.

Improving the investment climate through non-discriminatory, transparent and predictable business conditions, simplified administrative procedures and the fight against corruption are among the priorities of the EU. Ukrainian legislation enables foreign investors to freely invest into the Ukrainian economy, on the same basis as domestic investors; the Law "On the Regime of Foreign Investment" addresses specific issues of foreign investment. There are, however, certain restrictions for foreign investors in the fields of insurance, publishing, information agencies and broadcasting. These restrictions mostly concern juridical limitations on the rights of establishment or maximum percentage rate of the foreign investments in the statutory fund of the enterprise.

Table 10.1 Structure of Ukraine' services exports and imports (2006)

	Exports			Imports			balance
	USD. mln	Share of the total. %	Yoy growth. %	USD. Mln	Share of the total. %	Yoy growth. %	
Services, total	7505.5	100.0	122.3	3812.4	100.0	129.8	3693.1
Transport	5354.7	71.3	119.5	789.0	20.7	125.8	4565.7
including:							
Sea transport	806.1	10.7	103.4	96.6	2.5	108.4	709.5
Air transport	722.7	9.6	128.6	248.7	6.5	131.0	474.0
Railways	860.2	11.5	107.6	338.0	8.9	123.0	522.2

	Exports			Imports			balance
	USD. mln	Share of the total. %	Yoy growth. %	USD. Mln	Share of the total. %	Yoy growth. %	
Pipeline transport	2500.6	33.3	127.6	5.2	0.2	87.5	2495.4
Travel services	248.3	3.3	120.0	230.1	6.0	150.2	18.2
Business services of all kinds ³⁷	846.9	11.3	145.0	700.7	18.4	150.2	146.2
Communication services	258.1	3.4	127.3	90.9	2.4	99.8	167.2
Construction	164.3	2.2	103.9	181.7	4.8	114.7	-17.4
Insurance	70.5	0.9	283.5	103.6	2.7	171.8	-33.1
Financial services	80.1	1.1	224.7	521.1	13.7	203.8	-441.0
Computer services	86.8	1.2	251.3	111.6	2.9	88.6	-24.8
Royalty and licensing	13.4	0.2	137.4	227.7	6.0	108.6	-214.3
State services	3.2	0.1	160.7	563.0	14.8	95.0	-559.8
Maintenance	279.0	3.7	84.2	32.2	0.8	151.9	246.8
Trade in services with the EU	2218.5	29.5	128.5	1867.1	48.97	145.4	351.4

10.1.3 WTO commitments

Ukraine has made substantial concessions in the area of trade in services and is committed to fully liberalise cross border supply of services as well as the provision of services through consumption abroad. As part of WTO accession, the supply of services through mode 3 (commercial presence) will be completely liberalised in 139 out of 155 sectors. Among others Ukraine will open the banking market by allowing branches of foreign banks to operate in the country and insurance market by allowing non-resident re-insurers dealing with certain kinds of risks. The limitations on commercial presence will be preserved in education, wholesale distribution of books, newspapers and magazines and news agency services. Ukraine also commits to allow access of key personnel in a commercial presence (managers executives and specialists), contractual services suppliers and independent professionals within the fourth mode of service supply (presence of natural persons). In the transport service sector, maritime transport, road transport and auxiliary transport services are liberalised, but not passenger and freight rail and internal water transport services.

10.1.4 EU-Ukraine FTA

Trade in services is a key issue for the EU-Ukrainian partnership. On top of the substantial coverage of Ukraine's GATS commitments, further opening the financial and other key service sectors such as telecommunications and transport services to foreign investment and best international practice could constitute key element of reforms to be implemented within the context of an FTA. Under the liberalisation scenarios, the overall modelling results show that an extended FTA will have major positive economic and

³⁷ Include: legal services, accounting, advertisement, research and development, etc

social impacts overall and specific impacts through changes in the production structure of Ukraine. For overall trade in services, the substantial reduction in terms of output and employment, following WTO accession, of the financial services and insurance sector may be aggravated by the extended FTA (on top of the WTO), and a similar reduction is expected for the transport sector in the short run (this sector looks potentially strong in the long run) while, as a consequence of the FTA (on top of the WTO) distribution services will grow and so do communication services. The incumbent firms will suffer from the increases in competition from EU firms, while in the long run, overall employment and production rebounds. This suggests that there will be social sustainability issues regarding employment and employment opportunities as well as equality and poverty, environmental sustainability issues related to environmental quality and CO₂ emissions and economic issues related to changes in income across sectors and changes in Ukraine's trade patterns.

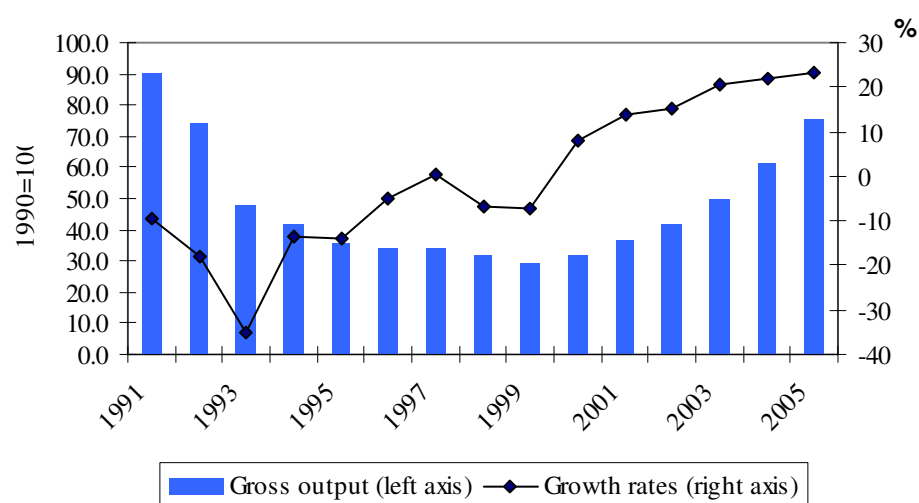
10.2 Current policies and crucial sector issues

10.2.1 Distribution services (wholesale, retail, other)

Sector overview and recent developments

The sector of distribution services is among the largest service sectors of the Ukrainian economy. Its contribution to the economy gradually increased during the transition period and currently accounts for almost 13.0 percent of GDP (2006) and around 20.0 percent (2005) of the total number of employed persons. However, during the transformation period the volume of provided distribution services decreased significantly, in line with a general macroeconomic deterioration and it was only in the middle of the nineteen-nineties some recovery took place after strengthening of household incomes. By 2005, the volume of retail turnover had only reached 75 percent of the 1990 level (see Figure 10.2).

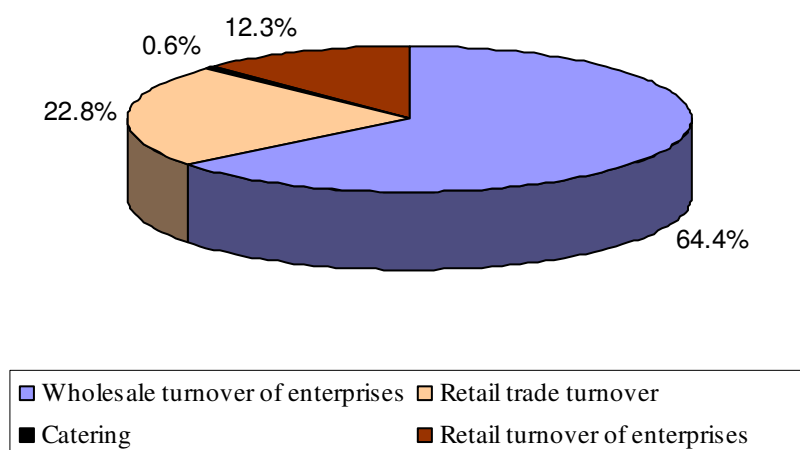
Figure 10.2 Retail trade turnover, 1991 – 2005



Source: State Statistics Committee of Ukraine

In 2005 the wholesale segment accounted for 64.4 percent of total turnover of enterprises (see Figure 10.3) with fuels and ferrous metals being of particular importance. The retail sector is composed of foods (41.6 percent) and non-food products (58.4 percent) with significant contributions of petroleum and pharmaceutical products.

Figure 10.3 Structure of distribution services sector, 2005



Source: State Statistics Committee of Ukraine

According to official statistics, in 2006 distribution services was the third most profitable sector in Ukraine. Moreover, according to the Global Retail Development Index 2006³⁸, Ukraine ranked fourth - after India, Russia, and Vietnam - in terms of potential development perspectives. It is not surprising therefore that the sector has attracted significant levels of investment and in 2007 the sector claimed second place – after financial services – in terms of the volume of FDI inflows. As of January 1st, 2007, the FDI stock of the sector amounted to US\$ 2.3 billion which is 10.7 percent of total foreign direct investments in Ukraine.

Development has, however, been geographically uneven, especially for retail trade for which the highest growth rates are being observed in the industrial regions with higher levels of household incomes and greater concentrations of consumers. This can be qualified as the sector's response to social and demographic changes, such as increasing urbanization and the growth of income-rich and time-poor consumers in the industrial/urban regions.

Institutional and market structures

Prior to 1992, wholesale trade within Ukraine was organised on the basis of a centralised government system for the supply of products, whereby consumers and suppliers were connected through mandatory links. With the development of the market economy in Ukraine, the system of the former distributive bodies (ministries and committees) was eliminated and new structures began to develop within a framework of 'free' wholesale markets. The decentralisation of the wholesale sector brought about an increase in trading agents acting as a connecting link between producers and consumers.

³⁸ Emerging market priorities for global retailers. http://www.atkearney.com/shared_res/pdf/GRDI_2006.pdf

The retail trade market has followed a similar path and has experienced significant structural transformations since the launch of market reforms in the country. The privatisation process of the state-run trading enterprises was launched, and many new trading enterprises – especially smaller ones – entered the sector. The first part of retail market emergence was dominated by the development of small stores. Since financial resources were scarce, supermarkets appeared at a later part, when capital accumulated in other sectors (such as the oil and gas industry) could be used by national industrial groups for the development of their own retail chains.

Food retail accounts for almost half of the entire retail market, and is highly fragmented. The top five food retailers have a market share of 21.3 percent (based on 2005 sales). This is much lower than, for example, 36 percent in Italy, 76 percent in the UK, and 88 percent in France³⁹. The low concentration can be explained by the relative youth of Ukrainian retail in its modern form, low market saturation and limited competitive pressure from foreign retail operators. Among the top five operators only one is international – Metro Cash & Carry - and the market shares of these companies are rather moderate: Fozzy Group (6.1 percent), Furshet (4.5 percent), Metro (4.3 percent), ATB (3.4 percent), and Velyka Kyshenya (3.0 percent). Currently, with many Ukrainians beginning to prefer shopping in malls and supermarkets, we observe the tendencies of further capturing of market share by super- and hypermarkets from open markets and traditional (smaller) retail formats.

Given its low saturation, fragmented structure and high sales growth rate, spurred by increasing personal income, the Ukrainian retail market remains one of the most attractive Eastern European markets for foreign investors. International retailers began to enter Ukraine in the early 2000s. Metro, Spar, and Billa were some of the pioneers and many international retail giants are currently actively looking for retail space in Ukraine, among them Auchan and IKEA. Meanwhile, Italy's Kings Cross, which builds and operates large shopping centres, is constructing a massive shopping centre in Lviv that is due to open in 2008 and the company is already planning to expand into other Ukrainian cities. Domestic retailers are preparing for the upcoming increased competition. Furshet, for example, hopes to beat out foreign entrants by nearly doubling its number of supermarkets. Nonetheless, the overall competition in the retail sector is still moderate, especially in small and mid-sized cities. However, EU-Ukraine FTA will most likely serve as an additional prerequisite for heating up the competition.

Current policy and sector issues

Significant liberalisation of the distribution services sector is envisaged within the WTO accession process, with no restrictions on modes 1 and 2 of trade in services – cross border supply and consumption abroad. For mode 3 (commercial presence) some minor limitations will remain in place, namely restrictions on foreign investment for companies distributing printed editions (limited to 30 percent maximum in the statutory fund of the enterprise) and for new agencies. Mode 4 (presence of natural persons) will be substantially liberalised beyond current practice of WTO Members– Ukraine will allow access of key personnel in a commercial presence 'up to 5 years' of temporary visa and contractual services suppliers and independent professionals for up to 3 years.

³⁹ Source: Industry Research 'Ukrainian Consumer Goods and Retail', Renaissance Capital, July 2006

Efforts are currently underway to remove restrictions imposed on the import of specific products. A good example of progress towards WTO commitments is the harmonisation of the licensing fee for wholesale trade of alcoholic beverages. Prior to 2006, the licensing fee for importers of alcoholic products was twice as high as that for domestic wholesalers. This was viewed as a violation of national treatment and therefore, by the end of 2006, an amendment equalising these fees was adopted into the law on alcoholic beverages. Further going agreements on regulatory approximation are expected in various sub sectors of distribution services inside the FTA.

The distribution services sector in Ukraine is largely domestically orientated, with Ukrainian wholesalers and retailers undertake little significant activities abroad. However, this is likely to change as business processes and supply chains are transformed by overall globalisation processes and new technologies, which are accelerated by WTO accession and will undoubtedly be further sped up by an EU-Ukraine FTA. One area in which this will be felt is likely to be internet-delivered e-commerce. Currently trade in distribution services takes place mainly through commercial presence but, as a result of advances in e-commerce, cross-border supplies are likely to experience fundamental increases.

Some steps have already been taken to promote e-commerce in Ukraine. The process started in 2000 with a Presidential decree supporting the creation of a national global information Internet network and ensuring broad access to that network in Ukraine. The decree specifically addressed e-commerce, stating that the Ukrainian authorities will “ensure state support for the development of Internet infrastructure and the creation of conditions for the development of e-commerce”. An important step towards further progress was taken at the March 2007 meeting of the Inter-Parliamentary Assembly of the Commonwealth of Independent States (CIS IPA), including Ukrainian representatives where a draft model law on e-commerce was considered. The purpose of the model law is to create a legal basis for e-commerce, determination of principles of state regulation and support of the activities in e-commerce field, as well as establishment of the legal regime for e-contracts and communications for the sale of goods, execution of works, and provision of services.

10.2.2 Transport services (road, rail, air, water and sea, other)

Sector overview and recent developments

The transportation sector accounts for 8.6 percent of total GDP - or 28.7 percent of all services - and is responsible for 14.4 percent of the total budget income. Despite recent strong developments – freight traffic grew by 20.2 percent and passenger transport by 5.4 percent between 2000 and 2005 - passenger and freight transportation are only 54.7 percent and 45.6 percent of their pre-1990 levels respectively. Increased transport activity in Ukraine is inevitable and necessary for economic growth, under the scenario of vigorous trade expansion, but initially a significant traffic recovery seems unlikely under the FTA terms.

Due to Ukraine's geographic position, it is an important transit country between Russia and the European Union and a major part of transportation services is provided to foreign companies.

Institutional and market structures

Before 1990, Ukraine had a relatively efficient transportation system with widespread use of public transport. Today, there is an increasing push for greater individual mobility that creates a constantly increasing demand for road based transportation. Further impetus to improve the quality of services and modernise the transport infrastructure comes from Ukraine's huge transit transport potential. So far, however, progress towards modernisation has been quite limited and many long-term infrastructure projects failed to start as the authorities could not develop a coherent development strategy. Attempts to attract private capital for infrastructure projects were not successful because the country lacked an effective regulatory regime and long-term investment risks remain too high.

The transport sector suffers from a state monopoly: the entire national road network, railway system, ports and airports as well as many organisations involved in transport-related maintenance and construction are still state-owned units reporting to the Ministry of Transport. This strong state presence coupled with limited investment capacity, limits technical innovations in transport and leads to a pace of reform in the sector that is too slow to take full advantage of the opportunities offered.

With the significant presence of the public sector in the provision of transport infrastructure and services, existing user charges, tariffs and fares are often insufficient or inappropriate to cover the cost of maintenance and renewal of the core assets required. Consequently, the asset base of the transport sector is eroding, and rehabilitation, maintenance and renewal backlogs are mounting. The situation is aggravated by the oversupply of outdated transport infrastructure. During the middle and the end of the twentieth century Ukraine's infrastructure was designed to handle much higher volumes of traffic than are currently using the infrastructure. As a result Ukraine faces a very high level of maintenance compared to its traffic levels and subsequently technical innovation and technological upgrading needs are not being sufficiently addressed.

Current policy and sector issues⁴⁰

Although significant liberalisation will be part of Ukraine's WTO accession, some segments of the transport sector are not covered by the WTO and Ukraine's commitments under GATS (passenger and freight transport by rail and internal waterways). Among the main areas where WTO-related issues arise are:

- **Rail transport:** one of the main issues of conformity with WTO obligations in transport is the existence of differential tariffs applied domestically and those for the transportation of exports/imports on railway transport. The issue was raised many years ago and since then some of the tariffs have been already equalised (e.g. for the transportation of coal and ferrous metal scrap);

⁴⁰ For an overview of policy issues and developments in the transport sector in Ukraine see: "Back to the drawing board: Restructuring Ukraine's network industries" Ildar Gazizullin, March 2006, International Centre for Policy Studies (ICPS, Ukraine), available at: <http://indeunis.wiwi.ac.at/index.php?action=content&id=publications> and "Free Trade between Ukraine and the EU: an Impact Assessment", (2007), International Centre for Policy Studies, Kiev, available at: <http://www.icps.kiev.ua/eng/project.html?pid=110>

- **Port fees:** Ukraine charged differentiated rates (regular or reduced) for port fees according to the flag of the vessel. However in 2003, Ukraine committed itself to equalise port fees for foreign vessels. In December 2006 a limit for reductions was introduced. Then, from July 17, 2007, four types of discounts for loading and unloading of cargo (bulk coal, coke, and ore) were abolished (bulk coal discounts were abolished in two ports)⁴¹; and
- **Transit procedures:** Ukraine has committed itself to consider transit of goods through the territory of Ukraine as a subject of simplified and express control procedures and, in the event of relevant agreements, custom controls may be performed jointly by neighbouring states. In April 2007 a law was adopted enabling the possibility of railway cargo transit under cover of CIM/SMGS consignment notes. The aim was to facilitate procedures for transit cargo and decrease the time needed for these procedures. This is also why Ukraine takes part in the work on the convention on international customs transit procedures for the carriage of goods by rail under cover of SMGS consignment notes.

The lack of development of transport infrastructure and services is seen as a serious impediment to the smooth operation of Ukraine's economy and an important 'non-tariff barrier' to the effective movement of goods and people and the integration of Ukraine with the EU and other international markets. Improving transport connections and services is seen as a major precondition for effective market integration, as well as a necessary component for Ukraine to exploit opportunities as a hub for transit transport. Accordingly, the transport sector – especially air and road transport – is seen as an area where multiple initiatives are required that go beyond free trade towards convergence on EU standards and enhanced investments in infrastructure.

The EU-Ukraine Action Plan defined some priorities in reforming of Ukrainian transport sector, among them are:

- Elaborate and start implementing a national transport strategy, including transport infrastructure development and identify and commit sources of financing for this programme;
- Strengthen co-operation on regional and international issues through continuing consultations on the possible EU use of Ukraine's long haul air transport capacities;
- Take further steps for the integration of environmental considerations into transport sector;
- Implement selected measures and reforms in all transport sectors, among them improve efficiency of freight transport services, obtain full member status in the European Joint Aviation Authorities and encourage the restructuring of the state-owned port sector.

The Partnership and Cooperation Agreement (PCA) has fully liberalised international maritime transport between Ukraine and the EU, including non-discriminatory access to

⁴¹ These types of cargo form more than a half of loading-unloading works in two ports - Nikolaev and Kerch - where discounts ranged from 18 to 35 percent. It has been estimated that under the condition of unchanged amount of cargo shipped through these ports, the abolishing of these discounts will generate additional revenues of USD 800-900 million to each of the ports.

port services and the FTA is not expected to have any impacts in this field. It also provides for the following actions in relation to the transport sector:

- Abolishment of all obstacles which could have restrictive or discriminatory effects on the free supply of services in international maritime transport;
- Modernisation and development of railways, waterways, road, port, airport and air navigation including modernisation of management and, in particular, the modernisation of major routes of common interest and the trans-European links for the above modes;
- Promotion of joint research and development programmes;
- Preparation of the legislative and institutional framework for policy development and implementation including privatisation of the transport sector.

Specific initiatives and outstanding issues – that may eventually be incorporated in an FTA - in the transport field include:

- **Integration into Pan-European transport networks:** The EU-Ukraine action plan covers Ukraine's participation in the joint development of the Pan-European Corridors and Areas⁴² as well as in the TRACECA programme⁴³. In addition the High Level Group on the Trans-Europe Transport (TEN-T) recommendations on the extensions of the trans-European transport network to neighbouring countries and regions need to be included, given the potential inclusion of related aspects in the Enhanced Agreement⁴⁴;
- **Aviation sector reform:** EU and Ukraine have made progress in cooperation in the aviation sector with the signature in 2005 of the agreement on certain aspects of air services. This "horizontal agreement" removes nationality restrictions in the bilateral air services agreements (ASA) between EU Member States and Ukraine allowing any EU airline to operate flights between any EU Member State where it is established and Ukraine. It therefore demonstrates that there is an external dimension to the internal market for air transport. Also by aligning ASA with the EC Treaty the "horizontal agreement" brings legal certainty for all EU air carriers operating to Ukraine. As a next step, in December 2006 the EU Council of Transport Ministers adopted a mandate authorising the European Commission to start negotiations on a comprehensive Common Aviation Area Agreement with Ukraine. The CAA agreement should not only open the respective markets but also integrate Ukraine into the European aviation structures, including the possibility to sign working arrangements with the European Aviation Safety Agency (EASA) and mutual recognition of certificates and licences. Under the CAA agreement Ukraine will harmonise its legislation with European standards and implement a large part of the European aviation *acquis*. The agreement will thus be a further important step in the creation of a wider Common Aviation Area between the EU and its neighbours by 2010, but will require significant efforts from both the Ukrainian government and economic operators. Both aviation markets are closely connected and air traffic

⁴² Ukraine is party to 3 pan-European Transport Corridors: Corridor III: Brussels-Aachen-Köln-Dresden-Wrocław-Katowice-Kraków-Lviv-Kiev; Corridor V: Venice-Trieste/Koper-Ljubljana-Maribor-Budapest-Uzhhorod-Lviv-Kiev; and Corridor IX: Branch B – Kaliningrad to Kiev.

⁴³ TRACECA (TRANsport Corridor Europe Caucasus Asia) is one of four Euro-Asian Land Transport Corridors, also called a 'New Silk Road'. It should result in creation of a railway line that will follow the ancient Silk Road from the Chinese port of Lianyungang on the Yellow Sea to the Georgian ports of Poti and Batumi on the Black Sea and then on into Western Europe.

⁴⁴ High Level Group I Report (Van Miert), 2003.

between them is growing. In 2006, 2.2 million passengers travelled by air between the EU and Ukraine - over 350% more than in 2000;

- **Development of combined rail and road transport:** this segment is underdeveloped in Ukraine compared to the EU;
- **Elimination of border barriers (customs control reforms):** Ukrainian border controls are seen to be too long and complicated;
- **Restrictions on transportation of excisable goods:** currently some restrictions are set on the movement of excisable goods in transit, which need to be transported along specific routes and through designated points of entry at the customs border;
- **Competition policy and privatisation:** Even if in principle there are Ukraine does not impose constraints on market access (or will remove constraints as part of ongoing reforms), the transport sector is characterised by state ownership and natural monopolies in transport infrastructure. Attracting investment into the transport sector will require, therefore, opening the transport infrastructure and services to (foreign) capital; for example, privatisation of port terminals and operations, granting concessions for airport, container terminal, or highway operations etc;
- **Uncompetitive situation of transport service suppliers:** enterprises in the Ukrainian transport sector are seen to be highly uncompetitive. This is attributed partly to the absence and lack of correspondence to international supply standards; for example, vehicles do not meet international environmental standards.⁴⁵ This lack of competitiveness raises obvious concerns from domestic service providers over the impact of rapid liberalisation on their market position;
- **Training programmes:** provision of training programmes in economics, legislation and technical matters for transport operators and senior civil servants with an aim of promoting operating standards;
- **Harmonisation of transport statistics:** Ukraine's transport statistics are thought to be subject to considerable distortion by transport operators;
- **Information exchange:** covering information on transportation policies, interconnection and interoperability of multimodal transport networks and other issues of mutual interest.

10.2.3 Communication services (postal and courier, telecommunication, data services, other)

Sector overview and recent developments

Telecommunications services

In 2005 the telecoms sector employed 250 000 people and accounted for 3 percent of Ukrainian GDP. The telecoms sector is among the fastest growing sectors of the Ukrainian economy; since 2000 revenues from communication services have increased with an average annual growth of 32 percent. Within this figure, revenues from mobile communication increased by a factor of 12 between 2000 and 2005 and accounted for 52 percent of all telecom services in 2005. The rapid development of the telecoms sector and spread of the internet have been associated with high levels of investment; in 2005 the sector attracted UAH 7.2 billion of investment. Nonetheless, a geographical imbalance

⁴⁵ For instance, the stocks of soviet-era trucks with large loading capacities do not correspond to modern logistics requirements.

remains with modern services concentrated in major cities, leaving rural population with traditional analogue land line services only.

Postal services

Postal services in Ukraine are operated by the state monopolist – Ukrposhta. The market has been growing steadily from 2006 and value for postal services was estimated at around USD 260 million in 2006 (USD 265mln in 2005). The revenue was received through delivery of 1409 million newspapers and magazines, 390 million letters, 5.7 million telegrams and 13.2 million parcels. Among the main issues concerned with the development of the sector are the following:

- Customers complains on a low level of service (delays in deliveries, incorrect deliveries, etc.);
- Increasing competition from courier service companies, especially in the sector of subscription press deliveries;
- Under-use of modern technologies in mail sorting procedures.

Courier services

The market of courier services in Ukraine is around USD 10 million annually; for which the breakdown is: 15 percent of which is delivery of subscription material, 55 percent - advertisement, and 30 percent is a “pure” delivery of different orders. Around 10 companies can be described as major players at the market. They are represented by both foreign (DHL, TNT, City Express) and local companies. Foreign representatives of the foreign companies are involved not only in international delivery service, but also play an important role in domestic service.

Institutional and market structures

The telecommunications sector has recently been opened for foreign investment and competition and substantial liberalisation is integral to Ukraine’s WTO access. Ukraine’s mobile communications sector is quite competitive and has attracted substantial foreign investment but fixed telephony is still controlled by the state monopolist Ukrtelecom.

*Current policy and sector issues*⁴⁶

Current Ukrainian legislation in the telecoms sector corresponds closely to the EU Telecommunications Legislation Package of 1998. Within the context of Ukraine’s WTO accession process, the country has undertaken commitments to open up all forms of telecommunications and to carry out certain international demands regarding sector management. Among the main areas where WTO-related issues arise are:

- According to the WTO commitment Ukraine has abolished the 49 percent limitation on foreign ownership in the telecommunication sector;
- In compliance with the European telecommunication area conditions, starting from the beginning of 2007 Ukraine is changing city codes and the major part of short numbers as well as changing 8-digits numbers to 10-digits;
- Privatisation of the former state monopolist telecom supplier Ukrtelecom is in progress;

⁴⁶ For an overview of policy issues in the telecoms sector in Ukraine see: “Back to the drawing board: Restructuring Ukraine’s network industries” Ildar Gazizullin, March 2006, International Centre for Policy Studies (ICPS, Ukraine), available at: <http://indeunis.wiwi.ac.at/index.php?action=content&id=publications>.

- Since the beginning of 2006 restrictions on the share of foreign capital in the charter funds of television and radio broadcasting companies have been removed; and
- Ukraine has committed to preserve the independence of the regulatory authorities from service suppliers in telecommunication services.

The EU-Ukraine Action Plan defined some priorities in reforming the Ukrainian communications sector, among them are:

- Establishing a National Committee for Communication Regulation; it's competence includes matters related to licensing and registration of service suppliers as well as tariff regulation;
- Adopting regulations concerning licensing, interconnection, numbering and generally accessible telecommunications services in accordance with the Law of Ukraine on Telecommunications. This stated priority of the Action Plan remains unfulfilled despite being seen as essential and vital element of the plan.

The Partnership and Cooperation Agreement (PCA) provides for the following actions in relation to the Communications Sector:

- The establishment of policies and guidelines for the development of the telecommunications sector and postal services;
- Development of principles of a tariff policy and marketing in telecommunications and postal services;
- Encourage the development of projects for telecommunications and postal services and attracting investment;
- Enhancing efficiency and quality of the provision of telecommunications and postal services, amongst others through liberalisation of activities of sub-sectors;
- Advanced application of telecommunications, notably in the area of electronic funds transfer;
- Management of telecommunications networks and their "optimisation";
- An appropriate regulatory basis for the provision of telecommunications and postal services and for the use of a radio frequency spectrum; and
- Training in the field of telecommunications and postal services for operations in market conditions.

As with other infrastructure sectors, the challenges for the telecoms sector are to upgrade infrastructure, enhance competitiveness and provide an appropriate regulatory framework. In terms of an FTA with the EU, therefore, key issues relate to the practical implementation of WTO commitments/liberalisation and of the corresponding EU *acquis* (e.g. introducing EU norms and standards, strengthening national regulatory capacity). Especially the strengthening of the institutional capacity of the Antimonopoly Committee and the Communications Regulation Commission would be important to ensure monitoring of fair competition in the markets. Attracting the much needed investment in the telecommunications sector is linked to the privatisation of Ukrtelecom, the state monopoly supplier of fixed telephony. In turn, the effective privatisation of Ukrtelecom is linked to strengthening the capacity of the national regulator.

From the perspective of an FTA, key issues for the telecoms sector relate to the speed of transition towards a liberalised market and the adoption of international norms and standards. Although WTO/GATS provides the flexibility for gradual transformation, an

FTA may push for more rapid adoption of measures to comply with current EU standards. There is, however, concern that the current institutional capacity is largely insufficient to manage the development and implementation of wide-scale reforms. More generally, the sector needs to address the challenges of globalisation, new technologies, institutional and sector restructuring, and the developing gap in basic information services and in advanced services i.e. satellite technology.

Specific initiatives and outstanding issues – that may eventually be incorporated in an FTA - in the communications field include:

- Infrastructure modernisation: modernisation of Ukraine's electronic infrastructure and its integration into European and world networks, with a focus on improvements at a regional level and international cooperation;
- International standardisation: cooperation within European structures especially those involved in standardisation, information exchanges and possible technical assistance on regulation, standardisation, conformity testing and certification of information and communications technologies and the use of frequencies;
- Joint research: promotion and implementation of joint research, technological development on projects in the field of new technologies related to the information society;
- Postal sector cooperation: postal cooperation in the exchange of information and dialogue on postal matters in relation to, inter alia regional and international activities, regulatory aspects and policy decisions.

10.2.4 Financial services (banking, insurance, other)

Sector overview and recent developments

Providing investment resources for companies, the financial service sector remains one of the main drivers of accelerated structural reforms in Ukraine. Although weak in international comparison, the sector is raising its efficiency as intermediate between borrowers and lenders. A spur of investment activities in the industry would not be possible without proper resources provided by banks. Households increase consumption of domestic appliance and cars taking advantage of credit services variety. Increasing number of M&A deals, bond issuances and IPOs drive demand for investment banking services both domestic and imported. Insurers expand their presence as more market participants opt to minimise losses through purchases of high-quality insurance services.

The sector provided for 3.5 percent of total output in 2004 (6.2 percent of GDP) in 2004 and 2.6 percent (4.5 percent of GDP) in 2006. About 2.7 percent of employees work for the sector's companies. The sector remains mostly home market oriented: export to value added ratio was 1.2 percent in 2004 rising a bit to 2.4 percent in 2005. Financial services provide for a modest 3 percent of total services export. Weak engagement of the financial service providers in foreign trade results from low price and quality competitiveness of the sector as well as differing prudential standards complicating provision of services abroad. On the other hand, the financial services role in imports is more important (18 percent of total services imports). The import to value added ratio for the sector was 28 percent in 2004 and 11 percent in 2005. Variation in financial services imports shares signals that the market is still far from being stable and balanced.

Institutional and market structures

Banking

Ukraine has a two-tier banking system consisting of the Central Bank – National Bank of Ukraine (NBU) – and commercial banks. The NBU is responsible for conducting monetary policy and banking system supervision. The banking sector is governed by the Law of Ukraine “On Banks and Banking Activities” adopted in 2001.

According to the NBU, there are 173 commercial banks in the Ukrainian market as of June 2007. Overall assets of the banking system totalled UAH 340 billion (USD 68 billion) by the end of 2006 which is equivalent to 63.2 percent of GDP. Out of 173 banks, 134 are joint stock companies (91 – open JSC and 43 – closed JSC). The remaining 35 banks are limited liability companies. Since September 2006 newly founded commercial banks in Ukraine may operate either as open JSC or cooperative banks (with participation of at least 50 persons) only.

Key players among commercial banks are Privatbank (accounting for 11 percent of banking systems assets), Raiffeisen Bank Aval (8.95), Ukrsibbank (7.2 percent), Ukrsotsbank (5.8 percent), Ukreximbank (5.5 percent), and Oshchadbank (4.1 percent). Two Ukrainian commercial banks (Ukreximbank and Oshchadbank) are fully state-owned and the Ukrainian authorities do not intend to privatise them in the near future. These banks, however, have no special privileges to serve the government; they participate in government tenders on general terms. The government keeps its assets out of commercial banks on the treasury accounts at the NBU.

Since 2006 the Ukrainian banking sector is the leader among economy sectors in terms of the FDI inflow. The sale of Ukrainian Aval bank to Raiffersen International for USD 1.08 in October 2005 paved the way for foreign investment into the domestic banking system. Since then up to June 2007, non-residents acquired major or minor stakes in about 20 Ukrainian banks.⁴⁷ As of June 2007, 42 Ukrainian commercial banks enjoy participation of foreign capital of which 18 are 100 percent owned by non-residents⁴⁸. This is already a rather strong presence of foreign banks.

European banks acquired over 95 percent of stakes sold to non-residents in the last two years, while Russian residents bought the remaining stakes. Controlling stakes in Ukrainian banks are usually sold with a high premium.⁴⁹

Insurance market

The basic regulation in the insurance market is the Law of Ukraine “On Insurance Activities” adopted in 1996 (revised in 2001). The Law states that companies possessing a licence for life insurance activities cannot be engaged in other types of insurance. This regulation explicitly distinguishes Ukrainian companies into life and non-life insurers, which is consistent with EU regulations. The law lists 35 types of obligatory insurances.

⁴⁷ The latest M&A deal in the banking system is the announced acquisition of Ukrsotsbank (the forth largest bank) by Unicredit Group for over USD 2.2 billion. The deal is to be completed by the end of 2007.

⁴⁸ As of 1 January 2007, non-residents accounted for 30.2% of statutory capital in Ukrainian banks.

⁴⁹ The P/B (price to book) ratio for the latest M&A deals exceeds 3.5.

Ukraine's State Commission on Financial Services Market Regulation is responsible for supervision of insurance companies.

As of the beginning of 2007, 411 insurance companies worked in the Ukrainian market of which 55 are life insurance companies and 356 are non-life insurance companies.

According to the Commission estimates, the share of the three biggest life insurance companies in overall volume of premiums paid equalled 58.5 percent, while this share was much smaller for non-life insurers (12.2 percent).

All in all, Ukrainian insurance companies collected UAH 13.83 billion (US\$ 2.76 billion) of risk premium, of which 36.6 percent are re-insurance premiums. The structure of a premium is dominated by property insurance (55.4 percent of overall premiums collected), while financial risks premiums – the second largest group – account for 24.9 percent. Life insurance premiums provide for a modest 3.3 percent of total volume.

About 4 percent (US\$ 110 million) of total volume of premiums collected have been paid by Ukrainian companies to non-resident insurance companies to reinsure risks. Re-insurance activities have been of concern to the Commission as many companies were engaged into risk reinsuring to minimize tax obligations.

Similarly, bank insurance companies are becoming increasingly attractive to foreign direct investors. Non-residents owned 13 percent of paid capital in statutory funds of Ukrainian insurance companies. 66 companies had shares of foreign capital in their statutory funds.

Other financial services (security market)

The security market showed substantial progress in the last year. Improved infrastructure of the securities market, a favourable investment environment, and inflow of short and long term capital into the country contributed to strong developments of the market. The main securities market normative document is the "Law on Securities and Stock Market". The State Commission on Securities and Stock Market is the regulator responsible for prudential supervision of the market.

The FSTS – the major securities market index – grew rapidly and the volume of FSTS trade in securities went up from US\$ 1.31 billion in 2004 to US\$ 5.47 billion in 2006. As of January 1, 2007, about 1576 securities market participants were licences by the Commission, of which 805 are securities traders. About 1600 types of securities issued by 917 issuers were listed at trading platforms in Ukraine as of April 2007. This is a signal about the huge potential of securities market growth as there are more than 10.000 open JSCs in Ukraine, whose equity shares may be potentially traded in the market⁵⁰. The overall market capitalisation of companies listed at FSTS totalled UAH 376.3 billion (US\$ 74.5 billion) – about 57 percent of the projected 2007 GDP.

⁵⁰ As of January 1, 2007, there were 32 822 JSCs in Ukraine, of which only 10 943 are open JSCs.

Current policy and sector issues⁵¹

The financial sector is now being opened for foreign investment, which is seen as the crucial step at this stage towards improved resource allocation because it disconnects the financial system from both government and domestic monopolistic power.⁵² Ukraine abolished many limitations regarding participation of foreign capital in the statutory funds of the sector's companies and the financial sector on the whole. However, establishment of branches of foreign banks, insurance companies and stock market participants is still prohibited.⁵³ Ukraine also maintains prohibitions for insurance intermediaries (brokers and agents) to distribute services of non-resident insurance companies. At the same time local insurers can reinsure risks abroad.

In spite of the many overall potential benefits of financial service sector liberalisation for the Ukrainian economy, there is concern that any premature attempt at total compliance with EU regulatory norms would be too costly. This may lead to employment losses and growth reductions by incumbent financial service companies going bankrupt and further automation of jobs by EU firms, which leads to further losses. In this respect, major issues for the financial services sector concern corporate governance, oversight and supervision standards, transparency and procedures for combating money-laundering. Ukraine made extensive commitments within the WTO accession process. First, Ukraine committed to fully liberalise provision of most financial services through modes 1 and 2 (the main exclusions concern direct insurance other than transport insurance and trading of derivatives and of exchange rate and interest rate instruments; as regards intermediation of direct insurance, Ukraine will only allow the cross-border supply of this services five years after accession).

Commitments within mode 3 have been under hot debates during the bilateral negotiations. Ukraine agreed to allow opening of foreign insurance branches only five years after accession to the WTO. With respect to bank branches and representative offices, there is no transitional period but the following conditions apply⁵⁴:

- Government of the bank's home country cooperates with FATF;
- Banking supervision rules in the bank's home country comply with the Basel committee regulations;
- NBU concluded agreement on cooperation in the sphere of bank supervision rules with the Central bank of the home country;
- Minimum endowment capital of the bank's branch (money that banks provide to their branches in Ukraine) must be not less than EUR 10 million;

⁵¹ For an overview of policy issues and developments in the financial services sector in Ukraine see: *"Free Trade between Ukraine and the EU: an Impact Assessment"*, (2007), International Centre for Policy Studies, Kiev, available at: <http://www.icps.kiev.ua/eng/project.html?pid=110>

⁵² As of 1 January 2007, non-residents accounted for 28% of statutory capital in Ukrainian banks.

⁵³ Technically, the Law on Banks and Banking allows opening of branches and representative offices of foreign banks from the day of Ukraine's accession to the WTO. The Law on Insurance states explicitly that only residents are allowed to be engaged in insurance activities in Ukraine. The Law on Securities and Stock Market and the Decision of the Commission on Securities and Stock Market #60 state that stock market participants must be legal entities registered in accordance with the Law on Business Partnerships.

⁵⁴ According to the government officials, the current version of the Laws fully account for requirements of Ukraine's bilateral protocols. It is assumed that the Law norms are in full compliance with the schedule of commitments.

- The NBU is authorised to establish financial performance indicators obligatory to the foreign banks' branches. As of June 2007, the NBU did not develop the by-law regulations relevant to the branches functioning in Ukraine;
- The qualification criteria for branches of foreign banks should not be an obstacle for European companies. The only requirement, which seems to be burdensome for foreign banks' branches is the USD 10 million endowment requirement.

The specific initiatives and outstanding issues – that may eventually be incorporated in an FTA - in the financial services field include monitoring of the implementation of the WTO agreement as well as: Banking regulations and supervision; Branch operations opening up; and Credit and debit card provisions.

10.3 Impact assessments

The FTA will have significant impacts on trade in services and – like our approach to agriculture sub-sectors showed – these effects can vary widely within this overall sector.

The **economic impacts** of the FTA on distribution services are positive beyond the WTO accession of Ukraine. The same applies to trade in communication services albeit of a smaller magnitude. For transport services and financial services, the FTA has a negative impact on the domestic sector in Ukraine but a positive impact on EU transport and financial services in the longer run. EU firms will be able to increase their shares of road transport. Trade in all sectors with the EU intensifies with improvements in the trade balance in distribution and communication services and deteriorations in the trade balance in transport and financial services.

The **social effects** entail gains in employment in the distribution and communication services but job losses in the transport and financial services in the short run. Productivity of the service sectors is expected to increase and profit margins are expected to decrease. The FTA is expected to have a positive effect on decent work and work standards through regulatory harmonisation of Ukrainian practices with EU practices and through increased levels of FDI that come with international production and work standards. Also increasing market shares for (EU) firms that adhere to the EU *acquis* and ILO labour standards will lead to an overall increase in labour conditions, health & safety standards.

The **environmental effects** are primarily linked to transport services and not so much to distribution services, financial services or communication services. The negative economic impacts on domestic transport services are positive for the environment as emissions of greenhouse gases will likely reduce and leakages of pollutants into the environment will decrease. The increase in market share of the EU transport operators is expected to cause less polluting effects than the decrease in Ukrainian operators. Overall, investments in transport and distribution services lead to cleaner means of transport because of upgrading. However, the technology argument is expected not to be strong enough to cancel out increases in pollution and greenhouse gas emissions stemming from economic growth of the sector. The polluting effects for the EU mostly stem from cross-border transport services carried out by (relatively polluting) Ukrainian transport providers.

For distribution services the envisaged reductions in border costs and NTBs have significant positive effects as does the increase in international trade that is the result of the FTA. This will not only boost the distribution service sector but also the wholesale and retail markets. Higher levels of competition lead to increased productivity but also to bankruptcy of firms in the immediate FTA aftermath. Employment is expected to increase overall with positive effects on poverty reduction and GDP growth. Consumers benefit from reduced prices and increases in product varieties reaching them through wholesale and retail markets. Development of distribution services has a regional effect in that it will benefit the industrial areas in Ukraine more than the agricultural countryside. Upgrading of the engines used for trucks, planes and ships will have positive environmental impacts and so does an improved car park. There will be an expected negative impact for the environment through more emissions and pollution.

Domestic transport services are expected to experience a drop in output and employment in the short run that bounces back in the longer run in line with growth in trade flows and increased market shares for EU transport operators. The highly regulated and monopolised structure of the industry is challenged and opened to competition by the FTA, which leads to major restructuring efforts. An outdated transport system, inefficient service provision, and outdated transport vehicles warrant high levels of investments to increase competitiveness and productivity. Pipeline transportation is not expected to be heavily affected by the FTA. Imports of transport services from the EU may increase while exports may do so to a lesser extent insofar they are not carried out by EU transport operators, due to environmental standards (e.g. Euro-4 and Euro-5 engine requirements in the EU compared to Euro-2 in Ukraine). Given the high rates of depreciation of vehicle fleets, this effect is expected to be temporary. Ukrainian income levels will come under pressure in this sector in the short run and so will work practices as the Ukrainian transport sector will try to remain competitive. In the long run the FTA is expected to have a positive effect on Ukrainian passenger safety (roads, air) because it encourages infrastructure improvements. The initial negative economic impact on transport services will have a positive environmental effect due to less CO₂ and other polluting emissions and a re-bouncing of the sector in the longer run will not lead to proportional increases due to improved levels of environmental technology. In the longer run, the competitive position of the Ukrainian transport sector may to a limited extent depend on approximation of standards. If regulatory approximation of Ukraine's environmental standards is successful, the transport sector may become 'cleaner' which means it can grow without becoming more polluting and gain easier access to the EU market. Improvements in infrastructure also reduce leakages of harmful substances into the environment.

Market openings under the terms of the FTA might have less positive effects on the EU transport sector if granted to Ukrainian operators without ensuring they meet EU quality requirements (requirements concerning access to occupation - financial standing, professional competence and good reputation, driver qualifications as well as technical and environmental vehicle standards etc). Such requirements are imposed on EU transport operators and not necessarily applicable to Ukrainian operators entering the EU market. A difference in the level of requirements imposed might give rise to a competitive advantage for Ukrainian operators and result in negative effects in the European transport sector.

The estimated FTA impacts on communication services are not expected to be large. Economically, competition will increase and prices are expected to drop, which will likely lead to increases in production and employment in the long run. The initial effect of the FTA is expected to be a reduction in production and employment due to lack of investments. The FTA can lead to more harmonisation of communication standards between Ukraine and the EU. The positive impact of the FTA on communication services may be felt much more in cities than on the rural countryside. Environmental effects of changes in communication services are negligible and can be omitted.

The fourth sub-sector, financial services, is initially hit by the FTA as the domestic sector will decline. We believe that the CGE model restrictions play a role in the envisaged outcomes (e.g. the assumption of full employment and inability to incorporate dynamic FDI effects); a belief strengthened by expert opinions who expect the financial sector to benefit from the FTA. Nonetheless, production and employment are expected to drop in the short run, though capital investments in the long run do partially offset this short run effect. Prices for financial services are expected to drop – which is expected to have a strong positive impact on the rest of the Ukrainian economy. Increased competition through modes 1, 2 and 3 can lead to inclusion of international standards in the Ukrainian financial service sector. Environmental effects of changes in the financial services are expected to be negligible with only minimal effects through disposal of electronic waste (e.g. mobile phones) and a slightly increased use of paper, energy and CO2 emissions. The summary conclusions are presented below in Table 10.2.

Table 10.2 Summary of trade in services sustainable impacts

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	△	-/0	↑	Yes	L/M
Fixed capital formation	△	+/0	↑	No	L/M
Trade	△	-	↑	Yes	L/M
Social					
Employment & decent work	△	+	↑	Yes	M
Poverty	△	+	↑	Yes	M
Equality	△	-	↑	Yes	M
Health	○	0	↑	Yes/No	L/M
Education	○	0	↑	Yes	M
Environment					
Atmosphere	▽	--	▲	No	M/H
Land	○	-	▲	Yes/No	L/H
Bio-diversity	?	-	▲	Yes	L/M
Environmental quality	○	-	▲	Yes	L/H
Fresh and waste water	○	-	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the trade in services picture, but the impacts are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

11 Competition Policy

In this Chapter of the report, we provide an overall description of and policy issues related to Competition Policy as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex XIV.

11.1 Overview and recent developments in competition policy

The rationale for inclusion of competition policy provisions into FTAs is to prevent anti-competitive practices (such as competition-distorting subsidies, collusion of domestic companies against foreign competitors, abuse of dominant position on foreign markets, exclusive discriminatory rights for domestic enterprises, etc.) that may substantially undermine market-opening benefits of FTAs and hurt competition and trade between the FTA partners. At the same time, implementation of the effective competition policy is indispensable for establishing a fully functioning market economy in Ukraine, as well as enhancing efficiency and competitiveness of Ukrainian enterprises and industries. The latter is especially important given that Ukraine has been in transition from a centrally planned to a market economy.

Notwithstanding that Ukrainian competition legislation (except state aid) is well developed and close to international standards, estimates of the Anti-Monopoly Committee of Ukraine (AMC), suggest that the Ukrainian economy is still substantially monopolised and concentrated. In particular, enterprises operating in markets with competitive structures account for only around half of total sales in Ukraine (55.4 percent in 2004)⁵⁵, while about one third of total sales (31 percent in 2004) are conducted by enterprises operating in monopolised markets (pure monopolies and one firm dominance markets), and a substantial part of total sales (13.6 percent in 2004) – by enterprises from markets with oligopolistic competition⁵⁶ (see Table 11.1). The degree of concentration of Ukrainian industry further confirms this general picture.

Table 11.1 Structural preconditions for competition development in certain sectors of the Ukrainian economy (2004)

Sectors	Share of enterprises in total sales, in %		
	Markets with competitive structure	Oligopolistic markets	Monopolies and one firm dominance markets
Trade and distribution	96.0	2.0	2.0

⁵⁵ These are the latest available statistics.

⁵⁶ These numbers were calculated based on the data on around 300 national and 2000 local markets. See Kostusev O, et al. 2006,

Sectors	Share of enterprises in total sales, in %		
	Markets with competitive structure	Oligopolistic markets	Monopolies and one firm dominance markets
services			
Metallurgy and mining	81.6	9.4	9.0
Agriculture and food industry	53.0	26.9	20.1
Machine building	50.2	6.9	42.9
Energy and coal industries	23.3	21.5	55.2
Transport and telecommunications	15.4	2.1	82.5
Economy	55.4	13.6	31.0

Source: Anti-Monopoly Committee of Ukraine

By sectoral breakdown, the market structures are most restrictive for competition in the sectors where infrastructure network services dominate (such as transport and telecommunications, energy), other heavy industrial industries with high capital intensity (chemical industry, mining⁵⁷, etc.), while the most favourable are for trade and distribution services, publishing, construction, textile, and agricultural sectors.

Monopolistic markets are usually comprised by natural monopolies markets and monopolies authorised by the Ukrainian authorities (e.g., paid services for implementing certain state functions such as safety control, certification, fire safety expertise, etc.). The AMC reports about 10 nation-wide (such as pipeline transportation of oil and natural gas; transmission and distribution of electricity by main-line and interstate networks; railway services; air traffic support management; specialised services by transport terminals (ammonia), specific telecommunications services including relay of radio and television signals) and 2300 regional and local markets of natural monopolies in Ukraine. Regional markets of natural monopolies usually include markets of transmission and distribution of electricity and natural gas by local networks, local telecommunication services, and centralised supply of heating and water. Regulation of natural monopolies in Ukraine is rather weak and incompliant with the best international standards thus resulting in widespread cross-subsidising of sub sectors, unjustified and high tariff rates for their services, low quality of provided services and high and inefficient expenses being translated into the monopolies' tariff rates. Reforming and strengthening their regulation is on the agenda of the countries' economic reforms.

The markets of rendering services related to implementation of state and municipalities functions are also highly monopolised in Ukraine (according to the AMC, about 900 of these markets are monopolised)⁵⁸. Due to the inadequate regulation of rates for the services provided by these monopolised markets, they are usually overrated and serve an instrument of government authorities financing. Maintaining such a big number of monopolies in this sphere financed by private firms and other taxpayers is often not justified.

⁵⁷ Excluding coal mining.

⁵⁸ Kostusev O, et al. 2006, p. 9.

Oligopolistic markets in Ukraine embody amongst others the following markets: production of cement, beer, tobacco, and coke, mobile telephone services, petrol distribution services, etc. Many of these markets are highly dynamic and competitive, still their participants are often prone to concerted actions. Markets with one firm domination prevail in certain machine building sub sectors, chemical industry, water transport, and mining industry, etc. The widespread presence of these monopolised sectors is economically grounded in some cases (by high capital intensity ratio, economy of scale effects, etc.), while in others it is explained by inadequate implementation of market oriented and structural reforms, privatisation and bankruptcy policies. The situation concerning structural restrictions to competition is even worse on the regional level with a number of highly concentrated markets of certain agricultural products and food processing services in regard to these products (such milk and meat products, markets of bread and bakeries and flour).

Among the violations of competition legislation revealed by the Anti-Monopoly Committee, the abuse of dominant position is the most frequently observed (7300 cases over 2000-2005). About 85 percent of all abuses of a dominant position related to setting of higher monopoly prices, restriction of production or supply to markets, partners' enforcement of unfavourable contracts conditions⁵⁹. A second place went to illegal anticompetitive actions of state bodies that reduced or restricted competition in particular markets (3500 cases over 2000-2005 or about 25 percent of all detected violations). Concerted actions are rated third in the AMC's violations list (it detected about 500 cases of such anti-competitive actions over 2000-2005 period) with unfair competition concluding the list (470 cases).

Apart from market structure, being only a precondition for competition development, and competition policy per se, the level of competition on certain markets is also well determined by a number of institutional and regulatory factors, which legally restrict or depress competition, such as sector specific regulatory policy, trade policy, state aid policy, and land market regulations. For example, although the coal industry and some sectors of agriculture (e.g., sugar industry) are not concentrated sectors, the level of competition is not high due to extensive and in many cases competition distorting subsidies, weak bankruptcy procedures, and protective trade policies. Therefore, competition development of particular sectors should be implemented by addressing all these related policies.

11.2 Competition Policy and crucial issues

11.2.1 EU-Ukraine relations

Section of the EU-Ukraine Action Plan relating to economic reforms stipulate Ukraine's commitments to establish a *fully functioning market economy*, which implies market based price formation, effective control of state aid and a legal environment that ensures fair competition between economic agents⁶⁰.

⁵⁹ Kostusev O, et al. 2006, p. 10.

⁶⁰ EU-Ukraine Action Plan, Article 2.2.

In the area of competition policy, Ukraine's commitments address *state aid* and *anti-trust policies*. In regard to state aid, Ukraine is urged to develop and adopt state aid national legislation, which will be compatible with that of the EU and which will include an appropriate state aid definition, a principle of prohibition of state aid, which distort trade between Ukraine and the EU. Equally important, Ukraine is to establish a transparent and adequate control regime to ensure a credible enforcing of this legislation⁶¹.

The EU-Ukraine Action Plan points out the necessity of assessment of the compatibility of Ukraine's current antitrust legislation with the EU relevant legislation⁶² in practice, and in particular with the principles of *non-discrimination*, *transparency* and *procedural fairness*⁶³. Also, it is envisaged to increase independence and functional capacity of the Anti-monopoly Committee, and reinforce staff training.

11.2.2 FTA comparison on competition policy

There is not a uniform approach to formulation of competition policy provisions in the EU FTAs. The content and wording of competition provisions in the EU FTAs depend on how well the competition policy *legislation and competition authorities* are introduced and implemented in the EU trading partners when the agreements were signed (Szepesi 2004)⁶⁴. For example, some EU agreements explicitly refer to the EU competition legislation (on converted practices, abuse of dominant position and state aid) as criteria for the assessment of anti-competitive practices (agreements with Tunisia, Jordan, Morocco, the Palestinian Authority, and Croatia), thus obliging these countries to reform their competition policy in line with the EU standards (within established transition periods). At the same time, agreements with Chile and Mexico stipulate the mutual recognition of competition legislation and relevant authorities and envisage their close cooperation with regard to early notifications, consultations, exchange of information and technical assistance⁶⁵. There is also the third type of competition policy chapters of the EU FTAs concluded with the group of MED countries (Lebanon and Algeria), which contain a rather general and brief description of parties' cooperation to prevent anticompetitive practices (Szepesi 2004).

Competition provisions of the EU FTAs generally include the major competition issues: concerted practices, abuse of dominant position, discrimination of state monopolies and special or exclusive treatment for domestic enterprises, and state aid. According to all agreements, *concerted practices and the abuse of a dominant position* affecting trade

⁶¹ The same commitments are repeated in the Partnership and Cooperation Agreement between the EU and Ukraine, 1998.

⁶² Namely, Article 31, 81-85 and 86 of the EC Treaty, etc.

⁶³ EU-Ukraine Action Plan, Article 2.3.5.

⁶⁴ Szepesi, S. 2004. Comparing EU free trade agreements: Competition Policy and State aid (ECDPM InBrief 6E). Maastricht: ECDPM.

⁶⁵ For example, the competition chapter of the EU-Chile FTA include the following components: objectives; definitions of competition laws and authorities, as well as enforcement activity; notifications; coordination of enforcement activities; consultations when the important interests of one Party are adversely affected in the territory of the other Party; exchange of information and confidentiality; technical assistance; public enterprises and enterprises entrusted with special or exclusive rights, including designated monopolies; dispute settlement. The EU-Mexico FTA also specifies information to be included in notifications of administrative or judicial proceedings and any measures affecting other party's interests, as well as information be exchanged between parties.

between countries are incompatible with the FTA; as such, parties of FTA are empowered to impose remedial measures against such anti-competitive activities upon consultations with their partners.

State aid provisions usually concerns transparency requirements, including reporting on the total amount and distribution of state aid (on an annual basis), and providing information about individual cases upon request of the other party (Chile), or reference and obligation to approximate national state aid legislation and institutional framework to the EU standards (e.g., agreement with Croatia, certain MED countries)⁶⁶. In particular, the EU-Croatia agreement prescribes Croatia to establish an operationally independent authority, which is assigned with the powers to authorise state aid schemes and individual aid grants and to order the recovery of state aid that has been unlawfully granted in conformity with the EU rules⁶⁷. The FTAs usually explicitly stipulate discriminative and competition-distorting state aid of both parties to be incompatible with them, still allowing for state aid when it concerns certain agricultural products (Israel, Croatia) or state aid for specific public policy objectives, such as provision of services of general economic interest, environment protection, rescue and restructuring of firms in difficulty, training, employment, regional support, etc. (EU-South Africa agreement). In addition, the EU partners (Croatia, Tunisia, Morocco, Jordan) were granted transition periods during which they were regarded as those EU areas described in Article 87(3)(a) of the Rome Treaty thus authorising most of state aid in these countries⁶⁸.

Provisions on *discrimination of state monopolies of a commercial character and special or exclusive treatment for domestic enterprises* appear in some EU agreements. In particular, they provide for an elimination of any discrimination of state monopolies of commercial character and termination of any measures that disturb trade by granting special or exclusive treatment to public enterprises after a transition period (e.g. Lebanon, Algeria, Croatia), or recognition of the national laws regulating public or private monopolies (Chile) (Szepesi 2004).

Given Ukraine's current stance in regard to legal and institutional framework of competition policy, we envisage the EU-Ukraine FTA to contain:

- An obligation to approximate Ukraine's *state aid* legislation and institutional framework to that of the EU (as being the most unsettled issue among the competition policy issues in terms of its alignment with the EU standards);
- Provisions on close cooperation of the European and Ukrainian competition authorities in the area of anti-trust policy;
- A requirement to eliminate a discrimination of state monopolies of a commercial character, as well as of state enterprises with special or exclusive rights (within a transition period);
- The EU-FTA will contain a requirement to strengthen functioning and independence of Ukraine's competition authorities and provide for its close cooperation with the EU competition authorities; and
- Guarantees to ensure transparency of competition policy will also be included.

⁶⁶ At the same time, there are the EU FTAs that do not include state aid provisions (e.g. EU-Mexico agreement).

⁶⁷ See the EU-Croatia stabilisation and Association Agreement, Article 70.

⁶⁸ See, for example, EU-Croatia Stabilisation and Association Agreement, Article 70.

Taking into account experience of other EU partners, Ukraine may negotiate transition periods (of up to 4-5 years) before ensuring a full approximation of its legislation in the state aid area, as well as exceptions from general rules on state aid for certain goods, namely agricultural goods). Transition periods may be also envisaged for commitments concerning state monopolies and special and exclusive treatment of domestic enterprises.

11.2.3 Crucial issues of competition policy

In short, the major issues that the FTA between the EU and Ukraine will address are:

- *Anti-trust policy:*
 - Approximation of the remaining issues of national anti-trust and sector specific legislation and practices to that of the EU; and
 - Strengthening functioning and independence of the competition authority.
- *State aid policy:*
 - Adoption of state aid legislation compatible with that of the EU;
 - Introduction of state aid control and monitoring system and adequate institutions; and
 - State Aid Practices.
- *State monopolies and state-trading enterprises:*
 - Inventory of state-trading enterprises with special and exclusive rights; and
 - Regulation of state monopolies.

Approximation of the remaining issues of national anti-trust legislation to that of the EU (Anti-trust policy)

The basic legal framework for regulating competitive business practices in Ukraine consists of the following legislative acts: Constitution of Ukraine⁶⁹; the Law of Ukraine "On Protection of Economic Competition" No. 2210-III of 11 January 2001; the Law "On the Protection from Unfair Competition" No. 236/96 of 7 June 1996; the Law of Ukraine "On Natural Monopolies" No. 1682 of 20 April 2000, the Law of Ukraine "On Antimonopoly Committee of Ukraine" No. 3659-XII of 26 November 1993, the Commercial Code of Ukraine, in force since January 2004, and many others.

The Law "On Protection of Economic Competition" prohibits anti-competitive concerted actions⁷⁰ and abuse of a dominant position and provides for a system of merger control. The level of approximation of current Ukrainian antitrust legislation (in particular, concerning "the abuse of dominant position, anticompetitive concerted actions, merger control and restrictive agreements) to the EU law is estimated by the State Department for Legislation Approximation within the Ministry of Justice of Ukraine as rather high⁷¹.

⁶⁹ In particular, Article 42 – about the rights for the business undertakings.

⁷⁰ Under certain conditions the authorization for concerted actions may be granted.

⁷¹ State Department for Legislation Approximation, 2007. Overview of the Status of Approximation of Ukrainian Legislation to *acquis communautaire* — K.: «Professional», ISBN 966-370-034-3 — 544 p. (<http://sdla.gov.ua/atachs/ADAPT.pdf>).

Nevertheless, there are issues that still need to be harmonised to achieve full compatibility of national legislation with the *Acquis Communautaire*⁷². The most important one concerns, for example, the list of possible conditions for granting authorisation to anti-competitive concerted actions (contains EU incompatible conditions – export or import optimisation); problematic application of materiality threshold triggering merger clearance, given the lack of a clear definition of the notion of a “market where concentration occurs” and the consideration of any local activity of any of the parties to a merger as sufficient grounds to claim jurisdiction over it). Moreover, the Commercial Code of Ukraine contains inadequate competition provisions (Chapters 3 and 28) that contradict the provisions of the Law “On Protection of Economic Competition”, as well as the EU legislation, and add disorder to the entire framework for regulation of competition (judges apply both of these laws) (Svechkar (2006)).

In addition to the framework legislation on economic competition, which is rather close to international standards, there are also a number of sector specific laws that introduce direct or indirect restrictions to the competition in these sectors, such as granting of exclusive rights to certain enterprises, various privileges to domestic producers, price regulations, FDI restrictions, etc. These restrictions have been usually applied in the “sensitive” economic sectors such as agriculture and food industry (sugar industry, spirits and alcoholic drinks, etc.), automobile and shipbuilding industry, energy sector, finance services, etc. In line with the Ukraine’s WTO accession commitments, many of these legal restrictions have been already or will be abolished. Sector regulatory policies will be part of sector specific Ukraine-EU FTA negotiations.

Strengthening functioning and independence of the competition authority

A national competition authority, the Anti-monopoly Committee of Ukraine (AMC), has been established in 1993 to carry out Ukraine's competition policy. It is responsible for developing, enforcing and monitoring the implementation of competition legislation; preventing, detecting and publishing violations of the competition law, controlling the economic concentration, and promoting fair competition. The AMC deals with merger controls, concerted practices, abuses of a dominant position, unfair competition, as well as anticompetitive actions of state and local authorities (including state aid, government procurement and administered pricing).

The important issue of effective functioning of the competition authority is its independence and adequate powers to implement control and supervision over the implementation of competition policy (see also our analysis of government procurement). To be independent and effective the Antimonopoly Committee should be free from political influence of different business structures. Also it should be empowered to participate in government decisions affecting competition and to prevent anticompetitive activities of powerful financial-industrial groups. According to the legal provisions, the AMC is assigned with such powers (e.g., it reviews the primary and secondary legislation

⁷² In line with the implementation of the State Program for Adaptation of Ukrainian Legislation to the legislation of the European Union⁷², the Antimonopoly Committee has prepared a draft law on the Procedural Competition Code developed in compliance with the EU procedural competition rules. This draft law intends to improve the procedure of granting authorisation for concerted actions, to strengthen the interactions between the Antimonopoly Committee and economic entities, and to create the efficient procedures of investigating violations of the competition legislation. So far, this draft law has not been submitted to the Parliament and is still being amended by the Antimonopoly Committee.

and certain decisions of executive authorities). Still, the lack of full-fledged independence of the Antimonopoly Committee from the Ukrainian authorities appears evident when the government takes decisions contradicting the competition law with no reaction from the AMC, or when the AMC serves as an instrument to support government policies or decisions such as the introduction of price or sale margin regulations on particular markets. The independence of the AMC will be addressed during the FTA negotiations. Another important concern is the unclear situation with the appointment of the AMC commissioners and first deputies of the AMC chairman. According to the current Law “On Anti-monopoly Committee of Ukraine” they are appointed by the President of Ukraine based on the proposals of the Cabinet of Ministers. Still recently there were attempts of the Cabinet of Ministries to enhance its power in appointing the AMC commissioners and first deputies and thus further increase the Committee dependence on the central government.

Adoption of state aid legislation compatible with that of the EU (State Aid policy)

Currently, the Ukrainian legal system is missing the framework law providing for the systematic control and monitoring of state aid in Ukraine and bringing all state aid schemes under the jurisdiction of an independent executive authority. State aid is provided in accordance with sector specific or other regulations (on special economic zones, regional aid etc.), which are fragmented and frequently adopted without strong economic justifications for government interventions in the market operations.

State aid provisions are embodied in the Commercial Code of Ukraine, Law “On Protection of Economic Competition”, Law “On Facilitation of Regional Development”, etc. Still, none of them stipulates legal provisions defining state aid and its forms, neither a distinction between acceptable and unacceptable state aid with regard to its objective and its effect on competition and trade, all envisaged by EU legislation. The strict and precise procedures of state aid notification, provision, control and monitoring are also lacking in Ukrainian legislation.

In 2003-04, the AMC prepared and submitted to the Parliament a draft law “On state aid”, which in general incorporated the EU approach to state aid governance and provides for the creation of a state aid control and monitoring system in Ukraine, but still had important drawbacks (e.g. exemption of regional aid from the scope of the law, not well-defined procedures, etc.). Eventually, the Parliament did not adopt this draft law. After that, the AMC made another trial to address this issue in the Parliament in 2007, but it was unsuccessful again. The future EU-Ukraine FTA negotiations may serve as an additional strong incentive for the deputies to revert to this issue and adopt the needed legislative framework on state aid in Ukraine.

Introduction of state aid control and monitoring system and adequate institutions (State Aid policy)

The Antimonopoly Committee of Ukraine, as an authorised body to protect economic competition including state aid related issues, is not provided with the adequate powers usually envisaged for the independent supervisory authority to exercise the control on state aid. According to EU legislation they include: authorisation of state aid provision; monitoring and control over implementation of state aid legislation; assessment of the efficiency and effectiveness of state aid programmes (ex-ante and ex-post evaluations);

demanding any relevant information from granting institution as well as from recipients; demanding recovery of state aid if its provision violates legislation.

There are no periodical official reports making public all state aid legislation changes as well as detailed reports on state aid and its volumes. There is no official accurate information about the measure of the country's total state aid to enterprises (direct and indirect subsidies on the national and local level).

State Aid Practices (State Aid policy)

Ukraine's state aid system proves to be inefficient and not transparent. Moreover it provides additional possibilities for corruptive actions and prevents structural restructuring of the economy. For a long time, the Ukrainian authorities have been tolerating indirect sector specific subsidies in the form of tax privileges (main sector recipients included shipbuilding, aircraft construction, automobile industry, coal mining, space industry, publishing of books and agriculture), as well as ad-hoc aid. These subsidies are known as rather non-transparent and detrimental to economic competition and trade. On the contrary, state aid for horizontal objectives accounted for a small share of the total amount of state aid in Ukraine (according to the estimates of the Ukrainian Centre for International Integration, horizontal state aid accounted for only about 3 percent of the total state aid to industrial sectors in Ukraine in 2002, whereas regional aid reached 26 percent and sectoral aid – 71 percent)⁷³. The situation started improving in 2005, when the Ukrainian authorities abolished a majority of tax privileges provided to industrial sectors in Ukraine, as well as eliminated special investment regimes for business entities registered in special economic zones, territories of priority development and technological parks⁷⁴. As such, the positive tendency towards lessening the total amount of state industrial subsidies and increasing the share of state aid for horizontal objectives can currently be observed.

In the framework of the EU FTA negotiations, Ukraine may also be asked to commit itself to the strategic objective of total state aid reduction and its re-orientation on horizontal objectives.

State monopolies and state-trading enterprises

The widespread presence of monopolised markets and state enterprises with exclusive and special rights (or state-trading enterprises under the definition of Article XVII of GATT) may affect trade between partners and depress competition between them.

Law "On Natural Monopolies" No. 1682-III of 20 April 2000 defines a natural monopoly as a market characterized by the absence of competition due to proprietary technology and/or economies of scale in the production of a good or service with no close substitutes. This Law specifies the exhaustive list of natural monopoly activities in Ukraine, namely: pipeline transportation of oil and oil products, natural gas and petroleum gases, and other substances; the distribution of natural gas and petroleum gases; the transmission and

⁷³ Vavryshchuk V, Kalizschuk Y., Taran S., Hoyna Y., and N.Yasko, 2004. State Aid in Ukraine: Reforming in Accordance with the WTO and EU's Requirements. Nora-Druk, ISBN 966-8321-55-3; 86 pages.

⁷⁴ This was done in the framework of Ukraine's WTO accession process and as well in order to increase efficiency of budget spending.

distribution of electric energy; railway services; air traffic control; centralized supply of heating, water and the drainage system; and the rendering of specialized services by transport terminals, ports and airports. Natural monopolies operate within the regulatory framework stipulated in specific laws (Laws "On Transport", "On Railway Transport", Law "On Telecommunications", "On electricity", etc.) governing activities of particular natural monopolies, including pricing policy in the sector. As of present, there have been established only two regulatory bodies in energy and communications sectors (the National Electricity Regulatory Commission, the National Commission for Regulation of Communications), still the legal basis for independent functioning of these national commissions is insufficient (ICPS, 2006). In regard to communal services and utilities, the government developed the State Program for Reforming and Development of Utilities' Sector in 2004-2010 (approved in June 2004) providing for an more efficient state regulation of water supply and heating natural monopoly services and dissolution of monopolies in the utilities sector; still the low progress has been achieved in realization of these aims so far.

As was mentioned, weak and inefficient state regulation of the natural monopolies markets (as well as various monopolised markets of rendering services related to implementation of state and municipalities) result in wide-spread abuses of monopoly power by natural monopolies, unreasonably high rates of their services, discriminatory access for consumers of their services, and inadequate quality and safety of their services. These abusive practices significantly hurt competition on markets, which consume and depend on the monopoly services (due to high entry barriers, restrictive access, low profit incentives).

Exclusive access to services of natural monopolies, such as transport infrastructure and networks is an example of a special right to state-owned or specially authorised enterprises. For example, there are no legal restrictions on foreign trade of natural gas, but this market is *de facto* monopolised by an authorised operator that has exclusive rights to access national and interstate gas networks: the CJSC "UkrGasEnergo" - a 50-50 joint venture between "Naftogas" Ukraine and "RosUkrEnergo".

Other exclusive rights granted to Ukrainian state owned enterprises in the area of foreign trade include: export of ethyl spirits (six companies of the State Concern "Ukrspyr" granted with an appropriate licence), import or export of certain narcotics (State and municipal enterprises, including State joint-stock company "Liky Ukrainy"), import or export contracts for military equipment ("Ukrspetzexport"). The inventory of other possible state monopolies or enterprises with special and exclusive rights engaged in international trade should be implemented.

The future EU-Ukraine FTA negotiations may include a requirement to eliminate a discrimination of state monopolies of a commercial character, as well as of state enterprises with special or exclusive rights (within a transition period); a non-discrimination and transparency requirement in tariff-setting policies of natural monopolies and other authorised monopoly markets as well as possibility for dissolution of certain monopolised markets, in which the competitive structure may guarantee higher national welfare gains.

11.3 Impact assessments

Competition policy is very important in Ukraine because of the country's transition path from a centrally planned to a market economy. The more competition between firms without interfering with government actions and policies – with the exception of situations of market failure – the better the market economy functions.

This means that state aid should in principle not be allowed – unless (again) to combat market failures – if it leads to a discriminatory playing field. Antitrust policies need to be enforced in order to increase competition. **The economic impacts** of competition increases are likely to be lower prices, more output, and increases in international trade. For the EU and EU firms, this may open up a Ukrainian market for doing business in areas that were previously 'closed' (e.g. construction). Successful competition policy can yield also positive **social impacts** as a result of the economic impacts. These include decreases in poverty, more employment and higher wages. Also the potential for corruptive practices will be reduced leading to increases in static efficiency.

Environmentally, each aspect of competition policy and all competition policy measures have to be checked ex ante to avoid trade distortions and constitute sustainable policies, environmental issues and health and safety safeguards. Otherwise, only opening up of the markets can result in higher pollution, emission and neglect of health safeguards due to increasing competition. Even though there are no direct environmental impacts, the potential of competition policy for environmental policy is there.

Table 11.2 below summarises the sustainability impacts related to competition policy.

Table 11.2 Summarised sustainability impacts related to competition policy

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	△	-	▲	Yes	M
Fixed capital formation	△	+	▲	No	M
Trade	△	+	▲	Yes	M
Social					
Employment & decent work	○	+	▽	Yes	M
Poverty	△	-	▲	Yes	M
Equality	?	-	?	Yes	M
Health	△	-	○	Yes/No	M
Education	△	0	△	Yes	M
Environment					
Atmosphere	○	-	▲	No	M/H
Land	○	-	?	Yes/No	L/H
Bio-diversity	○	-	▲	Yes	L/M
Environmental quality	○	-	▲	Yes	L/H
Fresh and waste water	○	-	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the picture for competition policy, but the effects are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

12 Government procurement

In this Chapter of the report, we provide an overall description of and policy issues related to Government Procurement as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex XV.

12.1 Introduction

Government procurement is an important issue for the Ukrainian economy as we will present below. With government procurement – unlike the other sectors and horizontal issues – the separation between WTO (GPA) initiatives and FTA procurement initiatives is impossible to make. Ukraine will possibly start negotiations on the terms of her eventual accession to the GPA after joining the WTO. These negotiations are then held with current GPA members and are likely to take many years. Potentially at the same time, upon becoming a WTO member, the EU and Ukraine will start discussing the FTA within the framework of the Enhanced Agreement including provisions of government procurement. Indeed there is a range of issues that may be included in the FTA between the EU and Ukraine bilaterally, and not in the GPA in general, but these distinctions can at this point in time – for a still-to-be-negotiated agreement – not be made. We therefore look at the possible improvements that may be implemented in Ukrainian government procurement and the respective impacts without making a distinction between possible WTO and FTA commitments.

12.2 Overview and recent developments in government procurement

Government procurement plays an important role in the social and economic development of Ukraine. The overall value of public procurement in Ukraine in 2005 totalled UAH 20.75 billion (about 5 percent of GDP), from which 51 percent was spent to procure goods, 36 percent to procure works, and 11 percent to procure services (see Table 12.1). This is however a lower estimate (partially depending on the definition of government procurement) as it excludes government military procurement, for example.⁷⁵ In 2005, 79,925 procedures of procurement of goods, works and services were implemented, out of which 91.5 percent were made up by competitive procurement procedures.⁷⁶ In value terms, government funds were spent mostly through the application of the following procurement procedures: open tenders (68.7 percent), purchase from one

⁷⁵ In other countries the share of government procurement as part of GDP varies between 8% and roughly 30%. A DG Market study (2004) estimates average government procurement as share of GDP for EU countries between 10% and 21,5%.

⁷⁶ A competitive tender is defined as a tender with more than one participant, including open tenders (26%).

participant (15.3 percent), and request for price proposals (quotations) (11.4 percent) (see Table 12.2). Noteworthy, the role of sole source contracts in government procurement in Ukraine has been constantly declining over the recent years (in 2004, the percentage of sole source contracts by value was 26 percent), but still remains rather high. Shares of local budgets and the State Budget are most significant in the structure of total public funds planned by state entities for procurement of goods, works and services (49.4 percent and 45.4 percent respectively in 2005).

The level of competition of government procurement in Ukraine as measured by the amount of participants in tenders remains rather low with 2.6 participating bidders on average in case of an open tender procedure, and 2.79 participating bidders in case a price quotation procedure is used. Moreover, the available statistics clearly show very modest participation of foreign companies in government procurement in Ukraine (see Table 12.2). The overwhelming majority (99.8 percent) of successful bidders are domestic companies (those established and registered in Ukraine), while foreign companies accounted for merely 0.2 percent of successful bidders. Access, participation and success of foreign bidders to the Ukrainian government procurement process is expected to improve after recently the Ukrainian authorities abolished discriminating provisions against foreign suppliers in national legislation (in particular, in the agricultural sector), effective from March 12, 2007.⁷⁷ Notwithstanding this improvement of the legislative framework, both domestic and foreign suppliers often complain about inappropriate procurement practices that “effectively” restrict competition in government procurement markets in Ukraine, such as inadequate information on tenders, unclear bidding documents and ambiguous technical specifications, insufficient time for preparing bids, unjustified cancellation of tender procedures, and frequent delays in contractual payments (WB, 2006). Due to widespread violations of procurement legislation, an inefficient and constantly changing institutional framework along with a weak national legal system, government procurement has become one of the most non-transparent, allegedly corrupted and inefficient spheres of economic activity in Ukraine from which the entire country suffers.

Ukrainian procurement policy & law changed several times in attempts to address the abovementioned issues and further changes have been announced (one has been announced for September 2007). Even though changes in legislation may lead to changes that are positive for the Ukrainian economy, too many and rapid changes are not good for (foreign) investments as uncertainty is increased.

Furthermore it should be noted that Ukrainian improvements in government procurement (in the direction of EU standards) need to keep a fast pace, because EU legislation is also evolving. DG Internal Market is working on public procurement improvements related for example to reducing the costs of the procurement process further (by implementing e-procurement), furthering transparency (DG Market, 2004)⁷⁸ and improving the Public

⁷⁷ See amendments to the Law on Procurement of Goods, Works and Services for Public Funds as of 1 December, 2006.

⁷⁸ 'A report on the functioning of public procurement markets in the EU: benefits from the application of EU directives and challenges for the future', DG Market study, 3rd of February 2004.

Procurement Remedies Directives 89/665EEC and 92/13EEC to include a ‘standstill period’⁷⁹.

Table 12.1 Structure of Procurement Procedures by Value (Million UAH)

	Open Tenders	Tenders with Limited Participation	Two-level Tenders	Price Quotations	Purchase from one Participant	TOTAL
2004						
Goods	7 657.9	528.0	96.9	2 907.5	1 700.5	12 890.7
Works	3 630.6	504.1	403.0	473.7	3 814.8	8 826.2
Services	1 249.2	288.1	6.7	576.3	1 023.3	3 143.6
TOTAL	12 537.7	1 320.1	506.7	3 957.4	6 538.6	24 860.5
2005						
Goods	7 985.9	197.3	222.8	1 736.5	471.4	10 613.9
Works	5 125.7	281.5	41.1	119.8	1 837.0	7 405.1
Services	1 136.5	227.2	7.8	499.9	858.5	2 729.9
TOTAL	14 248.1	706.0	271.7	2 356.2	3 166.9	20 748.9

Source: Ministry of Economy of Ukraine

Table 12.2 General Statistics on Procurement

	2004	2005
Number of Announcements Regarding Tenders	14 068	19 527
Number of Announcements Regarding Tender Results	12 269	16 733
Number of Implemented Procurement Procedures (for goods, works and services)	127 799	79 925
Total Number of Participants of Tenders	355 233	248 735
Number of Successful Bidders, including:		
- Domestic	145 514	95 867
- Foreign	145 332	95 658
	182	209
Number of Concluded Contracts, including:		
- With Domestic manufactures	153 504	100 723
- With Foreign suppliers	136 185	89 212
	264	193
Number of Complaints Received by State Clients from Participants	380	623

Source: Ministry of Economy of Ukraine

Legislative and institutional framework of government procurement in Ukraine

Ukraine’s legal framework concerning public procurement consists of the set of laws and bylaws regulations, the main of which is a *Law of Ukraine “On Procurement of Goods, Works and Services for Public Funds” № 1490-III* (hereinafter the Procurement Law).⁸⁰ It was enacted in February 22, 2000 and since then it has been amended 10 times.⁸¹ The Procurement Law provides for the general legal and institutional framework of

⁷⁹ More information can be found on the EU website of DG Market: http://ec.europa.eu/internal_market/publicprocurement/remedies/remedies_en.htm

⁸⁰ Two important bylaws are the Law of Ukraine ‘On State Defence Order’ and the Law of Ukraine ‘On State Order for Satisfaction of Priority State Needs’

⁸¹ The most recent amendments were passed by the Parliament of Ukraine on 1 December 2006 and came into effect on 12 March 2007. This report is based on this most recent version of the Procurement Law.

procurement of goods, works and services using public funds, describes various procurement methods and tendering procedures connected with submission and opening of tenders and awarding of procurement contracts. This Law is based on the UNCITRAL model law on government procurement and incorporated basic principles and procedures of the WTO Agreement on Government Procurement (GPA) and Directives of the European Union (namely, Directive 2004/18/EC of 31 March 2004). Nevertheless, some important discrepancies between Ukraine's Procurement Law and international standards still exist and require further harmonisation (see section 12.3.4 below).

Other important laws in this sphere include:

- *Law of Ukraine "On State Defence Order" No. 464-XIV of 3 March 1999* that is a special law that regulates public procurement in the sphere of state defence and national security. It stipulates the legal and institutional basis for formation, allocation, financing and implementation of state defence orders;
- *Law of Ukraine "On State Order for Satisfaction of Priority State Needs" No. 493/95 of 22 December 1995* establishes the general framework for formation, allocation and implementation of the State orders to supply goods, perform works, and render services for the satisfaction of priority state needs.

The Procurement Law provides for a decentralised government procurement system implying that procurement is carried out directly by the purchasing entities (managers of public funds). The procuring entities establish a tender committee, which consists of at least five representatives of procuring entities. The committee is responsible for organising and implementation of procurement procedures and for ensuring the efficient use of the public funds. The Procurement Law envisages the following public procurement methods:

- Open tender with price reduction;
- Limited participation tender;
- Two-stage tender;
- Request for price proposals (quotations);
- Procurement from a single participant (sole source), and
- Reverse auction.

Until the end of 2005, the Ministry of Economy of Ukraine was the central policy body with respect to government procurement and was assigned the functions of procurement coordination, monitoring and control. The 2005 amendments to the Procurement Law have changed the institutional structure of the procurement system in Ukraine, eliminated the previous role of Ministry of Economy and split its functions among several government bodies and organisations in an attempt to depoliticise the procurement process. According to the most recent version of the Procurement Law (of December 1, 2006), state control and supervision over the government procurement is implemented by the Parliament (responsible also for overall supervision), the Cabinet of Ministers, an authorised agency in government procurement (Anti-Monopoly Committee – AMC), the State Treasury, the Accounting Chamber, the State Auditing and Inspection Service, the State Statistics Committee, and law enforcement authorities. We note, however, that in spite of the legal efforts, in line with the World Bank Country procurement assessment report (2006), the current Ukrainian legislative set-up leads to politicisation of the government procurement process.

The *Anti-Monopoly Committee (AMC)* is designated as the authorised agency with respect to government procurement. Nevertheless, the AMC is not given a full range of functions that are typically given to a central procurement policy and monitoring body; functions, which were previously assigned to the Ministry of Economy and that would allow it to operate more separate from political pressures. The AMC is responsible mostly for preparing reports and providing general oversight but it lacks the real control functions over the procurement system, such as issuance of standard tendering documentation, granting authorisations for resort to alternative methods of procurement, or making decisions on complaints from bidders. Also, there are concerns that ~ the AMC expertise capacity in the spheres of authorisations, alternative methods of procurement and deciding on bidder complaints is not adequate due to financial limitations.

The *Interdepartmental Commission on Government Procurement* is a public collective body, which is assigned key functions of the central procurement policy body including authorisation of the use of alternative procurement methods and deciding upon complaints from bidders, maintaining the list of blacklisted tender committee members, and the list of debarred bidders, introducing innovative procurement practices, certification of procurement trainers, and certification of procurement training institutions. The Commission consists of 11 members (one representative each from the Accounting Chamber, the State Auditing and Inspection Service, the State Treasury, the Anti-Monopoly Committee, and the Ministry of Economy, and three representatives each from the Parliament and the Tender Chamber). Some of the bodies participating in the Commission are themselves involved in the control of the procurement process. As a result the important requirement of independence of the Commission as a control and monitoring body highly questionable. Moreover, inclusion of representatives from the private sector (Tender Chamber) and the Parliament implies their participation in the implementation of standard governmental and operational functions of the executive power and (potentially) creates functional conflicts of interest. The existing fragmentation of authority (between the Anti-Monopoly Committee and the Interdepartmental Commission) and the lack of independence of the procurement policy and monitoring bodies, undermine the efficiency of the control and supervisory system over government procurements in Ukraine.

The *Tender Chamber of Ukraine (TCU)* is a non-governmental and non-profit entity (a union of NGOs) that was created in 2005 to ensure the civil society participation in the process of formation and control over the government procurement policy in Ukraine. The Supervisory Council of the Tender Chamber is composed of representatives of governmental and parliamentary bodies, which are already involved in control over the procurement system.⁸² This again raises concerns about the threatened independence of the TCU as a non-governmental monitoring organisation and the built-in possibility for conflicts of interest. Procuring entities and bidders are obliged to provide all required information about tenders upon request to the TCU. Also the Interdepartmental Commission is to provide the TCU with copies of all its decisions and conclusions. It

⁸² Namely, three representatives from the Anti-Monopoly Committee of Ukraine and one representative each from the Ministry of Finance of Ukraine, Ministry of Justice of Ukraine, Main Auditing Administration of Ukraine, Accounting Chamber, State Treasury of Ukraine, as well as three deputies of the parliamentary committee concerned with issue of government procurement regulation.

should be noticed, that the Tender Chamber is assigned with a right to provide its opinions and conclusions upon complaints from bidders and upon the use of an alternative procurement procedure (being stipulated as advisory, these functions may lead to interference into the procurement administration process and therefore are not typical for a non-governmental entity). The Tender Chamber is empowered with other important functions of rather operational (as opposed to mere oversight) nature. Pursuant to the Procurement Law, the Tender Chamber issues an official information bulletin on government procurement, develops and publishes methodological materials for procuring entities, works out improvements to legislation, etc. It has the right to block publication of a procurement notice in its bulletin in case it detects a violation. The December 2006 amendments to the Procurement Law introduced a new operational function of the Tender Chamber, namely to maintain a thematic catalogue of participants of procurement procedures, listing those who are eligible for participation in procurement procedures. The Tender Chamber is also empowered to publish the list of certified Internet service providers, which are to digitally publish the mandatory procurement information (as of today only one Internet service provider has been certified). Against the Tender Chamber activities, appeal is only possible via legal procedures.

According to the World Bank's Country Procurement Assessment Report (WB, 2006), various press publications (see, for example, www.zn.ua⁸³), and numerous complaints from domestic and foreign suppliers, the management of the Tender Chamber is having too close relationships with and promoting business interests of certain private consulting firms providing public procurement services.⁸⁴ Moreover, the access to standard bidding documents is also dominated by private companies, like the European Consulting Agency and the Centre for Tender Procedures and Business Planning (an NGO), both of which officially possess patents and copyrights for many bidding documents and methodologies. Such a dominant position of a private company allows it to abuse its monopoly power⁸⁵ by charging excessively high fees for its services and by pressing procuring entities into the use of expensive complementary consulting services as a "necessary" condition for obtaining the required Internet publication services or standard bidding documents (the fees for such consultancy services are calculated as a percentage of the value of a contract and usually reach up to 2-6 percent (and even more⁸⁶) of the contract value). Bidders are also required to pay considerable fees for being included in the catalogue of participants of procurement procedures, as well as monthly fees and listing of participants' information has to be renewed annually. These practices result in a substantial cost burden to both procuring entities and bidders, hurt competition (high participation costs in procurement procedures hurts small businesses the most) and lead to inappropriate use and distribution of public funds.

To conclude, the current institutional framework of the procurement system has substantial drawbacks and a low level of compliance with the internationally recognised

⁸³ Zerkalo Nedeli, No 27(656) 14-20 July 2007 (<http://www.zn.ua/1000/1550/59964/>).

⁸⁴ One of them is the European Consulting Agency, which owns the only Internet service provider certified for electronic publishing of mandatory procurement announcements.

⁸⁵ The Anti-Monopoly Committee acknowledged the monopoly power abuse of the European Consulting Agency on the market of Internet publication of procurement information and fined it in 2006 (UAH 100000) and in 2007 (UAH 875700).

⁸⁶ Zerkalo Nedeli, No 27(656) 14-20 July 2007 (<http://www.zn.ua/1000/1550/59964/>).

principles and standards of good governance. In his decree of July 12, 2007, the president of Ukraine acknowledged an urgent need for comprehensive reforming and strengthening of the national procurement system and specified a number of critical steps in this regard. Among others, they include drafting amendments to the Procurement Law and submitting them to Parliament as a priority draft law in September 2007. In particular, these amendments envisage increasing the threshold levels for participation in procurement procedures, abolishing of the register of participants, eliminating of mandatory tender security requirements and mandatory listing in the catalogue of participants of procurement and creating the official digital information system providing its services free of charge.

12.3 Government procurement policy and crucial issues

12.3.1 The EU – Ukraine Action Plan

In line and beyond Ukraine's WTO commitments, the public procurement section of the EU-Ukraine Action Plan commits Ukraine to improve the functioning of the current procurement system through further approximation of Ukraine's legislation to EU legislation on public procurement in order to ensure effective implementation of the key principles of *transparency, non-discrimination, competition and access to legal recourse*.

Other important steps pointed out in the Action Plan include the limited use of exceptions from procurement procedures, access to independent/judicial review in the event of disputes, adequate access to information about public procurement procedures, effective dissemination of tendering opportunities and time limits and co-operation with the EU in the application of modern e-tendering technologies.

Ukraine's commitments on approximation of its procurement legislation to the *Acquis Communautaire* are reflected in the State Programme for Approximation of Ukraine's Legislation to the EU Legislation.⁸⁷

The EU legislation on public procurement is primarily and foremost based on the Treaty of Rome (1957). Further secondary and tertiary legislation includes Directive No. 2004/18/EC (on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts), Directive No. 89/665/EEC of 21 December 1989 (on the coordination of the laws, regulations and administrative provisions relating to the application of review procedures to the award of public supply and public works contracts), Directive No. 2004/17/EC of March 31, 2004 (coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors) and Directive No. 92/13/EEC coordinating the laws, regulations and

⁸⁷ Adopted by the Law No 1629-IV of 18 March of 2004.

administrative provisions relating to the application of Community rules on the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors.⁸⁸

12.3.2 FTA Comparison on government procurement

Given its significant economic and social role, government procurement is one of the key issues in EU free trade agreements. Still, the provisions on government procurement vary considerably among them.

For instance, EU FTAs with developing countries and Mediterranean countries contain only very general non-specific provisions requiring mutual opening of procurement markets.

At the same time, the most comprehensive chapter on government procurement is included in the EU Association Agreement with Chile (this agreement is one of the most recently concluded by the EU, effective from 2003). The procurement chapter of this FTA incorporates GPA equivalent measures concerning transparency, market access and non-discrimination, even though Chile is not a GPA Member (the EU is already a Member of the WTO GPA and its procurement regime is in line with the WTO norms). It is most likely that a similar approach – but maybe even farther reaching because of the neighbourhood status of Ukraine – with respect to government procurement, as taken in the EU-Chilean Association Agreement, will be used in the EU-Ukraine FTA negotiations, given the mutual interest of both countries in getting better market access to each others' considerable procurement markets.

The other agreement is that of the EU with Croatia, explicitly envisaging the introduction of the EU rules in the national procurement legislation, especially in the utilities sector⁸⁹. With respect to other contracts, it is agreed that all Croatian companies will be granted national treatment according to the EU procurement rules just upon joining the Agreement, while the European companies, not originating from Croatia, will receive national treatment pursuant to the Law on Public Procurement at least within three years upon entry into the Agreement. The possibility of Croatia to introduce access to procurement award procedures for all EU companies is to be determined by the Stabilization and Association Council. The chapter begins with reference to the non-discrimination and reciprocity in the WTO context being a desirable objective which is part of Ukraine's WTO accession process. Even though Ukraine and Croatia differ in their accession processes to the European Union, further far reaching levels of government procurement approximation can be part of an extended FTA.

⁸⁸ In his most recent report, the State Department for Legislation Approximation under the Ministry of Justice of Ukraine, which regularly monitors the legislation approximation process, defines the level of compliance of national procurement legislation to the EU norms as satisfactory and as such that still need further approximation (see State Department for Legislation Approximation, 2007. Overview of the Status of Approximation of Ukrainian Legislation to *acquis* communautaire — K.: «Professional», ISBN 966-370-034-3 — 544 p. (<http://sdla.gov.ua/atachs/ADAPT.pdf>)).

⁸⁹ It is stipulated that access of Croatian companies to contract award procedures in the EU utilities sector will depend on Croatia's progress in introducing the referred legislation.

Having studied various GPA chapters in the past, we take the EU-Chile Association Agreement as a model for how the structure of a future EU-Ukraine FTA chapter on government procurement within the FTA can look like. We envisage including the following major components and respective obligations (they are placed in the same order as in the EU-Chile Agreement):

- *Scope and coverage*: central government entities, sub-central government entities, and other procuring entities (such as utilities); as well as goods, services and works subject to agreement over respective threshold levels⁹⁰;
- *National treatment and non-discrimination*: a mutual obligation of parties to ensure national and MFN regime and lack of discrimination;
- *Prohibition of offsets and national preferences* (such as margins allowing price preference): spheres of application (in the qualifications and selections of suppliers, in the evaluation of bids and in the award of contracts);
- *Valuation rules*: obligation to prevent the avoidance of the application of the agreement's provisions and the split of a procurement contracts; calculation of the value of a contract;
- *Transparency*: obligation to promptly publish any legal acts and other relevant information regarding procurement in the appropriate publications and officially designated electronic media;
- *Tendering procedures*: description of possible tendering procedures applicable to procurement among countries (they may include open tenders, selective tenders, limited tenders, and sole source tenders), as well as rules and conditions allowing their application;
- *Qualification of suppliers*: obligation to ensure non-discrimination of requirements, possibility to establish permanent lists of qualified suppliers under certain conditions;
- *Publication of notices*: obligation concerning effective dissemination of tendering opportunities with all the information required for participation in the procurement (the widest possible and non-discriminatory access, free of charge and through a single specified point of access); list of compulsory information requirements to the notice of intended procurement; encouraging of early publishing of planned procurement; requirements for notices regarding permanent lists of qualified suppliers, if any;
- *Tender documentation*: obligation to include all information necessary for preparing and submitting responsive tenders and to ensure its availability to suppliers;
- *Technical specifications*: priority to performance and functional requirements rather than design or descriptive characteristics; use of international standards; exceptions;
- *Time-limits for the receipt of tenders*: adequate time to prepare and submit tenders; specification of time-limits;
- *Negotiations*: possible reasons for negotiations; rules of negotiations;
- *Submission, receipt and opening of tenders*: way of submission; transparency and non-discrimination;
- *Awarding of contracts*: conditions and criteria for awarding of contracts (lowest price or compliance with specific objective evaluation criteria);

⁹⁰ EU's and Chile's thresholds were set the same: central government - SDR 130,000 for goods and services and SDR 5,000,000 for works contracts; sub-central government - SDR 200,000 for goods and services and SDR 5,000,000 for works, utilities sector - SDR 400,000 for goods and services and SDR 5,000,000 for works (only for provision of airport facilities, maritime or inland port or other terminal facilities).

- *Information on contract award*: obligation to promptly inform tenderers of decisions on contract award, characteristics and relative advantages of the selected tender, as well as reasons for the rejection of a tender (the latter - upon request); exceptions;
- *Bid challenges*: obligation to implement impartial and timely consideration to any complains from suppliers; existence of an impartial and independent reviewing authority; interim measures to correct breaches (such as, suspension of the procurement process under certain conditions; compensation for the loss or damages suffered);
- *Information technology*: endeavour to use electronic means of communication for efficient dissemination of information (tender opportunities, etc.); endeavour to implement an electronic information system, which is compulsory for respective entities;
- *Cooperation and assistance*: development of training programs, etc.
- *Statistical reports*: collect and provide statistics on procurement covered by the FTA on an annual basis (upon request); specification of the content of statistics reports.

The procurement chapter may also include provisions envisaging possible modifications of its coverage, further negotiations on the agreement, exceptions (such as protection of public morals, order or safety, protection of human life, health, intellectual property, etc.), and review and implementation of the agreement. The FTA may also contain a chapter on the prohibition of using rules of origin specifically for government procurement.

12.3.3 Government procurement in the EU

The EU legislation concerning public procurement is based on the principles of equal treatment, non-discrimination and transparency and in first principle stems from the (amended) Treaty of Rome that applies if the directives do not cover all aspects. The directives No. 2004/18/EC, No. 89/665/EEC of 21 December 1989, No. 2004/17/EC of March 31, 2004 (as mentioned earlier as well) and 92/13/EEC Remedies directive coordinate the sector in the EU.

The EU Procurement Directives apply above the threshold of €137.000,- for procurement of supplies and services (€422.000,- in the case of utilities) and of €5.278.000,- for procurement of works. The EU member states generally apply the same or similar procurement procedures for lower amounts, because of synergy and cost effects of similar legislation; besides, below the thresholds and outside the scope of the Directives, procurement is still regulated by the principles of the Treaty. The EU public procurement procedures are worked out in line with the WTO GPA and set international standards.

12.3.4 Crucial government procurement issues

As mentioned before repeatedly, it is not always easy to separate the WTO effects from the further going FTA effects. This is especially challenging in the area of government procurement because Ukraine is only expected to start discussing government procurement changes upon joining the WTO.

Based on the previous descriptions and analyses, we identify the major issues that the EU and Ukraine are likely to address as the following – some in the WTO setting (GPA), others in the FTA:

- Scope and coverage of government procurement procedures;
- National treatment & non-discrimination;
- Procurement procedures & practices;
- Bid challenge procedures; and
- Institutional framework.

Scope and coverage of government procurement procedures

The Procurement Law is applicable to procurements of goods, services and works carried out by:

- All levels of public administration in Ukraine including central government, regional administrations and self-government bodies;
- Social insurance funds, the Pension Fund, the National Bank, organisations funded by State and local budgets; and
- State-owned enterprises, communal enterprises and businesses in which the state stake is over 50 percent.

According to the most recent version of the Procurement Law, the provisions of the law should be applied if the value of a contract equals or exceeds UAH 20,000 for procurements of goods and services, and UAH 50,000 for procurements of works.⁹¹ For state-owned enterprises⁹², the threshold level is higher: UAH 50,000 for procurement of goods and services, and UAH 400,000 for works.⁹³ As mentioned, these amounts are higher in the EU procurement legislation (over €137.000,-) but member states apply similar procedures for lower amounts.

At the same time, the Law contains a rather long list of exclusions from the scope of its application, which includes:

- Procurement carried out by enterprises of the defence-industrial complex (instead regulated by the *Law of Ukraine “On State Defence Order” № 464-XIV* of 3 March 1999);
- Procurement of goods and services, which are produced by natural monopolies such as water, heat and power supply; waste water disposal and maintenance of sewage systems; postal services, including postal stamps; railway transport services; pipeline transport of oil and oil products, natural gas and petroleum gases, and other substances; electric energy and its transmission and distribution; air traffic management telecommunications services, including relay of radio and television signals (except for mobile telephony services and Internet services); and
- Procurement of some special goods, works and services such as precious metals, natural gas for technical use, nuclear fuel, certain financial services, etc.

⁹¹ The December 2006 amendments has lowered thresholds for government procurements, which were before UAH 30 000 for goods and services and UAH 300 000 for works.

⁹² Provided these enterprises carry out procurement without using budgetary funds.

⁹³ If the request for quotations method is applied, the threshold level for state-owned enterprises is UAH 100,000 for goods and services, and UAH 500,000 for works.

With regard to the scope and coverage of government procurements of Ukraine under the future FTA and their compliance with international standards, the following major conclusions can be drawn:

- The existing list of exclusions from the government procurement regime should be analysed on the compliance with the GPA and the EU provisions requiring a limited use of such exclusions.⁹⁴ In the context of FTA's, all goods (with rare exceptions) are covered in the agreements while the coverage of services, including construction services, and the utilities sector, are a matter of further negotiations;
- Application of the Procurement Law to all state-owned enterprises, regardless of the nature of their activities, is not in line with the EU and GPA norms. Pursuant to the GPA, covered procurement means only procurements *"for governmental purposes not procured with a view to commercial sale or resale, or for use in the production or supply of goods or services for commercial sale or resale"*.⁹⁵ Therefore, in order to comply with international practice, state-owned enterprises procuring for commercial purposes should be excluded from the scope of the Procurement Law, albeit this is a difficult issue. It should be noticed that current thresholds are rather low (UAH 20,000) and cover almost all purchases by public entities (including hospitals, schools, transport companies, etc., which often suggest low value contracts). At the same time, costly and burdensome procurement procedures discourage potential bidders from participation in these low valued contracts. As such, there are cases when hospitals and schools, etc. cannot organise tenders and purchase essential products, goods, etc.

National treatment and non-discrimination

According to Article 5 of the Procurement Law, national and foreign bidders participate in the procurement procedures on an equal basis⁹⁶, and procuring entities are to ensure equal access to information concerning government procurement to all bidders. Furthermore, the Law stipulates that procuring entities cannot set up discriminative qualification requirements for suppliers.

The earlier legal impediments to equal treatment of foreign companies on the procurement markets were eliminated by the December 2006 amendments to the Procurement Law, which entered into effect on March 12, 2007.⁹⁷ As a result, the current Procurement Law does not have any stipulations that allow for discrimination between foreign and domestic suppliers or between foreign suppliers from different countries.

⁹⁴ For example, according to EU Directive No. 2004/17/EC, entities operating in the utilities sector, being state or private enterprises, should not be excluded from the procurement procedures even though they may be given a more flexible treatment compared to other procuring entities.

⁹⁵ Article 2(a)(ii) of GPA

⁹⁶ Still, national treatment is not ensured in the area of national defense: according to Article 1 of Law of Ukraine "On State Defense Order", only Ukrainian persons (regardless of form or property) can participate in government procurement in this sector except for procurement of weapons and ammunitions where a special license of Ukrainian persons is required.

⁹⁷ These violations of national treatment in public procurements included: Domestic producers had a 10% price advantage over foreign suppliers (their bid was accounted 10% lower compared to proposal of foreigners) under certain level of the contract value; If services or works were to be performed on the territory of Ukraine, non-residents could be requested to use domestic materials and labour; In case of procurement of agriculture products only domestic producers could participate in the tenders; Enterprises of invalids and persons in the penitentiary system enjoyed preferences over other tender participants.

At the same time, discrimination of foreign suppliers is still present during competition-restrictive procurement practices, in particular formulation of discriminatory qualifications of suppliers and technical specifications and rejection of tender proposals due to highly technical and/or formal reasons (e.g., particularly relevant for the pharmaceutical sector), manipulations with technical specifications after their approval by special technical review committees to the advantage of a particular bidder, acceptance of tenders only from companies registered in Ukraine, i.e. resellers of imported products or domestic manufactures (e.g. procurements of pharmaceuticals in health sector). These issues will be inevitably raised and have to be settled during the GPA negotiations, as well as FTA negotiations with the EU.

Corruption aspects: There are violations of the Law provision stipulating that procuring entities cannot set up discriminative qualification requirements for suppliers, for example as observed in the *pharmaceutical sector*. In particular, Resolution #252 of the Cabinet of Ministers of March 7, 2006, envisages only one recommended criterion to producers: availability of the Ukrainian GMP certificate (General Manufacturing Practice). As such, foreign suppliers are almost entirely excluded from the procurement proceedings since procuring entities almost always require this certificate and foreign suppliers do not have it. The European Business Association (EBA) appeal to government bodies with a suggestion to amend the existing criterion with two more criteria: original preparations and generics from the PIC/S countries.

Major procurement procedures and practices

Existing procurement procedures and practices often create barriers to entry for domestic and foreign suppliers and therefore reduce competition in the government procurement market of Ukraine. As such, they should be revised in line with international and European standards, as part of the FTA with the EU.

- According to international practices, *standard bidding documents* are usually prepared and disseminated free of charge to procuring entities by an authorised agency in the field of government procurement (any fee for acquiring these documents, if any, should only reflect expenses on their printing and distribution). There are no official standard bidding documents in Ukraine. The Ukrainian high fees for acquiring standard bidding documents, which are copyrighted⁹⁸ and are currently being provided by a private company⁹⁹, substantially increase costs of participation in government procurements in Ukraine. This is not in line with EU standards. Having the right to provide standard bidding documents, the only private company imposes unregulated excessively high prices for its services, which are much higher than the real costs of providing services;
- The *estimation of a contract value* is not clear. Contrary to GPA and EU legislations, the Procurement Law in Ukraine lacks detailed provisions on estimating the value of procurement contracts. These provisions are important for defining if a contract is subject to procurement proceedings, for what procurement method to use, and for preventing possible manipulations with avoiding the procurement procedures;
- The Procurement Law stipulates a *mandatory requirement to publish procurement notices and other information* in three different sources: a specialised countrywide

⁹⁸ By the Center for Tender Procedures and Business Planning, an NGO.

⁹⁹ The European Consulting Agency.

publication, the information bulletin of the Tender Chamber¹⁰⁰ and internet publication through one of certified internet service providers (currently only one internet service provider has been certified). The drawbacks of the current institutional framework in government procurement have made it possible for private entities to come to dominate the markets of printed and internet publications leading to expensive fees charged for any services provided. As a result, the publication requirement turns out rather burdensome for participants in procuring procedures. According to international practices, the situation can be changed by establishing a single free-of-charge official state website for government procurement, as well as an officially printed procurement publication. There seems to exist some corruption as well: existing monopolisation of the spheres of Internet procurement publications and standard bidding documents provision enable the private company to pressure procuring entities for using complementary procurement services. According to the State Auditing and Inspection Service estimations, participants of tender procedures paid to procurement consulting companies about UAH 930 million only in the first half of 2007¹⁰¹. There are also manipulations with how fast a procuring entity wants to have its procurement notices posted in the internet: fast posting are more costly;

- *Registration requirements* to tender procedures are an issue. Maintenance of the thematic catalogue of participants of procurement procedures is assigned to the Tender Chamber. Being mandatory, listing in the catalogue is another expensive burden for participants that substantially restrict competition for tenders (see section 11.1). *Issue:* The Tender Chamber that is empowered with operational function, seems to charge unjustifiably high prices to participants for its services concerning the catalogue maintenance;
- Unclear and inadequate *technical specifications* constitute one of the biggest problems of government procurement in Ukraine, seriously restricting competition in this area. Therefore, provisions of the Procurement Law on technical specifications need to be harmonised with international standards of the EU and the WTO that focus on performance rather than on detailed design specifications;
- The December 2006 revision of the Procurement Law imposed *tender security requirements* (such as deposits, bank guarantee, checks, etc.), which are mandatory for procurement contracts valued above UAH 100,000 for goods and services and over UAH 500,000 for works. Given the high fees for such banking services in Ukraine, this requirement presents a real barrier for many suppliers and discourages them from participation in procurement tenders. This is especially discriminatory against small businesses resulting almost entirely in their *de facto* exclusion from the procurement process. This has a huge impact, both socially and economically on the Ukrainian economy, since SMEs are one of the engines for economic growth and development. *Issue:* What is notably strange is that some bidders (especially, in case of big procurement contracts) are “recommended” to use services of particular banks thus promoting particular business interests;
- The application of *procurement methods* should also be scrutinised for transparency and the possibility for manipulation and collusive actions (in particular, price reduction stage of the open tender method (when a successful bidder is proposed to

¹⁰⁰ Printed publication in the TCU informational bulletin is usually determined as mandatory by the TCU.

¹⁰¹ See Zerkalo Nedeli, No 27(656) 14-20 July 2007 (<http://www.zn.ua/1000/1550/59964/>).

reduce the price thus encouraging bidders to inflate their initial prices) or reverse auction (two-stage procedure ending with an auction to reduce tender prices);

- In practice possible *negotiations and collusive actions* among bidders that are not allowed by international standards do occur;
- *Time periods for submission of tenders*: to be non-discriminatory, time periods should provide foreign and domestic suppliers with enough time to prepare and submit tenders no matter what type of procurement method is being used. Currently, Ukrainian time limits are inadequate compared to the relevant GPA and EU provisions.¹⁰² Foreign suppliers are very sensitive to this issue, since manipulations with time periods may exclude them from tender procedures; and
- *Cancellation of procurement procedures*: The Procurement Law provisions on cancelling procurement proceedings do not comply with the respective EU and GPA provisions. The law contains a number of provisions providing for cancellation of procurement proceedings¹⁰³ that may be abused or manipulated by procuring entities. This leads to a lack of certainty and the possibility that the tender will eventually be cancelled even though proper regulations have been followed. Instead, according to international practice these provisions should be well defined and have an exceptional character;
- *Black lists*: An Article addressing the use of a "black list" of bidders (Article 16) has been added to the GP Law by December 2006 amendments. Particularly, it stipulates possible grounds for the blacklisting (such as groundless rejection of the signing of the contract; substantial and groundless violations of the contract conditions resulting in a break of the contract; anticompetitive concerted actions; other violations of the legislation on protection of economic competition; provision of invalid information in tender documents). The Interdepartmental Commission on Government Procurement is designated to maintain the black list. It also provides for a compulsory internet publication of the list on the official site of the Commission, as well as publication in the thematic catalogue of participants of procurement procedures (maintained by the Tender Chamber of Ukraine). In April 2007, the Interdepartmental Commission on Government Procurement adopted a procedural regulation of maintaining and operating of the black list of bidders.

Bid challenge mechanism

In accordance with the Procurement Law, procurement procedures carried out by a procuring entity (except for the choice of the procurement method) may be challenged by a bidder or any one else through an administrative challenge and/or a court challenge. The international standards in government procurement provide for an independent and impartial review mechanism for bidders' complaints. Pursuant to the Procurement Law, the Interdepartmental Commission, whose independence is questioned (as mentioned in section 12.2), is the body empowered to provide a review of bidders' complaints of an administrative nature. The other important problem is that, pursuant to the Law, the receipt of a bidders' complaint by the Commission automatically leads to suspension of

¹⁰² For example, the Procurement Law allows a normal period of 30 days (minimum 15 days) for receipt of tenders following the date of publication of a procurement notice (in the EU, 52 days (minimum 22 days) are normally provided (in case of open tender). Moreover, this normal term can be even shortened (up to 10 days for limited tenders) by a procuring entity (the Law does not stipulate clear grounds for such reduction).

¹⁰³ One of the conditions for cancellation of a procurement procedure is a participation of less than three bidders.

the procurement procedure for up to 20 days.¹⁰⁴ Provided that the review subject is not defined and justifications are not required by Law, in practice bidders usually use this instrument to postpone tender deadlines.

Institutional framework

As described in section 12.2, the existing institutional framework of government procurement is inadequate and inefficient. Its reform requires the establishment of an independent authorised agency implementing standard functions of central procurement policy and controlling the draft of legislation, preparation of and distribution of standard bidding documents, publication of procurement notices and awards, monitoring, etc. (WB, 2006). At the same time, the Tender Chamber of Ukraine should be transformed into a real non-governmental entity, which is not involved in any administration of the Ukrainian procurement system.

Additionally, one of the main features of the current situation in government procurements in Ukraine is a weak *procurement legislation enforcement*. This is explained by weaknesses of national court system and anticorruption legislation. The legal procurement framework is also characterized by inadequate sanctions against possible violations.

12.4 Impact assessments

In order to achieve regulatory approximation of one of the allegedly most fraudulent parts of the Ukrainian economy, government procurement, to EU standards, much still needs to be done as part of the FTA: procedures need to be cleared, legal amendments put through and transparency enhanced.

A well-functioning government procurement system can have significant **economic impacts** through introduction ‘fair’ competition and better spending of public funds through improved levels and management of inward investments. Efficiency is improved and public investments are less prone to crowd out private investments. Well invested public funds through government procurement lead to higher levels of GDP growth and more trade (mostly in services). The price levels of properly procured tenders are significantly lower leaving room for alternative uses of public funds. An improved procurement system, with lower tendering costs, allows for an increased participation of SMEs which will have a strong positive economic impact. For the EU an improvement in Ukrainian government procurement can mean that more EU firms will tender and win procedures to carry out work in Ukraine.

Socially, government procurement – through better allocation of resources, for example in the health care sector, leads to higher quality of products and a better health care system. Also the education system in Ukraine stands to gain from an efficient government procurement system, which is a clear **social impact**. Overall, well spent resources as

¹⁰⁴ Non-bidders’ complaints do not require suspension of the procurement procedure.

investments in the Ukrainian economy lead to employment creation, wage increases and lower levels of poverty.

Environmental impacts are harder to measure, but overall, inclusion of sustainable development considerations in the government procurement system can lead to funds invested in a more sustainable way, if legal provisions are adopted. An example would be the use of the ‘green scheme’ of the Kyoto protocol to enhance environmentally sound investments. This would be a true test for Ukrainian government procurement.

The overall impacts of government procurement for the Ukrainian economy are presented below in Table 12.3.

Table 12.3 Summary of overall impacts of the FTA on government procurement

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	▲	-	▲	Yes	M
Fixed capital formation	▲	+	▲	No	M
Trade	○	+	▲	Yes	M
Social					
Employment & decent work	△	+	▲	Yes	M
Poverty	△	-	▲	Yes	M
Equality	△	-	▲	Yes	M
Health	▲	-	▲	Yes/No	M
Education	▲	0	▲	No	M
Environment					
Atmosphere	△	-	▲	No	M/H
Land	△	-	▲	Yes/No	L/H
Bio-diversity	△	-	▲	Yes	L/M
Environmental quality	△	-	▲	Yes	L/H
Fresh and waste water	△	-	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the government procurement effects, but they are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

13 Technical standards

In this Chapter of the report, we provide an overall description of and policy issues related to Technical Standards as well as the summary of the impact assessments. For an extended impact elaboration, we refer to Annex XVI.

13.1 Overview and recent developments in technical standards

Technical norms are important in a world of free trade. Normally, they play several roles: correct information asymmetries, provide incentives for quality by specifying minimum levels of performance, reduce health, safety and environmental hazards, and ensure compatibility of complimentary products produced at other ends of the globe. Although beneficial *persé*, technical norms may become impediments to free trade in case they differ across countries. In that case they create additional non-tariff barriers to trade that lead to deadweight losses.

The issue of technical standards and regulation has been of special importance for Ukraine. The country inherited the Soviet technical regulation system (including technical norms), incompatible with that of the EU. The reform progress on technical standards and norms has been moderate so far. Most outdated technical norms are still in place and are unlikely to be updated or replaced in the near future. As a result, Ukrainian producers, exporters, and importers view technical regulations as one of the major impediments to expand exports to the EU market and access modern technologies and equipment produced in the EU. For Ukraine as a country, technical regulations are one of the major impediments to benefit fully from a free trade agreement, hampering economic growth, employment creation, exports and income and wage increases.

Formally, we should not call this chapter ‘technical standards’ but ‘technical norms’. The latter includes technical standards as well as regulations and therefore has a broader nature that is more applicable and translatable into non-tariff barriers to trade.

13.2 Technical standards policy and crucial issues

13.2.1 Description of current developments

The issue of technical regulation is addressed in a number of Ukrainian laws. The law shaping the basics of the technical regulation system is the Law ‘On Standards, Technical Regulations and Conformity Assessment Procedures’ adopted in 2005 (Law hereafter). Besides, the issue is also regulated by the Law ‘On standardisation’ and Law ‘On

Conformity Assessment'. Several special laws define technical requirements in selected sectors like telecommunication, transport, tourism, nuclear energy etc¹⁰⁵.

The Law was adopted with a view to fully harmonise Ukrainian basic technical legislation with the WTO TBT Agreement and facilitate adoption of international and EU standards in Ukraine. The key points of the Law include:

- In line with provisions of the WTO TBT Agreement, two types of technical norms are distinguished – regulations (obligatory rules specifying commodity and production process characteristics) and standards (voluntary norms which are usually implemented by companies in order to meet increasing requirements of consumers and give market signals about proper quality);
- National standards, technical regulations and conformity assessment procedures should be designed in a way that they do not create unnecessary barriers to trade. They should be based on internationally or regionally accepted norms;
- Technical norms of other countries may be acknowledged as equivalent to Ukrainian ones;
- Only residents of Ukraine may provide expertise on conformity assessment acknowledged in the country; and
- Conformity assessment documents issued in other countries may be acknowledged in Ukraine based on international agreements on mutual recognition of conformity assessment procedures and agreements between the bodies responsible for assessment procedures. Foreign conformity assessment certificates may also be recognised in Ukraine if the country of commodity origin participates in international organisation on conformity assessment.

The State Committee of Ukraine for Technical Regulation and Consumer Policy (Committee hereafter) – Derzhspozhyvstandart – is responsible for the state policy in the sphere of technical regulations. The Committee is a member of the international organisations ISO (since 1993), IEC (since 1993), has an observer status in the European Committee for Standardisation (CEN), and affiliate status at the European Committee for Electro-technical Standardisation (CENELEC).

According to the Decree of Cabinet of Ministers, assessment of product's conformity with voluntary technical norms is delegated to non-state bodies while assessment of conformity with mandatory norms must be implemented exclusively through state agencies. Currently the assessment is done through the UkeSEPRO (YKPCEΠΠO) state certification system covering about 120 bodies throughout Ukraine.

Despite numerous initiatives with regard to reforming the state regulation system, progress has been modest so far. Currently Ukraine uses about 16.800 standards that have been developed and adopted before 1992 (GOST regional standards formerly common for all the USSR countries). Most of them contradict internationally accepted standards, let alone the EU norms. About 41 percent of national standards and only 10.3 percent of international (GOST) standards have been harmonised with the international norms as of

¹⁰⁵ 'Law on Telecommunications' (adopted in 2004, latest amendment – January 2007), Law on Transport (adopted in 1994, latest amendment – June 2007), 'Law on Tourism' (adopted in 1995, latest amendment – November 2003), 'Law on Permissible Activity in the Area of Nuclear Energy Use' (adopted in 2000, latest amendment – May 2003).

March 2006. All in all, as of January 2007, 3.707 national standards are harmonised with international norms. In particular during 2006, 617 national standards have been adopted by simple translation of texts of international norms and 20 standards by acknowledging international documents as national ones (the ‘cover’ method).

The programme of technical norms harmonisation has been outlined in the ‘State Program of Standardisation for 2006-2010’ adopted by the Cabinet of Ministers in March 2006 and ‘Program of Revision of the GOST Standards Developed Before 1992 and their Alignment with WTO TBT Agreement’ adopted by the Committee in March 2006. Throughout 2006-2010 the Committee is expected to approve about 8.900 national standards compatible with the international ones.

13.2.2 Ukraine’s commitments under the WTO

Ukraine committed itself to ensure full compliance of its legislation with the WTO TBT Agreement and join the Code of Good Practice from the date of its accession to the WTO without any transition periods. This means that from the moment of joining the WTO Ukraine will not be able to oblige foreign producers (willing to sell in Ukraine) to comply with Ukrainian technical norms incompatible with the international ones. This poses a big problem for the country. Since the government is not able to fully align domestic technical norms with the international ones, there will be a gap in technical regulations: imported commodities and services will be certified against international norms while Ukrainian commodities and services will be tested against domestic norms which are frequently incompatible with the international ones. In this respect caution should be taken in order to ensure smooth and in-time adoption of the missing international norms into domestic legislation.

13.2.3 The EU-Ukraine Action Plan

EU-Ukraine Action Plan sets ambitious goals in the sphere of technical regulation. Ukraine committed itself to *“continue the alignment with the EU and international regulatory and administrative practices and prepare for participation in the EU internal market in selected priority industrial sectors”*.

The priority cooperation measures outlined in Article 2.3.1 of the PCA are: identification of priority sectors for alignment with the EU and international regulatory practices and possible inclusion in an Agreement on Conformity Assessment and Acceptance of Industrial products (ACAA), harmonisation of legislation with EU technical regulations, further revision of Ukrainian standards, enforcement of institutional capacities in the technical sphere, simplification of conformity assessment procedures of industrial products in accordance with the requirements of the EU directives. Thus, Ukraine’s commitments relating to the sphere of technical regulation under the Action Plan are comprehensive and far reaching.

Ukraine and the EU held several rounds of consultations to identify priority sectors for alignment with EU and international regulatory practices and possible inclusion in the

ACAA. The four priority sectors that have been chosen by Ukraine are simple pressure vessels, electro-magnetic compatibility, low voltage equipment, and machinery. The ACAA agreement is expected to enter into force since 2011 meaning that Ukrainian products in priority sectors will be exported to the EU without need for additional testing in the EU.

13.2.4 Technical norms in the EU FTAs and Accession agreements

Most of FTAs concluded by the EU touch the issue of technical norms superficially. For example, the common approach in the FTAs with the MED countries is to include norms obliging the EU trading partners to promote the use of the EU technical rules and standards for industrial and agri-food products and certification procedures. However, no specific measures and timelines are defined regarding implementation of the FTA articles. Provisions relating to TBT in the EU-Chile FTA are more detailed. However, they also lack specificity, making the respective part of the agreement a kind of declaration rather than a binding document. One of the important issues under the EU-Chile agreement is the establishment of a Committee on Standards, Technical Regulations and Conformity assessment in order to create a forum for discussions of issues relating to reforms in technical regulations sphere.

Technical regulation provisions within the European Association Agreements (EAA) signed between the EU and candidate countries in the early 1990s were the most far reaching in terms of stated goals. In particular, the candidate countries were obliged to fully implement rules and procedures equivalent to those applied in the EU. Later all the candidate countries signed Protocols on European Conformity Assessment and Acceptance of Industrial Products (PECA). The protocols provided for mutual recognition on the basis of the *acquis communautaire*. Although PECAs are relevant to candidate countries only and were part of the pre-accession strategy, their successful implementation led the EU to initiate inclusion of similar agreements with the countries of the Mediterranean region and the CIS. From the point of view of the EU, ACAA conclusion means adoption by the Parties of standards and approaches in key sectors of technical regulation.

13.2.5 Crucial issues in the context of the FTA

Provisions of the EU-Ukraine Action Plan set an ambitious agenda for alignment of the Ukrainian technical sphere with the *acquis communautaire*. At the same time, the document leaves the choice of speed and scope of harmonisation at the discretion of Ukraine. The idea behind the document was to support Ukrainian efforts without putting much pressure and obligations. In general, the Action Plan provisions provided enough incentive for Ukraine to align with the *acquis*. The document is even more ambitious than provisions of the FTAs signed by the EU. Unfortunately, Ukraine did not manage to demonstrate substantial progress with respect to reforms in the technical sphere. Weak sector institutions, lack of political will, corruption, lack of proper financing, and poor policy implementation discipline hinder the process of harmonisation. Given this information, duplication of similar provisions will be of little value-added for the FTA

Agreement. Ideally, provisions of the EU-Ukraine FTA should contain strict obligations regarding implementation of the EU technical norms in Ukrainian legislation, including timelines and control indicators.

The key issues that should be urgently addressed in the context of FTA negotiations are the following:

- More effective enforcement of respective articles of the EU-Ukraine Action Plan;
- List of products subject to obligatory certification in Ukraine should be reviewed, substantially reduced and brought in line with the EU norms. Instead, liberal conformity assessment procedures based on consumer risk management should be implemented;
- Power of the Committee with respect to assessment of product's conformity with obligatory Ukrainian technical norms should include de-monopolisation; and
- Ukraine should be recommended to acknowledge conformity assessment results from the EU without additional tests conducted by domestic certification bodies. This is a deviation from the mutual recognition principle. However, it may provide Ukraine with powerful incentives to speed up harmonisation in the technical sphere and adoption of EU norms in its national legislation.

The technical sphere alignment process should be based on adoption of the EU technical norms (based on New and Global approaches) in the Ukrainian legislation instead of harmonisation of domestic norms with those of the EU.

13.3 Impact assessments

Technical standards form a core component of the FTA as it is widely recognised – also by this study – that approximation of standards in the post WTO-accession state of Ukraine will have a much larger impact on trade and development than several small tariff reductions.

The **economic impacts** of alignment of Ukraine's norms to the EU level are multidimensional. Direct effects of approximation as a consequence of the FTA include increases in competition and reduction on companies' costs related to passing conformity assessment procedures. This would most strongly apply to the aviation industry (production of aircraft), and the sector of machinery & electronics. The indirect effects come from strong incentives – with a large EU market about to open up – for Ukrainian producers to improve production processes, implement quality control schemes and invest in new technologies. Technical standards upgrade would include quality standards and costs of certification. For the EU a major impact is an improvement of standards of imported products, leading to higher quality products and more consumer safety.

Socially, approximation of norms will make investments easier and lead to more transparency, predictability and simplification of regulations. Most affected are those sectors for whom harmonisation will reduce current costs of compliance with the EU: agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production. The latter improvements will also have positive health effects. Increases for the textiles and wearing apparel sector will lead to increased

labour participation of women, hence more gender equality, since predominantly women are employed in these sectors. Also improved standards lead to increased product safety for EU consumers and businesses.

The **environmental effects** of an FTA are generally expected to be positive as it means that Ukrainian environmental standards for various sectors and sub-sectors are going to be upgraded to EU standards. Given the fact that the EU is ahead of Ukraine in these standards, this will lead to less pollution, emission of greenhouse gases, more attention to biodiversity and an increase in environmental quality. Also implementation monitoring of environmental legislation is expected to increase.

One important overall conclusion needs to be repeated: the short run costs for Ukraine to not only pass legislation but mostly to practically implement and monitor the upgrade of standards are very high and should not be underestimated. However, if we look at the long run perspective, these one-time short run costs are easily outweighed by the significantly strong and positive long run effects of harmonisation of norms.

Table 13.1 Summarised sustainability impacts related to technical standards

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	△	-	△	Yes	L/M
Fixed capital formation	△	+	△	No	L/M
Trade	△	+	△	Yes	L/M
Social					
Employment & decent work	△	+	△	Yes	L/H
Poverty	△	-	△	Yes	L/M
Equality	△	-	△	Yes	L/M
Health	▲	-	▲	Yes/No	M/H
Education	○	0	△	No	M
Environment					
Atmosphere	△	-	▲	No	M/H
Land	△	-	▲	Yes/No	L/H
Bio-diversity	△	-	▲	Yes	L/M
Environmental quality	△	-	▲	Yes	L/H
Fresh and waste water	△	-	▲	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

The sustainable impact assessments show the technical standards picture, but the effects are not all positive. Various policy measures can be devised to further optimise the positive and mitigate the negative sustainable impacts. This will be done in Chapter 15.

14 Assessment of economic, social and environmental impacts for both the EU and Ukraine

In this Chapter we refrain from making policy recommendations (mitigating or enhancing) but focus on the expected impacts, economically, socially and environmentally. Policy recommendations will be made in Chapter 15.

In general the economy wide economic, social and environmental impacts stemming from the FTA are summarised in Table 14.1 below. As many of the impacts are very general and there are opposite effects for the different parts of the economy, we go further in more detail to the effects.

Table 14.1 Overall economic, social and environmental impacts in Ukraine

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	▲	0	↑	Yes	L/M
Fixed capital formation	▲	+	△	No	L/M
Trade	▲	+	↑	Yes	L/M
Social					
Employment & decent work	△	0/-	↑	Yes	L/H
Poverty	△	0	↑	Yes	L/M
Equality	?	+	↑	Yes	L/M
Health	?	-	↑	Yes/No	M/H
Education	△	-	↑	No	M
Environment					
Atmosphere	▼	--	△	No	M/H
Land	▽	-	△	Yes/No	L/H
Bio-diversity	▽	-	△	Yes	L/M
Environmental quality	▽	-	△	Yes	L/H
Fresh and waste water	▽	-	△	Yes/No	M/H

For the meaning of the signs in the Table, we refer to section 1.4

14.1 Economic sustainability impacts of the FTA

In general, the **(initial) economic impacts** of the FTA are estimated to be overwhelmingly positive for the extended FTA and slightly less positive for the more limited FTA. This happens because in the extended FTA scenario we assume the EU and Ukraine cut tariffs deepest and achieve the highest levels of regulatory approximation, leading to lower standard costs, border costs and costs for trade in services and FDI. Also in the long run, the economic impacts are more positive than in the short run. The reason for this is that capital is assumed mobile only in the long run, allowing capital to find the highest rate of return across the Ukrainian economy only in the long run, causing the marginal product of labour to rise. This analysis is corroborated in Table E.1, showing that the welfare gains are largest in the long run extended FTA with 5.3% welfare gains for the Ukrainian economy.

Across sectors and horizontal issues, we identify the main expected economic impacts by looking at the sustainability impact indicators presented in Table 5.1.

14.1.1 Real income

GDP per capita

Overall GDP per capita is expected to go up as a consequence of the FTA – more in the extended FTA than in the limited one and more in the long run than in the short run. Assumed improvements in competition policy are expected to lead to increases in production and GDP per capita as productivity goes up. For the cereals sector, the FTA will lead to growth if the tariff rate quota (TRQ) and quotation of exports are sufficiently reduced. Ukrainian meat and animal fat may experience growth if SPS measures are sufficiently implemented to approximate the EU food and safety standards, albeit this is expected to be a long run development. The metallurgy sector is expected to show significant increases in GDP per capita from the FTA. Distribution services and communication services will benefit but transport and financial services will show negative real income effects. The latter is expected due to restructuring of the sectors (e.g. banking), consolidations and existence of scale economies. A well-functioning government procurement system can lead to growth in specific sectors where it enhances efficient investments (e.g. infrastructure, transport, hospitals, education). The assumption of technical standards approximation is expected to have positive growth effects in the agri-food sector, machinery & electronics, manufacturing of textiles and wearing apparel, motor vehicles and agriculture due to lower costs of compliance. Short-term approximation costs should not be underestimated though.

Net value added

Overall, the net value added, will go up as a consequence of the FTA. Especially in meat and animal fat (agriculture sub sector) if SPS is sufficiently harmonised, metallurgy, and machinery & electronics, if technical standards are sufficiently harmonised.

Improvements in the distribution sector may lead to secondary positive net value added effects in the retail & wholesale sectors. Also improvements in government procurement and technical standards potentially lead to higher net value added because of regulatory cost reductions, which make sectors more competitive, allow more firms to tender and

increase value added. The net value added in EU industries is also likely to go up because of (limited) production reallocation to Ukraine.

Consumer effects

Consumers are expected to benefit significantly from the FTA, mostly because of cheaper prices for agricultural and manufacturing products and services. If sugar tariffs are dropped consumers pay less for sugar, but also the confectionary industry will benefit from cheaper prices for the major input in their production processes. Modelled reductions in tariffs in metallurgy and machinery & electronics lead to lower prices for intermediate goods, having a positive impact for price levels of consumer goods all across the Ukrainian economic sectors. In agriculture, due to the FTA, food security may increase if SPS standards are being implemented which can have a positive effect on people's health and even life expectancy. For industrial goods, if technical barriers to trade are reduced, more efficient and cleaner production may be the consequence, and more attention for workers' safety and health. The expected energy effects of the FTA are not clear. There will be more pressure for environmentally sound production of energy, which is positive for consumer health, but due to external effects, coal production with current production technologies may continue and even increase (at least in the short run) which is not a positive effect from a sustainable point of view. Lower prices for transport services due to the break up of monopolies in public transport and infrastructure may lead to better quality of transport services and cheaper prices. The same goes for financial services where clear standards, rules and regulations improve consumer confidence in the sector. Government procurement is expected to lead to public investments that are much more effective and yield higher returns with tax money, having positive effects in areas like infrastructure, construction, financial services, and communication services. Finally lower prices can spill over into the Ukrainian economy from technical standards approximation to EU legislation. EU consumers will also benefit due to increased trade with Ukraine, mostly in agricultural products and steel, which will have a downward effect on prices for consumer products and is expected to lead to more choice.

Effect on prices

Generally – as explained under consumer effects – the FTA scenario predicts lower prices in the Ukrainian and EU economies due to the use of scale economies. In the meat and animal fat sub-sector, prices go down depending on the level of approximation of Ukrainian production standards to EU food safety rules. For sugar the drops in prices are expected to be significant and also prices for beer and wine will go down because of increased international competition. When metallurgy and machinery prices drop this will have a positive impact on downstream sectors that need steel and machines for production, also in the EU. The effects on energy prices are not clear because of other factors, outside the FTA, that have a significant impact. Energy security for Ukraine and the EU can increase because of the FTA if addressed properly in the Enhanced Agreement. Also in the services sector, international competition can lead to lower prices. If technical standards are harmonised with EU legislation, especially agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production can experience lower costs of compliance and customs controls. This is expected to lead to more trade between the EU and Ukraine and lower prices.

Variety of goods and services

With respect to agricultural products the number of varieties of products is expected to increase (e.g. meat offer, wine, beer, fruits and vegetables) and the same applies to the confectionary industry with sugar as its main raw material input. For the manufacturing sectors metallurgy and machinery & electronics variety in intermediate products may increase because of the integration of the Ukrainian economy into the worldwide (and especially EU) steel and machinery production networks. For consumers, liberalisation of the electronics sector is expected to lead to more choice in terms of electrical appliances and electronic equipment. The positive effect of the distribution services on retail and wholesale will also increase varieties of products. We expect a strongly increased offer of service products from the financial sector – both from foreign and domestic suppliers – to the Ukrainian consumers, multinationals and SMEs.

14.1.2 Fixed capital formation

Gross fixed capital formation

GFCF formation – the total value of additions to fixed assets by resident producer enterprises – is most commonly applied to tangible assets like plants & machinery equipment, vehicles, land-improvements and building (excluding their depreciation). But also intellectual property and discoveries of mineral deposits are included. The FTA is expected to have an impact on the GFCF in the cereals sub-sector through investments in upgrading the production methods, including the machine parks at farms. Most investments in the long run are expected in the production upgrading of the metallurgy and machinery sectors. There are large investment opportunities for EU capital in these sectors. Also in the major restructuring of the energy sector that is likely to follow an extended FTA, including energy production with open hearth furnaces, outdated coal plants, unsafe nuclear power plants, etc. large investments will occur – and are needed. In the transport sector, transport equipment is expected to be upgraded to meet EU environmental standards (Euro-5 level) as part of the FTA. This also is in line with the reduction of the level of concentration in transport services. An improved competition policy – where state aid and anti-trust policies are reduced and enforced respectively – leads to more gross fixed capital formation.

Private and public capital formation

In the beer and wine as well as cereals sub-sectors of agriculture, we expect public and private capital formation to have positive impacts. Also private capital formation is encouraged and has a strong potential in metallurgy. The latter may improve environmental effects – i.e. cleaner production – in this sector in the longer run.

Foreign Direct Investment (FDI)

FDI is of crucial importance for the positive impacts of the FTA because it can give a boost to sectors in Ukraine that is not possible with the (limited) amounts of domestic money and with FDI come modern standards and new (read: also cleaner) production technologies. FDI can support the wine and beer industries, help in SPS approximation to EU levels and contribute to technology upgrades and more efficient and cleaner production methods using less energy in metallurgy, chemicals, and machinery & electronics. FDI in the energy sector can be used for new and ‘sustainable’ projects and

upgrades of energy production, including increasing safety standards at work. The FTA is expected to increase FDI in the services sector because of its liberalisation, allowing for foreign investments, take-overs, stakeholder ship, etc. Our gravity estimations show that the larger the increase in Business Climate Index (BEI), the larger the expected FDI inflows in Ukraine will be. The Ukrainian financial services sector can potentially integrate with the EU (and other) financial markets. If the broad FTA includes provisions for improving government procurement procedures, they may lead to more foreign bidders in the process. Increases in technical standards lead to more foreign investments into those sectors that harmonise enough to EU standards to get export approvals into the EU markets. The need for FDI in Ukraine, provides EU firms with large investment opportunities in the years to come.

14.1.3 Trade

Balance of trade in goods and services

Overall the trade balance for Ukraine will improve and for the EU it will worsen in relative terms. In absolute terms also EU exports to Ukraine will rise significantly. However, due to the fact that the trade balance of the EU is over 100 times larger than Ukrainian trade, the effects for the EU are insignificant. Improvements in the trade balance for Ukraine are expected in cereals, meat and animal fats (depending on the depth of the SPS agreement if it is included in the FTA (and EA)), machinery & electronics, metallurgy and distribution services, while an improvement for EU industries is expected in beer and wine, sugar, transport services, and financial services – these are the sectors where imports are expected to increase faster than exports. Improvements in domestic competition policy may enhance the competitive force of Ukrainian industries and will lead to a further improvement of the trade balance.

Volume of trade in goods and services

The FTA may lead to large increases in the volume of trade for cereals (if TRQs are sufficiently reduced), sugar, steel products, machinery & electronics. Growth in distribution services is limited and initial growth rates in trade in transport and financial services are negative. Overall, based on our modelling assumptions, FDI inflows, competition policy, simplifications and streamlining of customs procedures, clearer and more transparent government procurement procedures and harmonisation of technical standards are horizontal issues that we expect to lead to significant trade increases for Ukraine and increases for the EU also because of more understanding and mutual recognition of each others product quality.

Terms of trade (ToT)

The terms of trade apply to the Ukrainian economy as a whole and it is hard to use the sum of some sector impacts to determine the ToT impacts of the FTA. Given import prices, the terms of trade for sugar and transport services are expected to worsen, while the terms of trade for metallurgy and machinery & electronics is improving. An overall effect, however, is impossible to give due to the fact we need detailed information regarding all sectors in Ukraine.

14.2 Social sustainability impacts of the FTA

The screening of social impacts of the FTA is done using the social sustainability impact indicators listed in Table 14.2 below. The overall social impacts of the FTA for Ukraine and for the EU are explained first and followed by detailed impact analysis for all specific social sustainability impact indicators.

Table 14.2 Social sustainability indicators

Social Core Indicators	Specific Indicators
a) Poverty	People living under poverty line, GINI index, regional effects
b) Health	Life expectancy, Mortality rates (maternal, child), Access to health services, sanitation, nutritional levels
c) Education	Primary, secondary and tertiary enrolment rates, literacy rates
d) Labour issues (incl. Employment and decent work)	Unemployment, Productivity and quality of work, Rights at work, Employment opportunities, wage effects, self-employment
e) Equality	Gender equality in employment and employment opportunities, gender equality in education, social protection, social dialogue

14.2.1 Overall social impact of the FTA for Ukraine

The overall social impacts of the FTA for Ukraine culminate around the following crucial issues:

- Approximation of the Ukrainian government procurement legislation with the EU *acquis*;
- Tariff reductions;
- Improvement of health and safety standards and production methods;
- Increasing FDI flows and investments;
- Changes of energy mix and energy production;
- Approximation of competition policy;
- Short term restructuring problems and availability of training.

The social impacts are closely linked to the economic impacts, which predict employment increases – although the CGE outcomes may present an upper limit to this effect – and wage increases. In general, an FTA is expected to increase employment, raise real incomes and wages and hence decrease poverty in the long run. Employment increases are lower initially and more marked in the long run, while the nature of employment – required skills and skill levels demand – may be subject to change and the restructuring of industries may have negative social effects in the short run. The decreases in employment in some sectors (like agriculture) in the short run and consequent temporary worsening of poverty could be addressed.

Provisions to address health and safety standards and production methods into more employee friendly ones can increase the working conditions and workers safety along the lines of the decent work indicators as identified by the EU and ILO significantly.

Investments into new technologies and increasing FDI flows are hence important as they enable the improvements in production methods and conditions and can speed up ongoing restructuring and modernisation in certain sectors which still use out-dated (and often more hazardous) technologies and production methods. Employment effects are mixed with an increase in employment in electricity, metallurgy, machinery & electronics and agriculture (long run) and decreases in employment in agriculture (short run), financial services, transport services and sugar and confectionary.

The increase in real income thanks to the FTA is also expected to have large social effects. It will decrease poverty and hopefully reduce the gap between the poor and the rich in Ukraine, reducing the GINI coefficient. With more buying power, people can afford to buy better quality food (increasing hence the demand for e.g. fruits even further) and educate their children better. Similarly, increased employment opportunities and wages should lead to lower levels of poverty and may have a mitigating effect on labour migration. Growth potential in some sectors, may also spur investments, entrepreneurial activities and self-employment, which all have positive potential impacts on income and poverty levels.

The model assumption of approximation of government procurement procedures as an impact can have large positive social effects. Better allocation of resources in the health care sector leads to higher quality of products and a better health care system. Also the education system in Ukraine stands to gain from an efficient government procurement system as the current system has created supply and resource difficulties for schools and hence decreased quality.

The changes in the energy sector and the energy mix have potentially very large social effects concerning employment, poverty and safety and health issues. Especially in the coal sector drastic improvements are needed in worker safety and health issues. Also Redundancies in the coal, oil and gas sector can have large social effects, the more since the coal industry is well organised in terms of concentrated worker's power. Alleviation of these problems should be of importance in the negotiations.

Successful competition policy can enhance the positive social effects of the FTA even further by boosting competition and production, which leads to improvements in employment, poverty and higher wages.

In the longer run increased employment opportunity, but particularly increases in wages and the quality of work, may reduce out-migration of labour and particularly the worst forms of this migration: illegal migration and 'slave' trade of women into prostitution. As such it should improve the position of some of the weakest groups (low-skilled / uneducated and poor persons and particularly women) in Ukrainian society.

14.2.2 Overall social impact of the FTA for the EU

In the long run the social effects of the FTA for the EU are expected to be very small if not negligible. Yet, the following few issues should be managed to avoid social problems in the EU area:

- Regional negative employment and poverty effects due to the FTA;
- Handling of the possible migration flows from Ukraine;
- Approximation of Ukrainian food safety standards especially in meat production.

The FTA – though affecting the overall EU statistics very little – may have disproportionately large regional effects in sectors that are very clustered. For example, in the metallurgy sector in southern Poland or the motor vehicles cluster in southern Germany, Czech Republic and Slovakia negative employment effects could be the result of the FTA.

The possible migration flows from Ukraine to the EU need to be handled properly in order to avoid social problems. Work permit issues are of particular importance to avoid illegal immigration and social problems related to immigrants, which many European countries have at the moment.

The approximation of food safety standards in Ukraine is also important to guarantee food safety for European consumers with increasing food imports from Ukraine to the EU. Most likely the EU stance during the FTA negotiations is that first standards must be approximated before agricultural products (notably meat and animal fats) are allowed to be exported to the EU.

Otherwise, there are also many positive social effects stemming from an FTA for the EU. The employment in the sugar and wine sectors is expected to go up slightly thanks to increasing production and exports and so are financial service and transport service provision from the EU to Ukraine. But most importantly for the European consumers are the cheaper prices for imported goods because of the FTA, like cheaper food products, lead to higher disposable incomes.

14.2.3 Poverty

People living below the poverty line

Most poverty in Ukraine is concentrated in the rural agricultural areas. The model outcomes for the FTA for the agricultural sector predict both employment and wage growth, which will be more pronounced in the long run. This implies poverty can be reduced, both in depth and in breadth, also through flanking policy measures as will be further discussed in Chapter 15 of this study. The positive effects would be most noticeable in the cereals, meat and animal fats and fruits sectors. Harmonisation of technical standards can further enhance agricultural performance leading to further poverty reductions. Also increasing employment opportunities in metallurgy, machinery & electronics, the electricity and distribution services sectors lead to increased job opportunities and income, hence to lower poverty levels. However, especially in the short run, large scale restructuring of the coal industry – a possible FTA outcome – would have a negative impact on poverty levels in areas where this industry is concentrated, because it raises unemployment in a sector with workers that are not easily re-allocated to other industries or sectors.

GINI index

The GINI index is a measure for income equality in a country: the higher the GINI coefficient, the greater the difference between rich and poor. Since the lowest incomes are found in the rural areas and agricultural sector, predicted impacts of an FTA in terms of improvement of employment and wage levels in this sector could contribute to an improvement of the GINI coefficient – depending on the overall size of these effects. But improvement of the GINI coefficient hinges most crucially on issues that are not necessarily directly related to the FTA, such as the tax and education systems, ownership structures and factor returns. An FTA would lead to increased openness, competition and approximation of standards and regulations, in turn further encouraging restructuring and modernisation in certain sectors and the Ukrainian economy at large. As such it may indirectly affect these systems and structures, thus reducing income disparities. There are no effects foreseen of the EU Ukraine FTA on the EU GINI index.

Regional effects

Through various mechanisms, the FTA is expected to have regional effects in Ukraine. Regional effects are important in the country because of political sensitivities and because of regional development and poverty reduction programmes. Agricultural productivity, growth – albeit not so large in the short run – tends to positively affect the (mostly Western) rural agricultural countryside. If FDI leads to improved productivity in wine production the wine producing areas in the south of Ukraine benefit. If the FTA leads to increased importance of metallurgy and machinery, that are pre-dominantly located in the (south)east of Ukraine, this should lead to employment and income growth in these regions. Possible closure of the coal mines for environmental reasons and because of a change in the energy mix resulting from an FTA will have large negative social and economic impacts in Eastern Ukraine where most miners live and work. The development of distribution services has a regional effect in that it will benefit the industrial areas in Ukraine more than the agricultural countryside. Development in communication services is expected to be stronger for cities than for the countryside unless accompanied by flanking measures. Also competition policy may lead to regional effects due to reductions in state aid for specific sectors and enforcement of antitrust policies in others (e.g. coal subsidies, metallurgy subsidies, agricultural subsidies, transport service monopolies). Also for the EU there may be regional effects, with the bordering countries to Ukraine being affected more strongly than those EU member states that are located further away. For example, in some ‘new’ EU member states, agricultural production may experience some pressure from the FTA, while the transport sectors are expected to benefit.

14.2.4 Health

Life expectancy

Life expectancy increases when living conditions in general improve. One effect of the regulatory approximation of SPS standards to comply with EU food safety regulations and harmonisation of technical standards for industrial products to EU levels is that food quality goes up. This means that product safety and health aspects in Ukraine and the EU improve. Both these effects lead to an increase in life expectancy. Also envisaged improvements in working conditions, worker safety, and quality of work in manufacturing and agriculture will lead to higher life expectancy. On the other hand,

negative environmental impacts like increased CO₂ and SO₂ emissions, more chemicals in the air, and increased water and waste pollution lead to a less healthy environment and reductions in life expectancy. In general, if poverty decreases and disposable incomes increase, people have more money and will live healthier lives, leading to higher life expectancies. For coal miners, an FTA that improves production technologies, working conditions and worker safety can have a significantly positive impact on their life expectancies. Government procurement improvements resulting from the FTA can have a positive effect on life expectancy in the long run through increasing procurement quality of facilities like roads, infrastructure, hospitals, better advice and policies, etc. For the EU we do not identify any significant impact.

Mortality rates (maternal, child)

Studies show that higher income levels (in this case for Ukraine because of the FTA) can lead to purchase of better and more diverse food products and – based on research of the relation between income and lifestyle – a healthier lifestyle. In many sectors, worker safety and working conditions will be improved because of the FTA. Upgrading of production methodologies as well as vehicles and planes, investments in road, rail and airport infrastructure lead to more road, rail and air safety. A negative impact stems from the mixed environmental aspects related to air pollution, greenhouse gas emissions, waste increases, and chemicals in the air. Maternal and child health is likely to improve due to increasing income levels and more transparent government procurement for maternity and child hospitals. Although labour migration of health professionals (especially obstetricians and paediatricians) may have negative effects, it must be noted that such migration is still limited as long as Ukrainian diplomas and certificates are not yet recognised in the EU.

Ageing of population

Although the ongoing process of an ageing population due to low birth rates and high mortality rates represents an autonomous demographic process, an FTA with the EU may indirectly affect this process. The extent of these effects should not be overestimated though. On the positive side, improved public health (systems) may decrease the mortality rate, while on the negative side labour migration may reduce further the share of the working population and the availability of health professionals.

Access to health services

We identified no direct links between the FTA and access to health services. However, indirectly, higher incomes make it easier to access health services and improved government procurement procedures improve the quality of constructed hospitals and other health-related buildings. Services liberalisation, including mode 4, can lead to migration of surgeons, doctors and other health specialists.

Sanitation

There is an expected indirect positive effect of government procurement schemes on the quality and availability of sanitation. Also, if the FTA leads to poverty reductions and more unlocking of the Ukrainian countryside, sanitational quality is likely to improve. For the EU we do not identify any effects.

Nutritional levels

Through improved Ukrainian SPS standards as a consequence of the FTA effects on approximation of the EU food safety standards, meat, fruits, cereals enjoy higher quality and increased nutritional levels. Technical agri-food standards improvements have the same effect.

14.2.5 Education

Primary, secondary and tertiary enrolment rates

Reductions in poverty, and increases in income will likely have a positive effect on enrolment rates, as less children will be required to supplement household income at a young age. This is a medium to long run effect, which is also strongly influenced by Ukraine's overall education policy (e.g. importance of the MDGs). However, in the short run, trade liberalisation leads to increased levels of competition in most sectors of the Ukrainian economy, which will lead to both intra- and inter-sector restructuring. Thus on the one hand this implies skills and skill levels required in specific sectors may change, while on the other hand labour will have to transfer from losing to gaining sectors. Both of these effects place an adjustment burden on the Ukrainian education system, not just in terms of the quality of existing basic and higher education systems, but also in terms of the need for adult education, vocational training, on the job training and retraining, etc. For EU educational policy and educational institutions there are cooperation opportunities (e.g. joint programmes) that can serve mutual interests.

Literacy rates

Reductions in poverty, increases in employment and consequent increases in enrolment rates will have long term positive effects on literacy rates. However, no immediate effects of the FTA on literacy rates have been identified, neither for Ukraine nor for the EU.

14.2.6 Labour issues (including employment and decent work)

Employment and unemployment

Unemployment overall is expected to go down. However, this is not the case for all sectors, while in Ukraine the unemployment rate is only part of the story since a large share of the Ukrainian population does not participate in the labour market and is thus not registered as unemployed. The model outcomes need to be interpreted with some caution, especially for certain sectors. Thus, although the model predicts strong employment gains for the Ukraine, these effects may be more moderate in reality, particularly in the short run. On the one hand the current labour participation rate is low, implying that increased job opportunities may result in more people 'returning' to the official labour market and official unemployment figures remaining at the same level or even increasing. On the other hand, in many companies more people are employed than strictly necessary. Production, sales and export growth may therefore not immediately translate into new jobs, but rather lead to increased productivity of the existing workforce.

In addition, in certain sectors the FTA will not substantially change the direction of more structural and ongoing transition and modernisation processes. Thus, for instance, in the

long run the number of jobs in the agricultural sector is expected to decrease, as the sector is modernised and becomes more efficient and as employment shifts from agriculture to manufacturing and services.

At the sectoral and sub-sectoral levels effects will likely vary. For agriculture the employment effects would be negative in the short run and positive in the long run, while the nature of the jobs may change over time (more technology intensive). Employment in the meat and animal fat sub-sector would go up if SPS standards are approximated to EU levels. Also for metallurgy and machinery & electronics we expect employment to increase. The energy sector shows mixed results with employment increases for the electricity sub-sector but decreases for coal, gas and oil. In the energy sector deep restructuring is needed so in the immediate aftermath of the FTA implementation employment is expected to go down. Particularly the coal industry is expected to experience employment declines due (in part) to the FTA. Unemployment in transport and financial services sector are expected to go up but only to a limited extent. Employment changes in communication services are negligible and positive in distribution services. Increased competition policy should lead to lower margins initially and increased unemployment, especially in non-competitive (sub)sectors (e.g. transport, and meat and animal fat production). In the long run competition is good for employment as it keeps wage increases within limits and raises productivity. Technical standards are expected to have positive effects (if harmonised) for employment in agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production because approximation of standards may lead to the opening up of new, large markets and because of lower compliance costs to higher standards.

For the EU we expect very small and at most regional effects. Based on the modelling results, in-depth analyses and engagement with civil society, we see the main benefits for the financial sector, transport sector and sugar sector if the extended FTA scenario is analysed. However, also very small positive effects occur in leather products, beverages and tobacco sectors in the EU. There are negligible negative effects in the wearing apparel, vegetable oils & fats and oil & petroleum production sectors as the FTA will cause a small shift towards Ukraine.

Employment opportunities

As becomes clear from the above, the effect of the FTA on employment opportunities would be on the one hand more of the same type of jobs and on the other hand new and/or different jobs. Examples of the first effect would be the metallurgy sector, and machinery & electronics sector, where more similar jobs are expected to be created due to increased outputs of those sectors. At the same time, in the coal industry and in some service sectors, employment opportunities will likely decrease. Examples of the second type of effect include agriculture, financial and transport services. The nature of employment in agriculture will change due to mechanisation. This will have implications for the skills required for these jobs, for instance the use of new tractors and machines (e.g. hydraulics, electronics), IT skills for administrative and management purposes, knowledge of dosing, use and registration of pesticides and fertilisers etc. and the acquisition of certain certificates (e.g. EUREP-GAP). Government procurement and competition policy is expected to generate further employment opportunities in the long run.

For the EU there are employment opportunities in the sugar and confectionary industry as well as in beverages (beer & wine mostly) and tobacco sectors. In the service sectors, most employment opportunities are created in the financial services sector.

Wage effects

In financial services and transport services wages are expected to decrease and so are wages in the coal industry. The effects on agricultural wages are expected to be mixed, with positive effects for the meat and animal fats sub-sector, if SPS standards are harmonised. Competition policy will lead to less protection and a downward pressure on wages initially. In the longer run, competition policy will make Ukrainian firms more competitive internationally and with rises in productivity allow for rises in wages. As explained in the above, increased overall wage levels should lead to poverty reduction and improvement in health and education levels.

In the EU overall, the wages will go up also, albeit with a very small amount.

Self-employment

In service and manufacturing sectors with a high minimum efficient scale (MES), such as metallurgy, chemicals and machinery, the possibilities for self-employment are low due to minimum investment levels needed to start up a successful business. However in agriculture, and various services sectors (communication, financial) these possibilities exist. The FTA will have a positive impact on self-employment in these sectors if at the same time, red tape and bureaucracy around setting up new businesses is significantly reduced. Since cutting these costs is part of the border and standard costs reductions in the FTA, this is an expected impact for Ukraine.

Productivity

Overall, productivity is expected to increase for various reasons. For Ukraine, first, improved competition because of the FTA will force firms and industries to become more efficient in order to survive. Second, increases in investments in (new) production technologies and updated and cleaner machinery, R&D as a consequence of the FTA, would lead to higher levels of productivity. Finally, improved government procurement procedures will lead to more competition and pressure to perform on the part of the tenderers. These effects would be particularly noticeable in certain (sub) sectors. With respect to agriculture (livestock), gross inefficiencies of many pig-breeding and cattle-breeding enterprises and outdated production methods exist according to sector experts that were interviewed. These inefficiencies will alter potentially because of the FTA. Metallurgy and machinery are expected to increase productivity over time as investments come in. In turn, higher productivity also allows for payment of higher wages in various sectors of the Ukrainian economy. The FTA envisages the energy sector to become more productive by aiming for the use of more gas and for improving energy efficiency in the production of electricity. For the EU, EU capital will be an engine to increase productivity and therefore capital returns.

The enforcement of competition policy as part of an EU-Ukraine FTA is expected to have rather ambiguous social impacts. The key issues to be negotiated within future FTA - state aid, anti-trust, and state monopolies policies – should increase competition in the most monopolised sectors and in general improve the overall competitiveness of

Ukrainian enterprises. This would lead to a downward pressure on goods and service prices. On the other hand, increased competition also creates pressures to reduce costs and raise labour productivity, thus leading to potential employment reductions. These effects are expected to be most pronounced in sectors with highly monopolistic structure and state ownership dominance, such as transport and telecommunications, energy and coal industries. These would all be long term effects.

Quality of work

The FTA clearly puts sustainable development as a top priority in the negotiations. We assumed in the modelling a reduction in differences in technical standards, which should be achieved through adoption of EU technical standards. Not automatically, but in addition to the existing FTA, policy measures could be developed to include environmental, health and safety aspects with regard to the work place and methods. Indirectly, restructuring and modernisation should lead to the adoption of safer and cleaner technologies and working conditions in sectors such as metallurgy, machinery & electronics, transport and the coal industry. In the energy sector, improving safety standards and their monitoring and implementation related to nuclear energy is envisaged. Likewise, inflows of FDI would lead to upgrading of machine parks, introduction of cleaner production methods, increased worker safety, and increased health standards at the workplace, e.g. through corporate social responsibility (CSR) schemes on the part of the foreign investors. For the EU there may be some very small and regional competitive pressures but overall the EU serves as an example for quality of work standards for the Ukraine.

Rights at work and social protection

The FTA impact on rights at work and social protection would take place both through the adoption of standards and FDI inflows (see above remark about CSR). However, most of the effects will likely be indirect and require specific policy measures to take place that will be assessed in Chapter 15. In principle, the EU approach to the FTA is to grant Ukrainian workers reciprocal rights that EU workers currently enjoy in Ukraine and looking ahead to Chapter 15, social protection will likely be dealt with under the enhanced agreement.

Social dialogue

There are no identified direct effects of the FTA on social dialogue. However, overall, the FTA will lead to restructuring of the Ukrainian economy and gains and losses across sectors and high-skilled and low-skilled workers. This will likely lead to a more active involvement of social partners to protect and assert worker's rights. Such active involvement would of course depend on their ability to strengthen their capacities and the willingness of the Ukrainian authorities to enter into a dialogue.

14.2.7 Equality

Gender equality in employment and employment opportunities

As simulated in the CGE analysis, the main FTA effect on gender equality would occur due to the expected substantial employment increases in the textiles and wearing apparel sectors (if technical standard procedures are cleared). Given the fact that many women

work in these sectors this would have a positive impact on gender equality in terms of labour participation rates. However, wages in this sector are usually among the lowest and labour circumstances remain an issue of international debate as the sector often employs young women known to be cheap, docile and often unorganised. The effect in terms of the income gap may thus be limited or even negative, while labour rights for women may also come under pressure.

Gender equality in education

There are no identified effects of the FTA on gender equality in education.

14.3 Environmental impacts

The screening of environmental impacts of the FTA is done similarly to the social analysis by using the environmental sustainability impact indicators listed in Table 14.3 below in line with TSIA Handbook. The overall environmental impacts of the FTA for Ukraine and for the EU are explained first and followed by detailed impact analysis for all specific environmental sustainability impact indicators.

The expected significance of environmental impacts is based on the economic and social significance of a sector both in the EU and Ukraine. The magnitude of impact has been related to the projected changes in production and trade for the sector assessed. The magnitude of the overall impact of a horizontal issue is defined by the ratio of GDPs. The specific indicators for agriculture differ from indicators of other sectors as presented in Table 14.3. This sub-section concentrates on the actual impacts of the FTA on environmental issues in the EU and Ukraine. The FTA could however include also provisions for upgrading environmental standards and include the environment as a sustainable factor for long-term development at an early stage – this will be done in Chapter 19. Also some issues need to be addressed at a more disaggregated level in order to show clear effects.

Table 14.3 Environmental specific indicators

Environmental Core Indicators	Specific Indicators	Agricultural Indicators
a) Atmosphere	CO2 emissions, air pollution and ozone depletion	CO2 emissions from animal farming and biodegradation of agricultural waste, NH3 emissions
b) Land	Land use, use of raw materials and natural resources, management of contaminated sites	Total utilized agricultural area, soil quality (fertilizers in soil), reduction of erosion, organic farming area
c) Biodiversity	Acid rain, heavy metal contamination, ecosystem damage	Size of protected natural areas, number of endangered species
d) Environmental quality	Waste management, use of energy, energy efficiency, noise pollution	Agricultural hazardous waste, use of renewable energy in agriculture
e) Fresh and waste water	Quantity of water use, ground water quality, quantity of waste water, cleaning of waste water	Nutrients (N and P) going into waterways, irrigation water quantity, number of rural waste water treatment (WWT) plants

Note. CO2 emissions include all greenhouse gas emissions recalculated as CO2 emissions.

14.3.1 Overall environmental impact of the FTA for Ukraine

The overall environmental impact of the FTA for Ukraine culminates around the following crucial issues:

- Harmonisation of legislation to meet the EU Environmental *Acquis*;
- Reducing the environmental damage at hot spots;
- Decoupling pollution and economic growth;
- Improving the BEI and FDI inflows;
- Increasing energy efficiency;
- Introducing best available techniques in metallurgy and energy sectors; and
- Compensating increased greenhouse gas emissions with Joint Implementation (JI) and emission trading with the EU partners.

The bullets above are modelling assumptions to show decreasing NTBs, standard costs and border costs and should not be seen as fulfilled. Rather they are the concrete means to be able to model NTB reductions in the FTA and EA, not accomplished policy measures. For the latter, we refer to the next Chapter.

It is expected that the harmonisation and regulatory approximation related to environment and adoption of new production technologies will provide the necessary basis for stopping the rapid depreciation of environmental assets and overcoming the environmental damage of the Soviet period. Without any changes, an FTA could just make many environmental problems worse. Implementation of the main provisions of the Environmental *acquis* should prevent shifting of dirty industries and stop negative environmental trends for:

- Consumption of natural resources, including water and land use;
- Pollution of ambient air, water and soil, disposal of waste;
- Destruction of habitats, wild life and natural landscapes;
- Emergency situations;
- State of public health.

The FTA negotiations aim to boost the process of regulatory environmental approximation to EU standards, so in general the Ukrainian environment may significantly benefit from the FTA, especially in industrial areas. Currently there are numerous environmental hot spots, mainly in Eastern Ukraine, but also in abandoned production locations in its Western part. Many of them are on the verge of becoming real environmental disasters.

The share of the fuel and power sector in Ukrainian industry is twice as much as in France, Germany or Italy and the share of metallurgy is almost three times more. “Dirty” industries prevail in the national economy as they have more than forty percent of key assets and are responsible for about one third of overall industrial output. The increase in the production of these industries –as estimated e.g. for metallurgy- can lead to further environmental problems.

The approximation of the Ukrainian environmental legislation and government procurement system with the EU *acquis*, should prevent the tendency to go back to the catastrophic pollution levels of the late Soviet period and to ensure steady growth of environmental expenditures. These goals are especially important now, as since 1999, the

recovery of the Ukrainian economy has started, and environmental performance is one of the main indicators when assessing competitiveness and sustainability of businesses. Approximation of government procurement system could also increase funds for environmental projects with better budget management.

The major environmental impacts are connected with ferrous metallurgy and the energy sector. They are listed as priority sectors in the practical implementation of the Kyoto mechanisms and provisions of the IPPC directive. Implementation of the European concept of best available techniques for main industrial sectors can improve environmental regulation and environmental performance of main polluters.

The FTA can also help to develop environmentally clean and sustainable sectors as tourism, IT and communication services. At the same time the overall development of the Ukrainian economy and expected implementation of big infrastructure and transport service projects will be connected with new land use problems and may lead to moderate increases of green house gas emissions and some air pollutants.

14.3.2 Overall environmental impact of the FTA for the EU

In the long run the environmental success of the FTA for the EU will depend on how the following crucial issues are managed:

- Managing greenhouse gas emissions;
- Avoiding trade distorting environmental aid;
- Harmonisation of technical standards; and
- Harmonisation of procurement and competition policy.

This chapter summarises the key environmental issues and potential impacts to be taken into account while negotiating the Ukraine-EU FTA. The overall magnitude of environmental impact for the EU is assessed to be modest or negligible depending on the indicator. This difference in the significance between the EU and Ukraine is mainly related to the fact that the current GDP of the EU exceeds that of Ukraine by 100 times. Another defining factor is the difference in the level of environmental performance; Ukraine is lagging far behind the EU in energy and resource use efficiency, waste management, pollution abatement and public health indicators.

Managing greenhouse gas emissions

The amount of CO₂ emissions resulting from the FTA will increase in the EU. Therefore the FTA would benefit from promoting greenhouse gas emission reduction projects against increased access to the EU market (e.g. metallurgy, agriculture and machinery). This type of interaction would not be trade distorting, and would be beneficial for all parties involved. It is assumed that the other EU energy sector issues, like security of energy supply, related to the EU- Ukraine FTA are addressed under the ongoing energy dialogue.

Avoiding trade distorting environmental aid

Environmental projects have traditionally been mainly supported by international grants in Ukraine. The FTA needs to regulate the rules how and where state aid and international

grant funding should be channelled in the future. Especially metallurgy, agriculture and energy sector subsidies require special attention. In terms of environmental impacts the governing policy rule should be that all ex-ante and ex-post evaluations of state aid would include agreed scopes of environmental assessment.

Harmonisation of technical standards

Removal of barriers of trade is the fastest way to economic growth. Technical standards constitute one of the key issues, and technical specifications on environmental performance have to be harmonised with international and EU standards with a focus on performance rather than detailed design specifications. Strict health and safety regulations are needed especially for livestock, food and feed products.

Harmonisation of procurement and competition policy

Environmental impact assessment (EIA) for entities operating in the utilities sector, being state or private enterprises, should not be excluded from the procurement procedures, and prior to accepting exceptions from procurement procedures environmental health and safety safeguards need to be cleared. The competition policy aims at ensuring that all companies operate on a level-playing field and it ascertains that government interventions do not interfere with the smooth functioning of the internal market or harm the competitiveness of companies. However, increased competition can affect negatively especially the greenhouse gas emissions, atmospheric pollution, water use and waste water indicators. Environmental standards applied to industrial sites with reference to the environmental *acquis* could alleviate the negative effects significantly.

14.3.3 Atmosphere

CO2 emissions

Growth in the metallurgy, machinery, energy and transportation sectors will likely lead to negative environmental impacts with respect to CO2 emissions (energy in the short-run) as well as to greenhouse gas emissions in general. For machinery & electronics, there is evidence of increased (though for the EU negligible) SO2 and NOx emissions. Production upgrading and the use of 'cleaner' technologies are impacts expected to occur because of the FTA can mitigate these effects somewhat. If energy restructuring leads to an intensified use of coal as the main source of energy, this may have very negative environmental impacts due to the pollution of the current coal mining process itself and because of the use of coal for electricity generation (Ukrainian coal contains a high level of polluting sulphur).¹⁰⁶ A smaller transport sector, combined with expected standard upgrading (e.g. car emissions from Euro-2 to Euro-5 level) is expected to lead to lower CO2 emissions. Competition policy is thought to have mixed effects on CO2 emissions: initially environmental concerns may be neglected due to competitive pressures, but in the long run, environmental aspects will be priced into the market. Government procurement system improvements can have significant positive impacts on CO2 emission reductions. A first example of this development could be the 'green scheme' of the Kyoto protocol. Ukraine signed the Kyoto protocol but remains below the boundary

¹⁰⁶ However, if Ukraine joins the Memorandum of Understanding on Energy or the Energy Treaty, these effects are addressed and mitigated.

of emission rights, increasing potential for higher production or re-allocation of production from somewhere else.

For the EU the FTA has potential impacts of the CO₂ emissions in that the FTA may prompt re-location of the EU industries to Ukraine that may reduce CO₂ emissions in the EU. Also, in the short run, when polluting industries grow, CO₂ emission levels in the eastern part of the EU may increase and only in the longer run decrease again.

Air quality

Revival of the agricultural industry and productivity increases can lead to more intense use of pesticides used for crop (e.g. cereals, fruits) protection.¹⁰⁷ If the number of livestock increases, more methane gas is going to be produced in agricultural areas. Manufacturing sector growth like metallurgy can have a negative impact on air quality due to increased levels of chemicals in the air and greenhouse gas emissions. In general, aerial pollution in Ukraine is significant with greenhouse gas and SO₂ and NO_x emissions into the atmosphere and it is likely to increase. Moreover, since air does not stop at borders, these environmental effects also partially spill over to the (eastern) EU. Also, a shrinking transport sector is expected to lead to less emissions and improvements of air quality. Competition policy and government procurement can have similar effects as mentioned above under 'CO₂ emissions'. The EU effects mentioned under CO₂ emissions apply equally to air quality.

Quantity of dangerous chemicals in atmosphere

In line with the arguments presented in the previous impact descriptions, agriculture growth may bring associated problems with eutrophication and the use of chemicals and dangerous pesticides. Like in the cereals sector, increased fruit production may lead to increased use of fertilisers and pesticides in order to increase fruit production output. This will have adverse environmental effects. Metallurgy growth leads to potentially more chemicals in the air and greenhouse gas emissions. Also aerial pollution is significant and is likely to get worse unless the FTA clearly breaks with past Ukrainian (energy) production methods and sets new standards.

14.3.4 Land

Land use in agriculture

Livestock increases in the meat production sub-sector of agriculture, and the gross inefficiencies in production can have a negative impact on land use in agriculture. Increased amounts of livestock also potentially bring problems with methane gas and phosphates and nitrates – though Ukraine is still far from the level of urgency of these issues that has been reached in the EU.

Desertification

Especially open coal mining, and the use of hearth furnaces, are expected to have a continuing negative impact on Ukrainian lands. If in the short run, the coal industry will

¹⁰⁷ FTA provisions could cover these issues in flanking policy measures as will be explained in Chapter 15.

grow this effect may exacerbate.¹⁰⁸ More intense use of agriculture is also likely to lead to a ‘giving land back to nature’ tendency. No significant EU effects are expected.

Urbanisation

We expect migration effects from rural agricultural areas to the cities to continue and even be encouraged by the FTA because of growth of manufacturing and services sectors relative to the agricultural sector. Wage differences that increase over time between cities and villages will also lead to more urbanisation. For the EU no significant effects are expected.

Natural resource stocks

The FTA is expected to lead to an increased use of natural resources, but less so than the growth rates of certain sectors would predict because the FTA in the longer run also facilitates and encourages more efficient energy use and ‘cleaner’ means of production. The use of coal, oil and gas is expected to increase because of increases in production. In the meat sector, the number of livestock will increase and the concept of bio-industry may be gaining ground to combat gross inefficiencies of many pig-breeding and cattle-breeding enterprises and outdated production methods.

14.3.5 Biodiversity

Number of species

There are no indications that the FTA will have a significant impact on the number of species in Ukraine or the EU.

Protected areas

There is no significant impact of the FTA on protected areas. However, the increased attention in the FTA for environmental concerns can have a positive impact on real protection of protected areas and increase their number and size. Inclusion of sustainable development in government procurement procedures and Ukrainian authorities’ thinking will also have an impact. Next to this being a model assumption, it also will come back in Chapter 15 as a policy recommendation.

Ecosystem

The ecosystems in Ukraine and the EU may – to a limited extent – be affected by the FTA. Livestock increases and meat production bring with them the problem of eutrophication, increased agricultural production may increase the use of pesticides and chemicals in the air and water and waste pollution of metallurgy and energy production can also negatively affect the ecosystem. Less transport services lead to improvements (read: decreases) in CO₂ emissions but in the long run, when transport services start to grow this effect may be reversed. Longer run effects involve upgrading to ‘cleaner’ production methods and investments in waste processing. Ukraine signed the Kyoto protocol but remains under the boundary of emission rights, increasing potential for higher production or re-allocation of production from somewhere else. For the EU the

¹⁰⁸ The impacts of the envisaged government procurement that include environmental standards and an attitude of awareness in general for environmental issues, can lead to combating desertification.

small impact may be an improvement of the ecosystem due to re-allocation of industries to Ukraine and due to re-allocation of some agricultural production to Ukraine – both of which reduce the pressure on the EU ecosystem.

14.3.6 Environmental quality

Waste management

Waste management applies mostly to the energy sector, metallurgy and chemicals sectors. The FTA is expected to lead to more wastewater production but also to more environmental care to address the management of waste production through FDI and production upgrading. Wastewater increases involve toxic side-products in metallurgy production, coal mining and gas transport through pipelines (gas leakages). Especially wastewater management in the Black Sea region is also potentially affecting the EU as Ukraine's sea waters are close to those of Romania and Bulgaria, EU member states.

Energy resources

Traditionally, many energy resources have been and are wasted in Ukraine through inefficient extraction methods and the use of heavily outdated and energy wasting production equipment and methodologies. In the short-run, our analysis expects the FTA to lead to increased coal production and increases in CO₂ emissions. Only in the long run, and after significant investments, the FTA may lead to significant improvements in the creation and use of energy resources. Growth of the economy and specific sector growth will lead to the use of much more energy. Through investments, foreign and domestic, the FTA can enhance production techniques and reduce leakages of energy in metallurgy production, machinery production, chemicals production, etc. This will make the sectors more competitive (important in an age of rising energy prices) and energy-efficient. Coal extraction is very inefficient in Ukraine and so is electricity generation, which leads to negative impacts on Ukrainian ecological standards. In addition to the traditional sources of energy, sunflower seed oils and cereals are more and more used as bio-fuels.

For the EU an intensified agreement with Ukraine has the potential impact of higher energy security and increased energy interdependency. Through EU funds and FDI, the Ukrainian energy sector may increase efficiency and energy exports to the EU.

14.3.7 Fresh and waste water

Quantity of water use

Overall, water use is expected to increase because of the FTA as water is used for irrigation in agriculture, input in metallurgy and machinery production. Also, macro-economically, if incomes rise, consumers start using more water. For the EU, no impact of the FTA on quantity of water use is expected.

Access to safe drinking water

There are potential negative effects of environmental and wastewater pollution on access to safe drinking water. This FTA impact has however not been found, neither for Ukraine, nor for the EU.

Water quality

Ukraine has to be careful with the water quality – keeping in mind the enormous pollution of water in the late Soviet period – when more fertilisers and chemicals are used in agricultural production (e.g. cereals, fruits). Also the metallurgy sector seems to create a negative environmental impact by water and waste pollution generation. However, we need to note that economic growth in general has these environmental impacts unless sustainable growth allows policy makers to address the polluting issues *ex ante*. The FTA is expected to lead to more growth and thus to growth of industries that can affect the water quality. There is space for flanking measures here. For the EU, FTA impacts on water quality are not found.

Quantity of waste water

The quantity of wastewater in Ukraine is expected to go up due to sector growth as a consequence of the FTA. Especially in metallurgy this environmental impact is expected. For the EU no such effects are found.

Cleaning of waste water

Regulatory approximation of environmental standards envisaged are designed to lead to higher environmental standards, including the cleaning of waste water (see also the section on water quality above). However these effects will be dominated by the increased need of cleaning of wastewater due to larger amounts of wastewater production as a consequence of the FTA. For the EU impacts in cleaning of wastewater are not found.

Water supply

The FTA will impact the utility companies by introducing more market access and thus competition as well as increased competition in the government procurement markets. These improvements in public utilities as a consequence of the FTA can have a positive impact on quality and productivity of water utilities, including the water supply. For the EU no significant impacts of the FTA on the water supply are envisaged.

15 Mitigating and enhancing policy measures

15.1 Introduction

The CGE analysis and in-depth analysis have made the advantages and disadvantages of the FTA clear by showing the economic, social and environmental impacts. Many people, and the Ukrainian economy as a whole, will benefit, but some people will lose. It is to the stronger impact outcomes of the analysis, both positive and negative, that we now turn. From an economic viewpoint, the social and environmental effects are positive or negative externalities that have to be strengthened or dealt with in order to reach the sustainability goals set at the outset of the FTA. This Chapter will provide some sustainable policy recommendations flanking the FTA outcomes.

Given the TSIA structure, we start by looking at what is an optimal set of policies. In sections 15.3 and 15.4 we look at policy measures, both mitigating and enhancing, that have to be dealt with from within the FTA, the EA, the EU private sector development (including partners) or the Ukrainian authorities.

15.2 Choosing the optimal set of policy measures

How is a 'right' structural set of mitigating and enhancing policy measures chosen, especially when keeping sustainability issues as a top priority? Rodrik (2004) provokes economic science – once again – by stating that (developing) countries that want to increase their growth performance do not just have the luxury of following a short list of 10 or 20 policy reforms to spur growth.¹⁰⁹ Instead a specifically designed set of policies accompanied by legal transformation and focus on implementation and enforcement is required. To devise flanking measures, the academic literature draws heavily upon the theory related to (positive and negative) externalities. Without going into the theoretical details, there are two approaches: the normative analysis and the positive analysis. This is presented in Table 15.1 below.

Table 15.1 Normative and positive policy analysis

Normative analysis	Positive analysis
Static efficiency	Political pressure from interest groups
Information intensity	Geographical distribution
Ease of monitoring and enforcement	Social/cultural influences

¹⁰⁹ Rodrik, Dani (2004), 'Rethinking growth policies in the developing world' – Luca d'Agliano Lecture in Development Economics, October 8, 2004.

Normative analysis	Positive analysis
Flexibility in the face of economic change	
Dynamic incentives	
Political considerations	

Normative analysis is based on efficiency and benchmarking to choose the set of instruments. Bohm and Russell (1985) have developed a list of such criteria as presented below. Positive analysis tries to explain why one instrument (or combination of instruments) was chosen over another set (Kathleen, Segerson, 1996). Instead of looking at normative analysis, the positive analysis looks at the factors that influence the outcomes and process that lead to establishing the instruments.

When proposing our flanking policy measures, we also keep in mind the Tinbergen rule, stating that a government can only achieve any number of policy objectives if it has at least the same number of independent policy instruments available (Tinbergen, 1952).

15.2.1 Normative analysis

The normative analysis looks at the economic efficiency of a flanking measure as such and is therefore closely linked to the economic analysis conducted in Phases 1 and 2. When applying the normative analysis to the FTA between the EU and Ukraine within the framework of the Enhanced Agreement, some interesting observations can be made, given the specific character of the FTA and EA.

- Static efficiency (NC1).¹¹⁰ The proposed policies need to enhance (at least) static efficiency in the Ukrainian economy. For example, tariff reductions under the FTA lead to overall welfare gains for Ukraine because consumer surplus gains outweigh producer considerations and approximation of standards of production lead to lower adaptation costs in the end. Both measures increase static efficiency;
- Information intensity (NC2). The proposed policies need to enhance information intensity. In Ukraine, given the historical Soviet and subsequent transition development, the free use of information is an issue that people need to become more used to. For Ukraine, a good example of a measure that encourages information dissemination is government procurement regulation. We argue for costless, transparent and full dissemination of tender information for government procurements;
- Ease of monitoring and enforcement (NC3). When proposing policies to flank the FTA expected outcomes, we watch carefully that the instruments are easy to monitor and enforce or in line with monitoring and enforcement already occurring for other policy objectives. This is especially important for the FTA between the EU and Ukraine. It means that we aim to include incentives in the regulations that drive the economic actors in the envisaged policy direction;
- Flexibility in the face of economic change (NC4). The proposed policies need to be flexible and allow for adaptation in case the economic situation of Ukraine is

¹¹⁰ NC1 = Normative Criteria 1; We will use the normative and positive criteria to check against every flanking measure we propose.

changing. This means that for example, support for restructuring can only be short-term transitional support and a focus on training and acquiring (vocational) skills and education is the more important;

- Dynamic incentives (NC5). The policy measures proposed need to address carefully – and in light of the research outcomes of Phase 2 that show the importance of dynamic effects of the FTA – and decisively the issues of increases in FDI and desire for R&D as well as upgrading of production and productivity in all sectors and industries;
- Political considerations (NC6). When devising a set of flanking policies, we need to keep in mind that the FTA is a structural shock from which some benefit and others don't. This is likely to lead to political and lobby reactions from those who are expected to lose out. For example, the estimated negative impacts on the coal mining industries will be challenged. Or proposals to change the institutional structure surrounding Ukrainian government procurement, de-politicizing the process, may lead to 'invisible' resistance.

15.2.2 Positive analysis

The positive analysis adds a few interesting insights to the discussion on flanking policy measures, insights, that do not become clear when conducting the economic analysis and insights, we feel are important to guarantee maximum impact and possibility for successful implementation. When applying the positive analysis to the FTA between the EU and Ukraine within the framework of the Enhanced Agreement, some interesting observations can be made, given the specific character of the FTA and EA.

- Political pressure from interest groups (PC1).¹¹¹ The imbalance of 'political pressure power' in Ukraine between the different players is large. It is to be expected that flanking measure by the Ukrainian authorities (economic, social or environmental) will be easiest to develop and implement if they are not detrimental to vested interests. However, the conflict between producer interests on the one hand and environmental and social communities on the other, may yield very different results than in Western European societal cultures;
- Geographical distribution (PC2). Several expected outcomes of the FTA lead to regional effects. For example if the agricultural sector is benefiting a little, but misses out on digital developments and if the metallurgy and machinery industries are likely to gain, economic redistribution effects inside Ukraine are expected. These redistribution effects are challenging to deal with from an economic point of view, but even harder to address given the political sensitivities in Ukraine, relating to social, political and cultural differences across the country. On top of this, strategic behaviour may occur amongst political representatives if intended improvements in social and environmental aspects take the form of a widely dispersed public good. This could, for example, apply to subsidies for cleaner technologies to mitigate negative environmental impacts. It remains the question who then benefits from the flanking measures;
- Social & cultural influences (PC3). Any policy measure that mitigates or enhances the expected FTA impacts has to be viewed in light of the social and cultural context

¹¹¹ PC1 = Positive Criteria 1; We will use the normative and positive criteria to check against every flanking measure we propose.

in which it is applied. The reason is that by affecting the costs and benefits of the FTA, it affects groups within the Ukrainian society and implicitly establishes rights and duties related to who will be protected from environmental and social damage and who has the right to inflict such damages. However, the policy measures and their impacts are strongly influenced by the public perception regarding the acceptability of certain actions, which are in turn influenced by society.

15.2.3 Some conclusions on the optimal set of policy measures

While negotiating and subsequently implementing the FTA – including flanking measures – both the EU and Ukraine need to be aware of the political pressure and geographical distribution effects the FTA and its mitigating and enhancing measures have and the socio-cultural environment in which they are being implemented. These factors, no matter how normatively optimal the policy measures are, may yield different outcomes.

It is therefore imperative to keep the following risks and challenges in mind for the FTA (and EA):

- The abovementioned factors may be the cause why the developed regulations and liberalisations may not lead to internalised social and environmental externalities even though they set out to do exactly that. So the FTA may not result in the ‘envisaged’ sustainable outcomes;
- Given the historical development and short time period in which Ukraine had the possibility to work actively with civil society and consequently the relative inexperience on the part of both Ukrainian authorities and Ukrainian civil society with policy influencing and dialogue, it is imperative that the EU take into account the views of different stakeholder groups in Ukraine, both during the negotiations and during the implementation of the FTA and its flanking measures. Otherwise the FTA may not lead to optimal mitigating measures for sustainable development;
- Support for the FTA throughout Ukrainian society and its regions is crucial for its success. Without broad support, the FTA will not yield significant (sustainable) impacts. Therefore, the EU and Ukraine need to take care to involve, listen to and react to concerns in society and regions and create ownership among Ukrainians to achieve sustainable development.

The overview of mitigating and enhancing measures is given in Figure 15.1. There are two approaches to mitigating and enhancing measures: the legal approach through regulation and the economic approach through economic instruments. It is a large mix of instruments that can be employed in order to generate the desired outcomes – taking into account the aforementioned challenges.

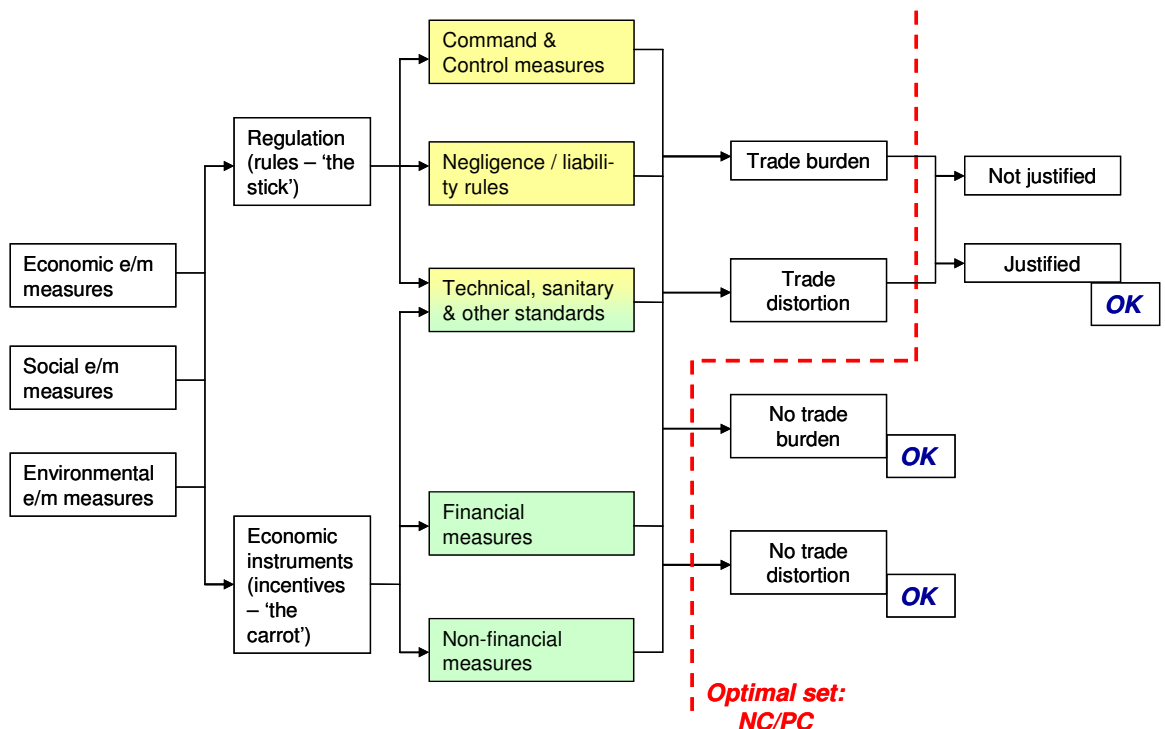
Schematically, we need to look at:

- What measures to employ (from Command & Control to Non financial measures);
- Check whether these measures create trade burdens or distortions;
- Check whether they meet the normative and positive criteria for an optimal policy mix (the dotted line);
- If the measures create a trade burden or distortion, check whether these are justified;

- Then determine the flanking measures to be imposed: those that do not create trade burdens and/or distortions and those that do but are deemed justified.

Several flanking measures that do not create trade burdens or distortions may be implemented. But regarding several environmental and/or social regulations and economic instruments, we may create trade distortions or burdens knowingly because they fit in the ex ante agreed decision making framework as 'justified'.

Figure 15.1 Mitigating and enhancing measures - overview



15.3 The FTA as part of the Enhanced Agreement (EA)

EU – Ukraine relations since the late 1990's have been shaped by the Partnership and Cooperation Agreement (PCA) of 1998, which includes the EU – Ukraine Action Plan (February 2005), specifying the policy objectives for supporting Ukraine's reform agenda. The PCA will be replaced by the Enhanced Agreement (EA), which is currently being negotiated.

Official assistance of the EU to the Ukraine over the 2007 – 2013 period, as outlined in the Country Strategy Paper (CSP) will be provided under the new ENPI. The principal objective of cooperation at this stage is to develop a relationship that goes beyond the levels of past cooperation to gradual economic integration and deeper political cooperation, including foreign and security policies. Support to the Ukraine is therefore focused on a selected number of key areas including:

- Democratic development and good governance;
- Regulatory reform and administrative capacity building;

- Infrastructure development, in particular in the transport, energy and environment sectors.

The CSP and ENPI specify the means and modes of EU assistance to the Ukraine, while the PCA, Action Plan and EA focus on policy objectives for cooperation and approximation between the Ukraine and EU. EU assistance should by definition be aligned to these policy objectives and as such can be used for supporting flanking measures for an FTA. Indeed many of the policy recommendations made in this report can be found in some form or other in these existing plans and programmes.¹¹² Flanking policy measures for enhancement or mitigation of the economic, social and environmental FTA impacts must thus be seen in the broader context of EU-Ukraine relations, the more so because trade policy is limited in its scope for addressing non-trade issues.

Although the EA has not yet been concluded, its broad outlines include a five-pillar structure, with an FTA forming the second pillar. The five pillars consist of:

1. Setting up an institutionalised political dialogue on common values in line with mutually accepted general principles governing future relationship between the EU and Ukraine;
2. Establishing a WTO compatible FTA for goods and services including binding disciplines in non-tariff and regulatory areas;
3. Specifying provisions regarding energy;
4. Provisions on cooperation in a broad range of areas of mutual interest;
5. Developed institutional structures to ensure effective implementation of the Agreement (including dispute settlement mechanism).

Thus the FTA is just one of the elements of the cooperation between the EU and Ukraine and similarly just one of the instruments to guide EU-Ukraine relationships, albeit one with substantial possible impacts. In the remainder of this chapter we will focus on concrete flanking policy recommendations, divided by policy measures that are directly related to the FTA and non-FTA policy measures, which would have to be covered under other agreements, or national policies.

15.4 FTA related policy measures

The in-depth assessment of sector specific and overall economic, social and environmental impacts has enabled us to identify the main economic, social and environmental issues that need to be addressed through policy measures. We have divided our policy recommendations into FTA related and ‘Broad’ policy measures.

¹¹² Where possible and necessary we will therefore refer to these.

15.4.1 Issues to be kept in mind

Before elaboration on actual policy measures recommended to address these various impacts there are a few issues that need to be kept in mind.

Institutional setting and rule of law

Most of the potential sustainability issues have not been experienced in Ukraine before. Efforts to improve social and environmental quality are recent. Because of this, especially concerning social and environmental sustainability, many of the structures required for the mitigating (flanking) measures do not yet exist. This is especially important, for example, for SPS approximation and Technical Standards. In cases where a political and economic consensus exists, there is usually a fully effective regulatory body, which is not the case for Ukraine in many instances. The role of the EU in acting to mitigate the negative sustainability consequences of the EU-Ukraine FTA could find its way through support efforts in institutional design, research efforts and an EU-Ukraine educational dialogue.

The sectors where the sustainability impacts have been most noted are the greatly (economically) benefiting manufacturing industries. As the sustainability impacts are closely related to existing effects, the mitigating measures must address the underlying situations affecting these sectors. In developing the approach, an important question to be asked is why an existing regulation has not already been effectively addressed. This may be due to lack of resources (trained personnel, financial resources), to a sub-optimal regulatory system or to a lack of consensus about objectives, leading to evasion of regulation.

A crucial part of the institutional setting is the implementation and institutional approach to implementing an objective ‘rule of law’. This is perceived by policy makers and businesses as an important problem. Judicial reforms, independence of the judiciary, and an effective fight against corruption at all layers of the administration/society are crucial for the success of the FTA.

Technology transfer

In a number of sectors in Ukraine there are factories that do not have access to pollution-reducing technology, although other companies may well have this access. The objective of technology transfer as a mitigating action is to provide the technical means to reduce various forms of pollution that would otherwise result from increased production from the EU-Ukraine FTA. The sectors where such an action could prove useful include mining and metals, food processing, chemicals, and machinery & electronics. Care will have to be taken to avoid giving unfair advantages to plants that are assisted with technology transfer and to avoid providing a disincentive to companies to invest themselves in pollution reducing equipment.

Monitoring

Periodic monitoring and evaluation should analyse the impact of the EU-Ukraine FTA (and thus implicitly the projections contained in this study); and the relevance and impact of the mitigation and enhancement measures adopted. The aim should continue to be to understand why, how and where sustainability impacts occur; what can be done to

ameliorate the sustainability impacts; and what counteracting policies do and do not work and why. The aim of monitoring and evaluation is thus both continuing analysis and policy prescription and should cover both the trade policy itself and the mitigating measures.

Invisible resistance

We imagine invisible resistance against several policy measures from those who lose out – as is to be expected. This resistance can come from all corners of society and tends to be gathering in momentum faster than the support from those who benefit economically. For example, changes to improve the government procurement system are expected to significantly reduce the level of alleged corruption. This may cause resistance against those policy changes even though they are beneficial for Ukraine as a whole. Another example is the potential for abuse of funds when we recommend monetary or fiscal incentives in support of the environment or short term adjustment support for specific sectors. Caution is in order to design such incentive schemes in light of the set of normative and positive policy analyses provided above.

Foreign direct investments

A stable political and macro-economic climate is of highest importance for investment and FDI inflows. Given the importance of investment and FDI for several sectors in the Ukrainian economy (agriculture, metallurgy, machinery and electronics, etc.) and for social and environmental policy, and given the enabling nature of investments, all policies need to adhere to the idea to enhance inward investments.

Ukraine's WTO accession

Throughout this study, we have emphasised that our conclusions, both in terms of impacts and in terms of policy recommendations depend on what Ukraine has already achieved before entering into an FTA (EA) agreement with the EU. Notably, our impacts and policy recommendations are subject to any Ukrainian WTO commitments. This applies to both the FTA-related and broader policy recommendations below.

15.4.2 FTA related policy measures

Many of the policy measures to mitigate or enhance impacts of an FTA formulated below are also part of the ENP Action Plan for Ukraine and to the extent they have not been implemented / fulfilled may likely become part of the Enhanced Agreement. What the impact study allows us to do is identify a number of specific priority areas in relation to economic, social and environmental issues. In addition, the emphasis in the Action Plan is still mostly on Ukraine, while in the context of the FTA, the EU may also adopt some potentially effective flanking measures, as is illustrated in this section.

General – across impacts

In line with our positive and normative policy analysis, we want to mention that the success of policy measures starts with proper drafting of legislation but subsequently depends to a large extent on successful implementation and enforcement. Across the economic, social and environmentally related recommendations and flanking measures, we feel that it is important – as a horizontal issue – that not only legal approximation but mostly attention is given to implementation and enforcement – keeping in mind the ‘rule of law’ in which field also progress needs to be made.

Economic

The main policy measures should be geared at minimising the short-term hurt from structural change in the economy, improve investments and promote entrepreneurship in the Ukrainian economy. FTA policy measures to address economic impact issues may include:

1. **Establishment of a transition period in tariff and subsidies reductions** for (1) the agricultural sector and specifically the meat and oils sub-sector, the beer & wine sub-sector and the sugar & confectionary sub-sector; (2) Machinery and Electronics sector; and (3) the services sub-sectors transport, financial services and retailing. These transition periods should be determined through an assessment of the restructuring needs and time for each (sub)sector, and accompanied by a clear restructuring plan with timetable and monitoring system.
2. **Improvement of the investment climate** through trade facilitation measures (e.g. border cost reductions, streamlining customs procedures), competition policy (e.g. reductions in state aid: phase out subsidies, tax exemptions, and other forms of state aid) and strengthening market forces (e.g. continue on the transition path to deregulate many industries, pursue privatisation policies to promote national competition and strive for structural reforms). Also imperative for an improved investment climate is to watch over intellectual property rights, and have an open government procurement system that is approximated (legally and with respect to practical implementation) to EU standards. Land ownership reforms are imperative as well to spur investments. The restructuring programme and trajectories followed by the steel sectors in the new EU member states and accession countries could serve as an example of how to set up such programmes while learning from the experiences of these countries.
3. **Promote entrepreneurship and SME development.** In part this would be achieved through improvement of the investment climate and further development of the SME policy, but a number of additional measures, sometimes linked to social policies (see below) could be beneficial as well. For instance:
 - training and education (addition of curricula on entrepreneurship in higher education, vocational and professional training schools, business administration, etc.);
 - making the tax and social security system conducive to entrepreneurship.
4. **Enhancement of approximation and adoption of EU SPS and technical standards** – particularly in agricultural sectors, transport, machinery & electronics, textiles & wearing apparel – through upgrading of laboratories, revising of SPS and other control systems (certification), capacity building for relevant institutions, etc. Joint

programmes and action plans should be defined and timetables set, which will allow for close monitoring of progress. Most priority needs to be given to SPS issues in the agricultural sector, followed by technical standards in the transport sector.

5. Strong emphasis should be placed on **approximation of the EU *acquis*** in various areas. E.g. services trade, SPS, technical standards, government procurement and intellectual property rights. This will lead to lower NTB levels, greater economic integration between the EU and Ukraine and more benefits from a potential FTA.
6. **Inclusion of a Sustainable development chapter to the FTA**, including a possibility to establish a Trade and Sustainable Development Forum providing for consultation with civil society.

*Social*¹¹³

The main issue to be addressed in the social recommendations is to bring Ukraine in line with international (and EU *acquis*) standards with respect to social considerations like worker safety, labour standards and equal rights for women.

1. **Inclusion of a Sustainable development chapter** to the FTA. Social clauses in this chapter could include for instance:
 - references to the requirement that both parties commit themselves to the effective implementation of core labour standards and other basic decent work components;
 - statement that parties to the agreement will ratify the ILO standards concerned;
 - a requirement for both parties to submit regular reports on general progress to implement all the commitments made under the sustainable development agreement;
 - engagement to respect the OECD Guidelines on Multinational Enterprises and the ILO Tripartite Declaration on Multinational Enterprises and Social Policy, and not to lower labour standards in order to attract foreign investment;
 - a system where complaints about social problems should be subject to consideration by genuinely independent and well-qualified experts;
 - possibility to establish a Trade and Sustainable Development (SD) Forum providing for consultation with civil society, including workers' organisations, employers' organisations and NGOs, with a clearly defined, appropriate balance between those three groups of members.
2. Conduct, within the scope of the sustainable development mechanism, **ex-post impact assessment studies to evaluate impacts** in particular areas of concern (e.g. as commissioned by the SD Forum and identified through a review mechanism based on civil society consultations).

Environmental

The main goal of the environmental flanking policy measures is to mitigate the potential negative impacts on the environment as a consequence of the FTA. FTA policy measures to address environmental impact issues may include:

1. **Sustainable development chapter to the FTA**. Environmental clauses in this chapter may include for instance:
 - commitment to multilateral environmental agreements, such as the Kyoto Protocol;
 - creating a system of standards for objective measurement of pollution;

¹¹³ We would like to thank the International Trade Unions Confederation and the European Trade Unions Confederations for their contributions to this section.

- engagement to respect the IPPC directive and focus on practical implementation;
 - working towards ratification of the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone;
 - promote voluntary Environmental Management Systems;
 - engagement with respect to the Kyoto protocol guidelines;
 - possibility to establish a Trade and Sustainable Development Forum providing for consultation with civil society on particular areas of concern in the context of environmental impacts.
2. Incorporate the **upgrading of Ukrainian engine technology** to EU standards (currently Euro-4 or Euro-5) and provide incentives for the upgrade like access to the EU or lower environmental tax obligations.
 3. **Tie the speed** at which sector liberalisation takes place, i.e. may produce and export to the EU (support trade and services flows) **or obtain other benefits to the level of environmental progress** in that sector.
 4. Fast-track for **trade liberalisation in environmental goods and services** between the EU and Ukraine.
 5. Include **environmental standards** in discussion about state aid reductions and competition policy.
 6. Temporary **funds for upgrading production methodologies** and inclusion of environmental concerns in production can be provided by the Ukrainian authorities.
 7. Include **environmental standards in government procurement tenders** – e.g. in the evaluation grids of government procurement tenders.

15.5 Non-FTA related policy measures

Economic

The main flanking policy measures addressing economic impacts should be aimed at enhancing the positive effects of investments, restructuring and modernisation and SME development:

1. Improvement of the **Investment Climate** and investment promotion. Policy measures to achieve this range from the promotion of macro-economic stability to reductions in the cost of doing business. More specific measures that could be considered include:
 - infrastructure improvements;
 - reduction of red-tape, cost of setting up a business, obtaining licenses, etc.;
 - investment promotion schemes and incentives;
 - education (see also under social policy measures);
 - promote the ‘rule of law’.
2. Encourage **restructuring and modernisation** of the economy and particularly specific sectors. Such sectors would include coal mining, metallurgy and agriculture. Specific policy measures that could be considered include:
 - develop restructuring programmes for rationalisation (capacity reduction) and upgrading, tied to time-frame and monitoring system;
 - promote rural development schemes through regional policy measures, especially in the short run.
4. Promote developments in the ‘**rule of law**’, especially with respect to implementation. This is perceived as a core problem, also for successful implementation of the FTA. Judicial reforms, independence of judiciary, and an

effective fight against corruption at all layers of the administration/society need to be initiated by the Ukrainian authorities.

5. Encourage **business-to-business contacts** in order to be able to exchange best practices, have EU business serve as specific examples for Ukrainian entrepreneurs and policy makers and develop business links that facilitate production and international trade.

Generally speaking, there is often an overlap between economic, social and environmental policies and in the best case scenario they are even mutually reinforcing.

Social

The main flanking policy measures to mitigate negative and enhance positive social FTA impacts relate to the improvement of employment, core labour standards and decent work principles, education, migration, overcoming regional differences and promoting equality. Generally speaking, the involvement of social partners and civil society in the design and implementation of social policies is recommended. This would imply the need for an inclusive approach by Ukrainian authorities and the need for capacity development to act as legitimate and well informed partners for dialogue from the part of the social partners and civil society.

More policy measures include:

1. Encourage **employment creation** and promote **improvement of labour conditions**.
The FTA is expected to have an overall positive impact on employment and on labour circumstances in terms of health and safety standards. These effects could be further enhanced through a number of flanking policy measures including for instance the following:
 - Promotion of **SME development and entrepreneurship** (see point 3 under economic policy measures) as new sources of employment creation;
 - Support **adoption and implementation of EU labour standards and decent work principles** in Ukrainian business and society. The experience of EU accession countries demonstrate that successful adoption of such standards requires time and capacity building. In Poland, for instance, the adoption of the EU occupational safety and health (OHS) *acquis* took place in three stages: (1) transposition of the EU *acquis* and directives; (2) development of organisational and technical solutions supporting enterprises in implementation of the OSH regulations; (3) Enforcement of new regulation, dissemination of good practices, training and education, implementation of tools, promotion of OSH management systems, etc. In Latvia the entire process took at least 10 years. Experiences in New Member States also illustrate the importance of the involvement of key stakeholders in the different steps of this process, including for instance the Labour Inspectorate and the Social partners. Finally, experiences in these countries illustrate the difficulties that particularly SMEs encounter in effectively adopting such standards. These experiences should be taken into consideration when developing policies for the improvement of labour circumstances in Ukraine.
2. Provide **skills retraining** in short run and refocus and improve **training and education** system in Ukraine for longer run:

- provide skills retraining for workers in sectors set to decrease employment (e.g. agriculture (short run), coal mining and transport services;
 - cooperation with EU education system and promotion of educational exchanges, resulting in long run achievement of similar levels of qualifications;
 - increased emphasis on professional training and education (addition of curricula on entrepreneurship in higher education, vocational and professional training schools, business administration, etc.) to encourage entrepreneurship and facilitate modernisation of different sectors.
3. **Address migration issues** (labour migration, illegal migration, brain drain) in a concerted and cooperative way:
 - Policy Dialogue Facility for migration issues, dealing for instance with issues related to recognition of professional qualifications and coordination of social security systems, etc.;
 - Promote cultural and other exchanges (e.g. study and/or professional exchange programmes);
 - Facilitate remittances and encourage productive investments of remittances (e.g. through tax exemptions).
 4. Develop **regional strategy** to deal with issues regarding regions suffering from industrial decline and migration (for EU, address this issue through the structural funds instrument).
 5. Work towards approximation of the law on **equal rights of women** with the relevant EU *acquis*.

Environmental

1. Develop a **regional strategy** to deal with issues regarding regions suffering from changes in land use and environmental degradation. Include biodiversity issues and the promotion of alternative land uses, e.g. for bio-fuels.
 - Include environmental provisions in government procurement tenders and make them part of the evaluation grid;
 - Commence negotiations with Ukraine on the Energy Community Treaty;
 - Compensating increased greenhouse gas emissions with Joint Implementation (JI) and emission trading with the EU partners;
 - Increase nature conservation and soil remediation projects;
 - Regulate transport related carbon dioxide emissions (CO₂) and volatile organic compounds (VOC) in accordance with Best International Practice;
 - When devising investment promotion schemes / encouraging inward investments, give priority / provide extra incentives to environmentally sustainable investments, solutions and technologies.

15.6 Conclusions

The Global Analysis Report and in-depth studies of sectors and horizontal issues, have provided us with a wide range of expected impacts as a consequence of the FTA within the Enhanced Agreement.

Overall, within the existing conditions our flanking measures aim to increase economic growth and production in a sustainable way. That is, we focus strongly on the social and

environmental impact policies have. In the short-run support for structural adjustment and production upgrading is necessary. Not only legal approximation but also implementation and enforcement mechanisms for policy recommendations have to be looked at.

Improving the business climate of Ukraine – and consequently drawing in more FDI – is one of the most crucial flanking measures – in order to financially support and engage in the changes that apply to the Ukrainian economy upon signing the Enhanced Agreement. Several policy recommendations are geared towards improving the quality of work, worker safety and health as well as to improving environmental practices. The FTA is expected to lead to higher levels of production that may or may not – in case environmental provisions are successfully included in the EA, implemented and enforced – lead to significant deteriorations in environmental quality of life.

The key **FTA related policy recommendations** include the following as presented in the Table 15.2 below. For more elaborate explanations we refer to the earlier parts of this chapter.

Table 15.2 Key FTA related policy measures

Area	Policy measure
Economic	Establishment of a transition period in tariff and subsidies reductions
	Improvement of the investment climate
	Promote entrepreneurship and SME development
	Enhancement of approximation and adoption of EU SPS and technical standards
	Strong emphasis on approximation of the EU <i>acquis</i> in various areas
	Inclusion of a <i>Sustainable development chapter</i> to the FTA
Social	Inclusion of a <i>Sustainable development chapter</i> to the FTA, including for instance: <ul style="list-style-type: none"> • references to the requirement that both parties commit themselves to the effective implementation of core labour standards and other basic decent work components; • statement that parties to the agreement will ratify the ILO standards concerned; • a requirement for both parties to submit regular reports on general progress; • engagement to respect the OECD Guidelines on Multinational Enterprises and the ILO Tripartite Declaration on Multinational Enterprises and Social Policy, and not to lower labour standards in order to attract foreign investment; • a system where complaints about social problems should be subject to consideration by genuinely independent and well-qualified experts; • possibility to establish a Trade and Sustainable Development (SD) Forum providing for consultation with civil society, including workers' organisations, employers' organisations and NGOs, with a clearly defined, appropriate balance between those three groups of members.
	Conduct ex-post impact assessment studies to evaluate impacts in particular areas of concern
Environmental	Inclusion of <i>Sustainable development chapter</i> to the FTA including for instance environmental clauses for: <ul style="list-style-type: none"> • commitment to multilateral environmental agreements, such as the Kyoto Protocol;

Area	Policy measure
	<ul style="list-style-type: none"> creating a system of standards for objective measurement of pollution; including environmental standards in government procurement; engagement to respect the IPPC directive and focus on practical implementation; working towards ratification of the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone; promote voluntary Environmental Management Systems; engagement with respect to the Kyoto protocol guidelines; possibility to establish a Trade and Sustainable Development Forum providing for consultation with civil society on particular areas of concern in the context of environmental impacts.
	Incorporate the upgrading of Ukrainian engine technology to EU standards and provide incentives for the upgrade
	Tie the speed at which sector liberalisation takes place, i.e. may produce and export to the EU (support trade and services flows) or obtain other benefits to the level of environmental progress in that sector
	Temporary funds for upgrading production methodologies and inclusion of environmental concerns in production can be provided by the Ukrainian authorities
	Include environmental standards in government procurement tenders – e.g. in the evaluation grids of government procurement tenders
	Fast-track for trade liberalisation in environmental goods and services between the EU and Ukraine
	Include environmental standards in discussion about state aid reductions and competition policy

The key **non-FTA related policy recommendations** on the other hand include the following points as presented in the Table below. For more elaborate explanations we refer to the earlier parts of this chapter.

Table 15.3 Key non-FTA related policy recommendations

Area	Policy measure
Economic	Improvement of the Investment Climate and investment promotion by: <ul style="list-style-type: none"> infrastructure improvements; reduction of red-tape, cost of setting up a business, obtaining licenses, etc.; investment promotion schemes and incentives; education.
	Encourage restructuring and modernisation of economy and particularly specific sectors
	Promote developments in the “rule of law” especially with respect to implementation
	Encourage business-to-business contacts
Social	Encourage employment creation and promote improvement of labour conditions by: <ul style="list-style-type: none"> Promotion of SME development and entrepreneurship Support adoption and implementation of EU labour standards and decent work principles
	Provide skills retraining in short run and refocus and improve training and education system

Area	Policy measure
	in Ukraine for longer run
	Address migration issues
	Develop regional strategy to deal with issues regarding regions suffering from industrial decline and migration.
	Work towards approximation of the law on equal rights of women with the relevant EU acquis
Environmental	<p>Develop a regional environmental strategy including the following:</p> <ul style="list-style-type: none"> • Include environmental provisions in government procurement tenders and make them part of the evaluation grid • Commence negotiations with Ukraine on the Energy Community Treaty • Compensate increased greenhouse gas emissions with Joint Implementation (JI) and emission trading with the EU partners • Increase nature conservation and soil remediation projects • Regulate transport related carbon dioxide emissions (CO₂) and volatile organic compounds (VOC) in accordance with Best International Practice • When devising investment promotion schemes / encouraging inward investments, give priority / provide extra incentives to environmentally sustainable investments, solutions and technologies

16 Consultation with Civil Society

16.1 Introduction

Consultations with civil society are at the core of the Trade Sustainability Impact Assessment. ECORYS has therefore taken extensive care of involving civil society at various moments into the development of this report. The involvement of civil society has taken place through the following means:

- Public meetings at the end of each of the three parts of the study;
- TSIA Workshop in Ukraine (Kyiv);
- Online consultations and discussions via the ECORYS trade-sia website;
- Structured interviews with individual stakeholders.

This has resulted in an open dialogue and constructive involvement of civil society both in the EU and Ukraine with regard to this TSIA study.

For Ukraine, CASE Ukraine has identified the following partners:

Table 16.1 List of Ukrainian Key Stakeholders

State Bodies	
Secretariat of the President of Ukraine	Viktor Baloga, Head of the Secretariat, Oleksandr Shlapak, First Deputy Head of the Secretariat Oleksandr Chaly, Deputy Head of the Secretariat
National Security and Defence Council	Vasyl Rogoviy, Deputy Head
Cabinet of Ministers of Ukraine Department on European Integration, Secretariat of the Cabinet of Ministries of Ukraine	Svitlana Kulykova, Director of the Department
Ministry of Economy Department of Collaboration with the WTO Department of Collaboration with the European Union Department of external economic policy Department of Bilateral Economic Cooperation	Viacheslav Tsymbal, Director of the Department Natalia Riabtseva, Director of the Department Vasyl Andriyashchuk, Director of the Department Pavlo Popov, Director of the Department
Ministry of Foreign Affairs of Ukraine Department of economic cooperation Department of cooperation with EU	Sergiy Korsunskiy, Director of the Department Igor Dir, Deputy Director of the Department
Ministry of Finance Department for International Relations and European Integration	Tetyana Yefymenko, Deputy Minister

Ministry of Agricultural Policy Department for foreign economic cooperation	Ivan Dymchak, Deputy Minister
Ministry of Justice State Department for Legislation Approximation	Denys Blinda, Head of the Division
Ministry of Health Protection Medved's Institute of Ecohygiene and Toxicology	Anatoliy Podruzniak, Head of the Department on Ecohygiene and Toxicology-Ecohygiene Expertise of Food Products and Consumer Products
Ministry of Industrial Policy	Dmytro Kolesnikov, First Deputy Minister
Ministry of Education and Science State Intellectual Property Department	Anastasiya Mindrul, Main Specialist, Legislation development division
Ministry of Environmental Protection Department on Euro integration and International Collaborations	Head
Ministry of Labor and Social Policy	Natalia Ivanova, Deputy Minister
Ministry of Fuel and Energy	Sergiy Pavlusha, Department on Euro integration and International Collaborations
Ministry of Coal Industry	Anatoliy Bolotov, First Deputy Minister
Ministry of Transport and Communication Department of External Affairs	Gennadiy Rak, Head of the Department
State Committee for Regulatory Policy and Entrepreneurship Department on Regulatory Policy	Oleg Miroshnichenko, Head of the
State Committee for Technical Regulation and Consumer Policy Department for Strategic Planning and Economic Cooperation	Ivan Sayevych, First Deputy Head
Antimonopoly Committee: Department for International Relations, European Integration and Protocol	Olena Gulakova, head of the Department
State Customs Service Department for International Cooperation	Aleksander Yegorov - Chairman Dmitri Zavtur, head of the Department
National Bank of Ukraine Center for Scientific Research of the NBU	Igor Shumylo, Executive Director on Economic Issues
National Electricity Regulation Commission of Ukraine	Valeriy Tsaplin, Head of the Department
State Commission on Financial Service Market Regulation	Tetyana Korotka, Department for development of financial services market, European and Euro-Atlantic integration
Parliament - Verkhovna Rada Of Ukraine	
Parliamentary Committee on European Integration	Prokopovych N.V., Head of the Subcommittee on Adaptation of the Ukrainian Legislation to the EU Legislation Lanoviy V.T., Head of the Subcommittee on Cooperation with WTO Ivan Kyrylenko, Committee on European Integration
Parliamentary Committee on Social Policy and Labor	Ivan Bondarchuk, Head

Parliamentary Committee on Economic Policy	Mykola Katerynychuk, First Deputy Head
Parliamentary Committee on Ecological Policy, Nature Management and Liquidation of Consequences of Chernobyl Catastrophe	Valeriy Kal'chenko, Head
Parliamentary Committee on Industrial and Regulatory Policy and Entrepreneurship	Sergiy Matviyenko, Head
Parliamentary Committee on Agricultural Policy and Land relations	Mykhaylo Gladiy, Head
Parliamentary Committee on Transport and Communications	Anton Prygodsky, Head
Think-tanks and NGOs	
Institute of Economic Research and Policy Consulting	Igor Burakovskiy, Director
Research institute of the Ministry of Economy of Ukraine	Shapovalova Maryna, Deputy Director of the Institute
Ukrainian Center for international Integration	Natalia Yasko, Director
Economic Education and Research Consortium	Tom Coupe, Director
Ukrainian Center for Economic and Political Studies named after O.Razumkov	Vasyl Yurchyshyn, Director of Economic Programs
Ukrainian European Policy and Legal Advice Centre (UEPLAC)	Jacques Tallineau, Legal Advisor in Internal Market Issues and Economic and Trade-related Reforms
Institute of Reforms	Viktor Pynzenyk, Director
International Center for Policy Studies	Olga Shumylo, Director of the European Integration Department
Yalta European Strategy	
Centre for Peace, Conversion and Foreign Policy of Ukraine (CPCFPU)	Oleksandr Sushko, Director
Ukrainian Institute for Social Research after O. Yaremenko	Head
Ukrainian Fund of Social investments	Viktor Miroshnichenko, Executive Director
Center "Social Monitoring"	Dmytro Dmytruk, Director
International Renaissance Foundation	Iryna Kuchma, Social Capital and Academic Publications Program Manager Dmytro Shulga, European Program Project Manager
Eurasia Foundation, Kyiv Office	Sarah Jewett, Regional Communications Coordinator
Trade Unions	
Ukrainian Trade Union Federation	Grygoriy Osoviy, Vice-President
Trade Union of Workers of Agri-Industrial Complex of Ukraine	Volodymyr Chepura, Head
Trade Union of Workers of Coal Industry of Ukraine	Valeriy Mamchenko, Deputy Head
Trade Union of Workers of Communication of Ukraine	Valeriy Yefremov, Head
Trade Union of Workers of Energy and Electrotechnical Industry of Ukraine	Sergiy Shyshov, Head
Trade Union of Workers Aircraft Building of Ukraine	Head
Trade Union of Workers of Automobile and Agricultural	Vasyl Dudnyk, Head

Mashingbuilding of Ukraine	
Businesses	
Ukrainian League of Industrials and Entrepreneurs	Anatoliy Kinakh, Head, Tetyana Ponomarenko, Deputy Director of Department on Economic Policy
Council Of Entrepreneurs of Ukraine	Ksenia Liapina, Head of the Council
The Council on Competitiveness of Ukraine	Yuri Poluneev, Head
Ukrainian Chamber of Commerce and Industry	Victor Yanovsky, Head of International Economic Relations Department
European Business Association	Anna Derev'yanko, Executive Director
Business Associations	
Ukrainian Association of Ferrous Metals Enterprises Association of Ukrainian Banks Ukrainian Grain Association Ukrainian Association of Light Industry Enterprises Ukrainian Association of Milk Industry Enterprises Association of Pharmaceutical Producers of Ukraine National Association of Meat Producers of Ukraine National Association of Vegetables and Fruit Producers of Ukraine National Association of Alcoholic Products Producers Ukrainian Association of Sugar Producers of Ukraine Union of Chemical Producers of Ukraine Association of Juice Producers Association Ukrcement"	

16.2 Public meetings with Civil Society

Three public meetings have taken place throughout 2007:

- 29th of June 2007 – related to Phase 1, the Global Analysis Report;
- 11th of October 2007 – related to Phase 2, the Interim Report;
- 23rd of November 2007 – related to Phases 1-3, the Final Report.

Throughout the public meetings, ECORYS explained and summarised the reports shortly and subsequently engaged in a discussion with the representatives of civil society that were present. The summarised minutes of these public meetings can be found on the website of DG Trade and ECORYS (www.trade-sia.ecorys.com).

16.3 TSIA Workshop in Kyiv, Ukraine

16.3.1 Workshop proceedings

In cooperation with CASE Ukraine (local responsible) and the Delegation of the European Commission to Ukraine, the workshop was prepared. Sixty-five participants

from civil society were present to discuss the first part and start of the second part of the TSIA project. The workshop consisted of three different sections with presentations and a plenary discussion at the end of each section.

- The first section was about the progress in the Trade SIA regarding methodology, application of methodology, and first results of the analysis, including sectoral impacts of CGE modeling, screening methodology and results;
- The second section concerned the sectoral and horizontal issues and included the following topics;
 - FTA impact on different sectors of industry and comments on the results;
 - Impact of the FTA on conducts of business between the EU and Ukraine;
 - Trade Agreement impact on agriculture;
 - Alternative modelling exercise and study on FTA impacts for Ukraine;
 - Employment effects of the FTA.
- The third section concerned the FTA and sustainable development challenges for Ukraine, including the role of civil society, social impacts and environmental impacts.

The civil society representatives were active and engaged in lively debates on the pro's and con's of an FTA for different sectors, issues and from different perspectives.

16.3.2 Concise analysis of the discussions

The main points of the workshop discussions consist of:

- Modelling aspects of the study (long run, short run, model assumptions, tariff reductions, data gathering and updates, scenario specifications);
- The way the CGE model takes losses in budget revenues due to tariff reductions taken into account;
- The reasons why the transport and financial sector declines are so pronounced – they are larger than expected;
- The issue of labour migration in case of liberalisation of movement of people;
- The inclusion of labour safety and other social risks;
- The way the ecological impact of the FTA is measured and can be quantified.

The minutes of the TSIA Workshop are summarised and presented on the websites of DG Trade and ECORYS (www.trade-sia.ecorys.com).

16.3.3 Follow-up actions

The follow-up actions consisted of two main actions: (i) communication with civil society and (ii) include the workshop and public meeting comments in the TSIA reports.

Communication with workshop participants and civil society

In the weeks after the workshop, we have worked out the minutes and communicated with various workshop participants and related civil society members about issues related to the CGE outcomes, the choice of sectors and horizontal issues, specific sector issues (e.g. cereals, motor vehicles, the environmental situation in Ukraine and government

procurement). The outcomes of these discussions and e-mail exchanges have been incorporated in this report.

Include comments of the Workshop in this report

We have included the most important comments from the workshop in this report. For a concise summary, we refer to section 16.6.

16.4 Online consultations and discussions via ECORYS website

Over 1550 hits have been registered on the ECORYS website, where all information regarding the TSIA study on the FTA between the EU and Ukraine is presented. Throughout the study we have received over 30 comments and requests for clarification related to the TSIA study reports. Also we have sent the ECORYS Newsletter (appearing every 2 months) to over 100 persons and institutions that have expressed their interest. The feedback received via online consultations and discussions is incorporated in the report.

1. Partial inclusion of the retail sector through distribution services, though not by adding it as an in-depth analysis sector. Also in the modelling part the retail sector is included;
2. Attention given – in line with civil society requests – to red tape and bureaucracy issues;
3. Re-modelling with more updated assumptions based on inputs from civil society that has lead to slightly different outcomes than the first modelling results;
4. Partial inclusion of the automotive sector through transport services and machinery & electronics sector;
5. Inclusion or a difference between short-run and long-run CGE model outcomes, reflecting the effect of mobility of capital;
6. Attention to corruption by focusing not only on legal approximation but also on implementation and enforcement of changed regulation.

16.5 Contacts with individual stakeholders

In addition to the contacts with civil society mentioned above, ECORYS and CASE Ukraine have also engaged in active bilateral interviews, surveys and discussions to get feedback and (both constructive and critical) comments on the TSIA study. Below, in Table 16.2, we present the list of interviews with stakeholders we have carried out since April 2007.

Table 16.2 Bilateral discussions and involvement of civil society

Name
ECPA (European Crop Protection Association) – Brussels, Belgium
ITUC (International Trade Union Confederation) – Brussels, Belgium
Federation of Trade Unions – Kyiv, Ukraine
Social-Economic Council for Ukraine – Kyiv, Ukraine
Ukrainian Ecological League – Kyiv, Ukraine

Name
Institute for Economic Research & Policy Consulting – Kyiv, Ukraine
UNDP Blue Ribbon Analytical and Advisory Centre (BRAAC) – Kyiv, Ukraine
Ukrainian Agrarian Confederation – Kyiv, Ukraine

16.6 Civil society comments included in this report

As mentioned repeatedly, we believe that listening to civil society with respect to this study is of crucial important to add to the quality and realism of this report beyond the overall CGE model outcomes. Having listened careful to the workshop participants, public meetings questions raised, and online consultations, we have included the following issues and comments into the study:

1. We have included more dynamics into the CGE model by looking at the short-run as well as the long-run effects of the FTA (for two scenarios);
2. We have more clearly presented the assumptions and restrictions of the CGE model in the final version of this report;
3. We have adapted our assumptions in the model regarding the reduction of EU tariffs to mirror those of Ukraine – which leads to different modelling outcomes (e.g. more positive for agriculture than before);
4. We have decided to look at the coal industry as part of the proposed in-depth analysis of the energy sector;
5. Significant attention is given to ecological consequences of the FTA outcomes for the sectors and horizontal issues;
6. As a consequence of the repeated comments from civil society, the transport sector has been included in ‘trade in services’;
7. As a consequence of reactions from civil society, we have included government procurement as a horizontal issue.

The comments from online consultations and discussions have already been incorporated in section 16.4.

17 Conclusions

This study has analysed the potential impacts for Ukraine and the EU of a Free Trade Agreement within the framework of an enhanced agreement. Applying the methodology of the Trade Sustainability Impact Assessment in line with the Handbook (DG Trade, 2006), we have reached the following two sets of conclusions:

1. The potential economic, social and environmental impacts of the FTA for both the EU and Ukraine;
 2. FTA related and broader policy recommendations and flanking measures.
- These sets of conclusions are presented below.

17.1 Overall sustainability impacts of the FTA

17.1.1 Economic impacts

The CGE analysis, as presented in Chapter 4 shows that several sectors gain and some lose because of the FTA (on top of the WTO scenario). Overall, the impact of the EU-Ukraine FTA is to reinforce existing trends in Ukraine. The Agreement results in additional economic growth for Ukraine, equivalent to not more than a year's normal economic growth (5.3% for Ukraine). This is the result of increased demand and some economic restructuring in favour of sectors in which Ukraine has a comparative advantage, such as processed foods, agriculture, chemicals, machinery & electronics and metallurgy. Sectors in which Ukraine has a comparative disadvantage are financial services and transport services. These sectors lose employment, as does mining due to increased labour-saving investment. None of these employment losses are large in the long run. While the greatest per person economic gains are realised in Ukraine, the EU's gains are larger in absolute value. In the European Union, the increase in value or income is spread thinly over a large number of activities. The overall gain in real income is around USD 8.5 billion. The positive economic impact of the FTA for the EU and its wide dispersion mean that no strong social and environmental sustainability analyses are required in the EU. In both Ukraine and the EU, the FTA is expected to bring about a combination of increases in employment and a reduction in prices relative to wages.

17.1.2 Social impacts

In Ukraine, the combination of increases in employment and a reduction in prices relative to wages will help to increase the standard of living and reduce poverty among the majority of the people living in urban areas. On the other hand, in Ukraine there are a number of pre-existing socially unstable and perhaps unsustainable issues that will be

affected by the FTA, although the trade agreement cannot be said to be the root cause of these situations. In most of these situations, the issues are related to the existence of a dual economy and to difficulties with fair and fully efficient regulation or with title to land.

The overall impact on employment is clearly positive. This does not preclude negative employment impacts in specific sectors that might be quite persistent in some circumstances. Especially in rural setting significant job losses are anticipated in the short term. The overall impact on employment means that urban opportunities for self employment, including in the informal sector must be created. On the other hand, many small farmers face an existing sustainability crisis reinforced by increased investment and competition from large commercial farmers from the EU. Poverty is expected to be reduced by the additional employment but will be made worse in areas where negative employment outcomes are expected. In the area of education, there is no obvious impact of the FTA agreement, direct or indirect. However, in the area of health we do expect limited positive impacts resulting from the EU – Ukraine FTA for the Ukrainian population, albeit in the long run.

In terms of overall equity, inclusion in the usual economic processes through employment will be an important step for many people. However, these opportunities will be limited for many people by the existing inequalities in terms of practical rights and access to social and economic opportunities. Women's access to employment, to capital, to land rights on equal terms is not yet universally achieved. While employment in some sectors where women are employed, such as food processing and textiles, will increase, no necessary change is created by the agreement to the pre-existing inequalities.

Without the EU – Ukraine FTA, the existing social problems will continue. While the agreement will not solve all of these problems, it may bring considerable social benefits to a large part of the population, while aggravating - as mentioned above - the economic and social situation of certain groups. The agreement will also bring opportunities to address some of the pre-existing social problems, but in addition strong policy measures to mitigate negative and enhance positive social FTA impacts will be needed, including effective monitoring and review mechanisms.

17.1.3 Environmental impacts

Increased industrialisation and urbanisation implies negative scale effects that for air, water and land quality generally outweigh benefits from technique effects (certainly in the short run). Land and water quality are also affected negatively by agricultural intensification. For these indicators, some localised environmental improvements could occur from technique effects but we also note the potential local seriousness of mine-induced pollution. Biological diversity impacts are largely a function of the electricity strategy chosen; a strategy that may cause such impacts is therefore not a necessary consequence of the EU-Ukraine FTA. As concerns the mining industry, the technique effect is rather unlikely to cancel the negative environmental impact resulting from the scale effect. Chemical and non-ferrous metals industries are heavily involved in the pressure operated on the environment, but companies are increasingly aware of the

problem. However, despite voluntary engagements and new regulations, the environmental scale effect resulting from the EU-Ukraine FTA is likely to outweigh the expected technique effect.

Changes in the electricity production and in transport activities are positively linked to variations in the other economic activities. Positive economic affects expected from the EU-Ukraine FTA should firstly be translated into higher environmental pressure. Also, here again, the technique effect is rather unlikely to be able to cancel the scale effect, especially in transport. Since the main environmental issue related to electricity production consists of air emissions, improvement could come from the use of gas instead of coal. At a cost in terms of impact on bio-diversity, air pollution can be improved by producing hydro-power electricity. Increased electricity production as a consequence of the EU-Ukraine FTA need not lead to a significant sustainability impact on bio-diversity.

For the detailed and summarised impact assessments per sustainability indicator we refer to Chapter 14.

17.1.4 Overall impacts

Below in Table 17.1 we have summarised the whole economy wide economic, social and environmental impacts in Ukraine. It should be noted that many impacts are very general and there are opposing effects for different parts of the society. For this reason the more detailed impact analysis can offer a better picture of the FTA effects.

Table 17.1 Overall economic, social and environmental impacts

Core indicator	Overall direction magnitude A	Existing conditions B	Equity C	Reversibility D	Capacity to change E
Economic					
Real income	▲	0	↓	Yes	L/M
Fixed capital formation	▲	+	△	No	L/M
Trade	▲	+	↓	Yes	L/M
Social					
Employment & decent work	△	0/-	↓	Yes	L/H
Poverty	△	0	↓	Yes	L/M
Equality	?	+	↓	Yes	L/M
Health	?	-	↓	Yes/No	M/H
Education	△	-	↓	No	M
Environment					
Atmosphere	▼	--	△	No	M/H
Land	▽	-	△	Yes/No	L/H
Bio-diversity	▽	-	△	Yes	L/M
Environmental quality	▽	-	△	Yes	L/H
Fresh and waste water	▽	-	△	Yes/No	M/H

* For the meaning of the signs in the Table, we refer to section 1.4.

17.2 Detailed sustainability impacts of the FTA

17.2.1 Agriculture

Overall, the FTA has positive **economic impacts** on the post-WTO agricultural sector in Ukraine and a relatively small impact on the EU agricultural sector (depending on the sectors and regions concerned). In the long run, the FTA will have positive growth and development effects, facilitates the inflow of domestic and foreign investments, causes wages to rise, lowers prices for agricultural products due to competition, cause employment to increase and GDP per capita in the agricultural sector to go up. Also trade flows will significantly increase and overall Ukraine's trade balance will improve, especially with the EU. The more extended the FTA, the larger the long run gains for the agricultural sector. This is why we argue to include significant reductions in standard and border costs through regulatory approximation (e.g. SPS) and reductions in corruption and bureaucracy. The **social impacts** are closely linked to the economic impacts and predict employment increases (though the CGE outcomes may present an upper limit to this effect) and wage increases. Wage increases are important in the light of differences in regional income distribution in Ukraine. The employment and wage effects lead to lower levels of poverty and may have a mitigating effect on labour migration. Also the FTA is expected to lead to an improvement of working conditions, health & safety standards (via regulatory approximation) and quality of work. Growth potential in the agricultural sector, due to its relatively minimum efficient scale requirements, may increase entrepreneurial activities and self-employment. The **environmental impacts** relate mostly to problems with eutrophication and the use of chemicals, dangerous pesticides and the like in agricultural production. If the FTA includes clear provisions and standards for the use of these substances, environmental impacts can be monitored and controlled, having a positive effect on the quality of the environment and soil protection.

Cereals and grains

For the cereals sector, the FTA (if sufficiently liberalised) will have large positive impacts in terms of sector growth, increases in exports and investment in production efficiency increases. This also leads to employment increases in Ukraine, higher wages for the workers in the sector and increases in both productivity and working circumstances. For the EU the impact on exports of grains and cereals to Ukraine is negligible. The FTA is also expected to lead to price decreases in this market, which may benefit consumers. Fertiliser and pesticide increases may have negative impacts on the environment and biodiversity in Ukraine.

Sunflower seed oil and oils

The production of sunflower-seed oil only benefits from trade liberalisation in a limited way. Tariffs are already low and Ukrainian products are accepted according to EU SPS standards already. For the EU, Ukrainian oil production may become more important as a product for bio-fuel production. Trade in oils will intensify between the two countries.

Meat products, meat offal and animal fats

The FTA impact on meat production and animal fats is expected to be positive if SPS standards are harmonised. The sector is expected to grow into a major exporter of meat, meat products and animal fats into the EU. Growth, employment and wages will go up. In

the short-run costly investments in productive capacity and upgrading of outdated machinery to comply with EU food safety requirements will be necessary. Employment effects are predicted to be positive by the CGE model, but sector experts point at limitations not included in the quantitative analysis: gross inefficiencies of many pig-breeding and cattle-breeding enterprises and outdated production methods. Furthermore, SPS standards will increase food quality and thus have positive health effects. Environmentally, the FTA may lead to increases in bio-industry production of meat.

Sugar and confectionary

The sugar sector is heavily protected in both the EU and Ukraine. Reductions in tariffs would lead to significant changes in trade patterns and a reduction in output for the Ukrainian sugar sector. Prices for sugar will drop significantly which is positive for consumers and for the confectionary industry. Lower tariffs are also expected to lead to increases in product varieties in the confectionary industry.

Edible fruits and nuts

Fruit production will face strong competition in the short-run which may have an initial suppressing growth effect but will benefit significantly from the FTA in the longer run, also because in this sector EU SPS standards are met. Investments will go up, and so will employment and wages. This sector is expected to show an increasing trade surplus with the EU because of the FTA. Increased fruit production may lead to increased use of fertilisers and pesticides in order to increase fruit production output.

Beverages, spirits and vinegar

The beverage sector in Ukraine may get hurt by the FTA agreement because of the strong competitive position of the EU in the production of beer and wine. Liberalisation will lead the EU to increase its market share of these products in Ukraine at the expense of domestic producers. Vodka production – on the other hand – is expected to increase slightly. Overall a consequence of the FTA is increased levels of investment in new technologies and equipment and increased competition.

17.2.2 Metallurgy

The **economic impacts** are significant and positive. The EU already applies a tariff of 0%, but the elimination of tariffs also by Ukraine and of the import restrictions currently applied by the EU for Ukrainian steel products, will lead to more trade between the EU and Ukraine (elimination of EU quotas on steel products will take place already upon Ukraine's accession to the WTO). Increased competition also leads to lower prices and in the long run a drive to upgrade production methodologies. Investments in the sector may lead to increases in productivity and better and more environmentally friendly production in the longer run. The issue of state subsidies for this sector remains an important issue though, partially offsetting these positive impacts.

As a consequence of increased production, also employment, a **social impact**, increases because of the FTA, and so do wages. Poverty levels among the formerly unemployed and low-skilled workers are reduced. Improvements in production methods and machines lead to higher levels of work safety and improved working conditions in general in line with decent work directives of the ILO. Also a positive impact on health can be possible

due to cleaner and better work circumstances. The **environmental impacts** of changes in the production structure of the metallurgy sector are significant and among the most important of the FTA. Increased production leads to more greenhouse gas emissions, lower quality of the air and higher levels of dangerous chemicals in the air and in the water. Wastewater may pollute (international) waters and increase in quantity. Investments into cleaner and more productive production techniques may partially offset these effects and so may provisions for more effective control of metallurgy plants on pollution issues.

17.2.3 Machinery & electronics

The **economic sustainable impacts** in machinery & electronics are positive with a significant sector growth, lower prices of intermediate and final consumption goods and projected increases in FDI in the long run that lead to upgrading of the machine park and increases in production. Lower tariff protection and subsidies lead to more competition from abroad and more efficiency in the sector. Ukraine's trade balance with the EU in machinery & electronics will improve as exports to the EU grow faster than imports from the EU. Because of increased openness to trade, we also expect Ukraine and the EU to enjoy an increased variety in types of machinery. One should note, however, that production upgrading may take years and is a costly endeavour for the industry. **Social impacts** of the FTA in the machinery & electronics sector include positive employment effects in the short run and stronger employment effects in the long run, increases in wages in the industry, upgrading of factories and production sites with improved worker safety and health standards at the workplace, and reduced levels of poverty. We expect FDI to play a significant role in this sector because of resource reallocation and production fragmentation of large multinationals. Foreign investments will encourage social workers' rights, and the health situation at factory floors. The overall **environmental sustainable impact** of the FTA in machinery & electronics in the EU is considered to be negligible in magnitude, also in the long run. Waste management is one of key concerns for machinery and electronics industry. There is evidence of increased SO₂ and NO_x emissions, in spite of production upgrading. Also increased production of finished products based on intermediate products supplied from Ukraine can have a negative environmental impact.

17.2.4 Energy

A key conclusion from the **economic impact** assessment to date is that the Ukrainian energy sector is likely to restructure significantly – with FTA even more than without. This implies that new investments will come in, with new economic opportunities as a possibility however also with job losses as a likely consequence – especially so in the case of privatisation of coal mines. An increase in gas price will further stimulate the use of coal, which has severe negative environmental and social consequences if not accompanied by measures. The **social sustainable impacts** of the FTA are potentially very large, especially in the coal sector where worker safety and health issues for miners need drastic improvements. Employment effects are mixed with an increase in employment in electricity and decreases in employment in coal, oil and gas. Large

redundancies in this sector have large social effects, the more since the coal industry is well organised in terms of concentrated worker's power. The **environmental sustainable effects** of the FTA in the energy sector take place in the bigger picture of rising gas prices. If gas prices continue to rise, a shift to coal will lead to significant polluting effects. Coal mining is very polluting and old-fashioned production methods used do not do the environment any good. Also aerial pollution is significant with greenhouse gas and SO₂ and NO_x emissions into the atmosphere that are likely to increase unless the FTA clearly breaks with past Ukrainian energy production methods and sets new standards. Moreover, since air does not stop at borders, these environmental effects also partially spill-over to the (eastern) EU.

17.2.5 Trade in services

The **economic impacts** of the FTA on distribution services are positive beyond the WTO accession of Ukraine. The same applies to trade in communication services albeit of much smaller magnitude. For transport services and financial services, the FTA has a negative impact. Trade in all sectors with the EU intensifies with improvements in the trade balance in distribution and communication services and deteriorations in the trade balance in transport and financial services. The **social effects** entail gains in employment in the distribution and communication services but job losses in the transport and financial services. Productivity of the service sectors is expected to increase and profit margins will be lower. The FTA is expected to have a positive effect on decent work and work standards through regulatory harmonisation of Ukrainian practices with EU practices and through increased levels of FDI that come with international production and work standards. The **environmental effects** are primarily linked to transport services and not so much to distribution services, financial services or communication services. The negative economic impacts on transport services are positive for the environment as emissions of greenhouse gases will be reduced and leakages of pollutants into the environment will decrease. Overall, investments in transport and distribution services lead to cleaner means of transport because of upgrading.

Distribution services

For distribution services the envisaged reductions in border costs and NTBs have significant positive effects on economic growth, trade, retail and wholesale markets and the level of competition leading to higher productivity. Employment is expected to increase overall with positive effects on poverty reduction and reduced prices for consumers and producers. Development of distribution services has a regional effect in that it will benefit the industrial areas in Ukraine more than the agricultural countryside. Upgrading of the engines used for trucks, planes and ships will have positive environmental impacts and so does an improved state of the car fleet. There will be a negative impact for the environment through more emissions and pollution.

Transport services

Transport services will experience a significant drop in output and employment in the short run and partially bounce back in the longer run. The FTA leads to major restructuring efforts and puts pressure on an outdated transport system, inefficient service provision, and outdated transport vehicles. These warrant high levels of investments to

increase competitiveness and productivity. Pipeline transportation is not expected to be heavily affected by the FTA. Imports from the EU will increase while exports will not due to failure of Ukrainian transport vehicles to meet EU environmental standards. The FTA will have a positive effect on passenger safety in Ukraine (roads, air) through encouraging infrastructure improvements. Environmentally, the reduction in transport services will have a positive effect due to less CO₂ and other pollutant emissions. In the longer run, through regulatory approximation of Ukraine's environmental standards, the transport sector will become 'cleaner' which means it can grow without becoming more polluting.

Market openings under the terms of the FTA might have less positive effects on the EU transport sector if granted to Ukrainian operators without ensuring they meet EU quality requirements (requirements concerning access to occupation - financial standing, professional competence and good repute - , driver qualifications as well as technical and environmental vehicle standards etc). Such requirements are imposed on EU transport operators and not necessarily applicable to Ukrainian operators entering the EU market. A difference in the level of requirements imposed might give rise to a competitive advantage for Ukrainian operators and result in negative effects in the European transport sector.

Communication services

The estimated FTA impacts on communication services are not expected to be large. Economically, competition will increase and prices are expected to drop, which will lead to increases in production and employment in the long run. The positive impact of the FTA on communication services may be much more felt in cities than on the rural countryside. Environmental effects of changes in communication services are negligible and can be omitted.

Financial services

Financial services experience drops in production and employment, because of strong foreign competition and restructuring in the sector (e.g. banking sector) as well as liberalisation of modes 2, 3 and 4. We believe that the CGE model restrictions play a role in the envisaged outcomes here too (e.g. the assumption of full employment and inability to incorporate dynamic FDI effects). Environmental effects of changes in the financial services are expected to be negligible.

17.2.6 Competition policy

Competition policy is very important in Ukraine because of the country's transition path from a centrally planned to a market economy. The FTA will lead to more competition in Ukraine through lower barriers to trade but also due to regulatory impacts with respect to state aid and antitrust policies. **The economic impacts** of competition increases are lower prices, more output, increases in trade and more employment. Successful competition policy will create also **social impacts** as a result of the economic impacts. These include decreases in poverty, more employment and – in the long run – higher wages.

Environmentally, each aspect of competition policy and all competition policy measures have to be checked ex ante to avoid trade distortions and constitute sustainable policies, environmental issues and health and safety safeguards. Otherwise, only the opening of the

markets can result in higher pollution, emission and neglect of health safeguards due to increasing competition.

17.2.7 Government procurement

In order to achieve regulatory approximation of one of the most corrupt parts of the Ukrainian economy – government procurement – to EU standards, a lot still needs to be done with respect to procedures that need to be cleared, legal amendments that need to be put through parliament and transparency that needs to be enhanced. The impacts of a well-functioning government procurement system – as an FTA outcome – are very large. Significant **economic impacts** come from introduction of ‘fair’ competition and better spending of public funds. Efficiency and the quality of public investments are improved higher levels of GDP growth and more trade (mostly in services) are the result. Socially, can improve the health care sector and the quality of products. Also the education system in Ukraine stands to gain from an efficient government procurement system. Well spent resources as investments in the Ukrainian economy lead to employment creation, wage increases and lower levels of poverty. **Environmental impacts** are harder to measure, but overall, inclusion of sustainable development considerations in the government procurement system can lead to funds invested in a more sustainable way, if legal provisions are adopted.

17.2.8 Technical standards

Technical standards form a core component of the FTA as it is widely recognised – also by this study – that approximation of standards in the post WTO-accession state of Ukraine will have a much larger impact on trade and development than several small tariff reductions. The **economic impacts** of alignment of Ukraine’s norms to the EU level include increases in competition and reduction of companies’ costs related to passing conformity assessment procedures. The indirect effects come from strong incentives – with a large EU market about to open up – for Ukrainian producers to improve production processes, implement quality control schemes and invest in new technologies. **Socially**, approximation of norms will make investments easier and lead to more transparency, predictability and simplification of regulations. Most affected are those sectors for whom harmonisation will reduce their current costs of compliance with the EU: agriculture, manufacturing of textiles and wearing apparel, motor vehicles and machinery and electronics and food production. The latter improvements will also have positive health effects. Increases for the textiles and wearing apparel sector will lead to more gender equality since predominantly women are employed in these sectors. The **environmental effects** of an FTA on technical standards, is generally positive as it means that Ukrainian environmental standards for various sectors and sub-sectors have to be upgraded to EU standards level which will lead to less pollution, emission of greenhouse gases, more attention to biodiversity and an increase in environmental quality. Also implementation monitoring of environmental legislation is expected to increase.

17.3 Mitigating and enhancing policy and flanking measures

The following section covers the lessons that can be drawn from:

- Policy making (to keep in mind the simplicity of measures, applicability and objectivity);
- The impacts that our impact assessment has identified.

We provide a general overview of the policy recommendations here. These are presented in more detail in Chapter 15.

17.3.1 Preconditions for policy measures

Institutional setting and the rule of law

Most of the potential sustainability issues have not been experienced in Ukraine before. Efforts to improve environmental quality are recent. Because of this, especially concerning environmental sustainability, many of the structures required for the mitigating (flanking) measures do not yet exist. In cases where a consensus exists, there is usually a fully effective regulatory body, which is not the case for Ukraine. The role of the EU in acting to mitigate the negative sustainability consequences of the EU-Ukraine FTA could first of all be seen as a supporter to start-up efforts or of efforts already under way, also in institutional design; as a source of support where new resources are required for research; and as a partner in a two-way EU-Ukrainian mutual education dialogue in those situations where a consensus is still to be built.

The sectors where the sustainability impacts have been most noted are the greatly (economically) benefiting manufacturing industries. As the sustainability impacts are closely related to existing effects, the mitigating measures must address the underlying situations affecting these sectors. In developing the approach, an important question to be asked is why an existing regulation has not already been effectively addressed. This may be due to lack of resources (trained personnel, financial resources), to a sub-optimal regulatory system or to a lack of consensus about objectives, leading to evasion of regulation.

A crucial part of the institutional setting is the implementation and institutional approach to implementing an objective ‘rule of law’. This is perceived by policy makers and businesses as an important problem. Judicial reforms, independence of the judiciary, and an effective fight against corruption at all layers of the administration/society are crucial for the success of the FTA.

Technology transfer

In a number of sectors in Ukraine there are factories that do not have access to pollution-reducing technology, although other companies may well have this access. The objective of technology transfer as a mitigating action is to provide the technical means to reduce various forms of pollution that would otherwise result from increased production from the EU-Ukraine FTA. The sectors where such an action could prove useful include mining and metals, food processing, chemicals, and machinery & electronics. Care will have to be taken to avoid giving unfair advantages to plants that are assisted with technology

transfer and to avoid providing a disincentive to companies to invest themselves in pollution reducing equipment.

Monitoring

Periodic monitoring and evaluation should analyse the impact of the EU-Ukraine FTA (and thus implicitly the projections contained in this study); and the relevance and impact of the mitigation and enhancement measures adopted. The aim should continue to be to understand why, how and where sustainability impacts occur; what can be done to ameliorate the sustainability impacts; and what counteracting policies do and do not work and why. The aim of monitoring and evaluation is thus both continuing analysis and policy prescription and should cover both the trade policy itself and the mitigating measures.

Approximation – implementation - enforcement

The success of policy measures starts with proper drafting of legislation but subsequently depends to a large extent on successful implementation and enforcement. Across the economic, social and environmentally related recommendations and flanking measures, we feel that – as a horizontal issue – not only legal approximation is important. Significant attention needs to be given to implementation and enforcement – keeping in mind the ‘rule of law’ in which field also progress needs to be made in Ukraine.

17.3.2 Summary of FTA related policy measures

In Table 17.2 below, we present a summary of the FTA related policy measures to address economic, social and environmental impacts that resulted from our global analysis and in-depth studies.

Table 17.2 Summary of the FTA related policy measures

Area	Policy measure
Economic	Establishment of a transition period in tariff and subsidies reductions
	Improvement of the investment climate
	Promote entrepreneurship and SME development
	Enhancement of approximation and adoption of EU SPS and technical standards
	Strong emphasis on approximation of the EU <i>acquis</i> in various areas
	Inclusion of a <i>Sustainable development chapter</i> to the FTA
Social	Inclusion of a <i>Sustainable development chapter</i> to the FTA, including for instance: <ul style="list-style-type: none"> • references to the requirement that both parties commit themselves to the effective implementation of core labour standards and other basic decent work components; • statement that parties to the agreement will ratify the ILO standards concerned; • a requirement for both parties to submit regular reports on general progress; • engagement to respect the OECD Guidelines on Multinational Enterprises and the ILO Tripartite Declaration on Multinational Enterprises and Social Policy, and not to lower labour standards in order to attract foreign investment;

Area	Policy measure
	<ul style="list-style-type: none"> a system where complaints about social problems should be subject to consideration by genuinely independent and well-qualified experts; possibility to establish a Trade and Sustainable Development (SD) Forum providing for consultation with civil society, including workers' organisations, employers' organisations and NGOs, with a clearly defined, appropriate balance between those three groups of members.
	Conduct ex-post impact assessment studies to evaluate impacts in particular areas of concern
Environmental	<p>Inclusion of <i>Sustainable development chapter</i> to the FTA including for instance environmental clauses for:</p> <ul style="list-style-type: none"> commitment to multilateral environmental agreements, such as the Kyoto Protocol; creating a system of standards for objective measurement of pollution; including environmental standards in government procurement; engagement to respect the IPPC directive and focus on practical implementation; working towards ratification of the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone; promote voluntary Environmental Management Systems; engagement with respect to the Kyoto protocol guidelines; possibility to establish a Trade and Sustainable Development Forum providing for consultation with civil society on particular areas of concern in the context of environmental impacts.
	Incorporate the upgrading of Ukrainian engine technology to EU standards and provide incentives for the upgrade
	Tie the speed at which sector liberalisation takes place, i.e. may produce and export to the EU (support trade and services flows) or obtain other benefits to the level of environmental progress in that sector
	Temporary funds for upgrading production methodologies and inclusion of environmental concerns in production can be provided by the Ukrainian authorities
	Include environmental standards in government procurement tenders – e.g. in the evaluation grids of government procurement tenders
	Fast-track for trade liberalisation in environmental goods and services between the EU and Ukraine
	Include environmental standards in discussion about state aid reductions and competition policy

17.3.3 Summary of broader policy measures

In Table 17.3 below, we present a summary of the broader related policy measures that could be addressed. They are not part of the FTA negotiations per sé but are expected to have positive impacts as flanking measures on the potential outcomes of the FTA.

Table 17.3 Summary of broader policy measures

Area	Policy measure
Economic	Improvement of the Investment Climate and investment promotion by: <ul style="list-style-type: none"> • infrastructure improvements; • reduction of red-tape, cost of setting up a business, obtaining licenses, etc.; • investment promotion schemes and incentives; • education.
	Encourage restructuring and modernisation of economy and particularly specific sectors
	Promote developments in the “rule of law” especially with respect to implementation
	Encourage business-to-business contacts
Social	Encourage employment creation and promote improvement of labour conditions by: <ul style="list-style-type: none"> • Promotion of SME development and entrepreneurship • Support adoption and implementation of EU labour standards and decent work principles
	Provide skills retraining in short run and refocus and improve training and education system in Ukraine for longer run
	Address migration issues
	Develop regional strategy to deal with issues regarding regions suffering from industrial decline and migration.
	Work towards approximation of the law on equal rights of women with the relevant EU <i>acquis</i>
Environmental	Develop a regional environmental strategy including the following: <ul style="list-style-type: none"> • Include environmental provisions in government procurement tenders and make them part of the evaluation grid • Commence negotiations with Ukraine on the Energy Community Treaty • Compensate increased greenhouse gas emissions with Joint Implementation (JI) and emission trading with the EU partners • Increase nature conservation and soil remediation projects • Regulate transport related carbon dioxide emissions (CO₂) and volatile organic compounds (VOC) in accordance with Best International Practice • When devising investment promotion schemes / encouraging inward investments, give priority / provide extra incentives to environmentally sustainable investments, solutions and technologies