


AUGUR WP1

NOTE OF SYNTHESIS

	Macro model of world regions ongoing research By Francis Cripps (UCAM)
	SUMMARY
Objectives of the research	<p>AUGUR is an FP7 forward-looking study assessing the position of Europe in the world in 2030. All the major dimensions that will shape the world of 2030 are considered, from economic growth, finance and trade flows to technologies, environmental impacts, migration, well being of populations and values that they espouse. The macro model of world regions traces feedbacks between the various dimensions under a range of assumptions about policies at the global level and in each part of the world.</p>
Scientific approach / methodology	<p>The model generates specific, quantitative scenarios describing medium and long-term developments up to 2030 taking account of institutional perspectives, historical studies and foresight exercises that give ideas about changing structures and trends in Europe and 14 other world regions. Projections are based on past behavioural patterns evidenced by historical data from 1970 onwards and explicit assumptions about potential changes that are now taking place or may be expected in future.</p>
New knowledge and/or European added value	<p>The model demonstrates the interdependence of developments in different fields in all parts of the world whose people are increasingly aware of common challenges and at the same time it documents the extent of disparities that underlie differences in priorities and opportunity. In particular the model provides an explicit analysis of ways in which the future for each part of Europe is bound up with developments in neighbouring regions and patterns of change in the world as a whole.</p>
Key message for policy-makers, businesses, trade unions and civil society actors	<p>People around the world face many common issues. In coming decades it will be essential to institute effective government programs in Europe and elsewhere in fields detailed below. Financing mechanisms for such programs must be devised to ensure that deficits can be incurred when necessary and that government debt is not vulnerable to credit crises such as those now afflicting Europe. Cohesion will remain at the top of the agenda.</p>
Objectives of the research	<p>The AUGUR project examines potential future developments under alternative governance assumptions. In this context</p>

AUGUR WP1

NOTE OF SYNTHESIS

governance means specific norms and patterns of behaviour of government, business and civil society generally that condition economic and social developments in all parts of the world. The aim is to develop understanding of relationships between ongoing changes in global governance and the future direction of outcomes in each part of the world.

Based on scenario studies, participants in the project will endeavour to draw out policy implications with particular reference to the position and role of Europe in the world over the period to 2030.

The objective of the macro model is to provide a common framework of quantitative assumptions and results for topics examined in detail by the various teams contributing to the project.

Scientific approach / methodology

The macro model measures and projects income, expenditure finance, trade and innovation, demography and migration, energy and environment and well-being indicators for Europe (divided into 5 sub-regions) and 14 other world regions on an annual basis. It provides estimates for every variable and country group (bloc) covering the period from 1970 to the present day in order to ensure that projected future developments can be examined in the light of historical experience over the past four decades.

A common set of identities and behavioural equations is used for all blocs to facilitate comparison between them and model longer-term changes in behaviour and performance explicitly. Several large countries are identified individually (the US, China, India and Japan). Europe is sub-divided into five country groups (North, Central, East, South and West - the latter being restricted to the UK). Other countries outside Europe are grouped by broad income level and continental region.

New knowledge and European added value

Although results at the present stage of the project are subject to revision, as they are validated by researchers in each domain, a number of general features and issues emerge clearly from scenarios thus far developed for the period from now to 2030.

1. The world economy is reasonably stable as a whole even though extreme events happen quite often in different countries and regions with consequences that spread across the world. As is well known, global trade, GDP growth and capacity utilisation are highly correlated although the distribution of trade, production and investment shifts through time. From a medium and long term perspective, the world system exhibits persistent

AUGUR WP1

NOTE OF SYNTHESIS

but changing trends, cyclical fluctuations of trade and income and short-term episodes of considerable financial volatility.

The big trends such as differential patterns of population growth, rapid GDP growth in East and South Asia and increasing energy demand and environmental emissions resulting therefrom have considerable momentum and are unlikely to change soon.

Trends in trade, finance and GDP will continue to be interrupted periodically by crises and recessions.

2. Europe holds an important although gradually declining position in world trade and technical innovation and will achieve continued income growth due to its highly diversified global relationships. But Europe will also face ongoing problems of unemployment and social fragmentation in many regions as well as migration pressures and difficult relationships with neighbouring countries. As a result of these pressures government budgets in individual member countries will remain vulnerable to periodic confidence crises unless the European Union develops a stronger system for sharing resources and managing fiscal policies.

3. Four distinct trends in global governance are the subject of investigation by all AUGUR teams and an initial set of scenarios has been developed to examine implications of each trend.

i) reduced government in a world increasingly driven by the interests of business and finance

ii) a bipolar governance system in which the US and China grapple with difficulties and struggle to maintain a cooperative relationship while other countries broadly follow leads set by one or the other of the two super-powers.

iii) multipolar governance in which a wider group of middle-income countries and country groups influence global norms and at the same time show more independence in implementing their own development policies.

iv) a trend towards regionalisation in which groups of countries cooperate closely with each other in order to improve their economic and financial security through development of regional markets, production networks and financial institutions.

Policy implications will be drawn out in the next phase of the project. Meanwhile some broad implications of the analysis to

AUGUR WP1

NOTE OF SYNTHESIS

date and initial scenarios to 2030 are listed below.

1. In principle, global GDP growth needs to be faster than in the past to accommodate the pace of development in East and South Asia, which will continue to grow rapidly and account for an increasing share of the world total. This trend will not be without problems and interruptions as the US will remain a weak partner to other regions while an increasing number of countries participate with growing effect in different branches of world trade. Although capital flows can finance deficits over quite long periods of time, the same international flows of finance and working capital that provide flexibility when expectations are stable often turn perverse when the future becomes uncertain. This exerts a brake on longer-term growth trends as financial risks make governments and central banks take a conservative view of fiscal policy and domestic expansion.

Europe was badly affected by the financial crisis in 2008 and its central banks and governments are concerned about the credibility of the Euro as a world currency. Moreover Europe has a tendency to generate a trade surplus owing to the strong performance of Germany and other countries in central Europe while at the same time it is aware of increasing competition from other parts of the world. Therefore policy-makers in Europe are cautious about expansion of domestic demand unless it is underwritten by a strong external performance.

2. Financial imbalances can be expected to continue in coming decades, along with periodic market contractions when continued deficits and the accumulation of debt engender loss of confidence in particular currencies, governments or financial markets. Since confidence is a systemic issue, the problem will not be solved by micro-economic regulation of individual financial institutions. A previous AUGUR Policy Brief titled "The World of Finance 2030" explains the need for macro-prudential regulation to enable financial systems to survive crises without amplifying the damage. Credit problems of several European governments in the wake of the 2008 crisis remind us that governments are often severely impacted by financial crises and neither global nor regional institutions have yet been particularly successful in providing support for governments on terms that limit the damage to output and employment in the affected countries.

3. Economic growth in many low and middle-income areas, including those surrounding Europe, will hardly be sufficient to improve employment conditions for expanding labour forces.

AUGUR WP1

NOTE OF SYNTHESIS

Therefore migration pressures from surrounding regions and within Europe itself must be expected to continue. This is an issue that has to be faced. In the long run migration pressures may eventually diminish as economic conditions in surrounding countries improve and provide better opportunities for their citizens. Meanwhile immigrants will arrive. The major issues are where immigrants will settle, the conditions under which they live and the impact on local populations.

4. Adjustment of energy sources, technologies and basic infrastructure to improve security of supply and reduce adverse environmental effects of energy use is slow and plagued by capital risk as financial returns to many required investments are long term. Incentives have to be devised and maintained over periods long enough to assure investors that projects will ultimately pay off. Given the time required to implement changes, further increases in global greenhouse gas emissions are inevitable in coming decades and it appears that climate change is here to stay in the present century. A corollary is that substantial investments will be required to adapt industries and infrastructures to consequences such as flooding, droughts and impacts on water supply, agriculture and vegetation.

5. The increased importance of markets and market relationships in daily life in all parts of the world continues to erode many traditional ways of life and community institutions. At the same time the spread of automation to nearly all market sectors and the increasing concentration of firms at the national and global level generate rising inequality in many countries, where increases in the share of profits and the pay of higher-paid employees absorb most of the growth of income while the wages of lower-paid employees and people working in informal occupations scarcely improve.

**Key messages for
policy-makers,
businesses,
trade unions and
civil society actors**

The world economy needs to expand faster than before to accommodate Asian economies that are developing fast and have increasing global weight. Despite its declining position, Europe will achieve continued income growth due to its highly diversified global relationships.

Financial risks and energy and environmental issues already preoccupy most countries around the world. Other urgent policy concerns that are likely to be recognized as long-term global challenges for certain groupings of countries include:

- unemployment, immigration, government finance and income support for the elderly (high-income countries in North America, Europe and East Asia)
- growth of trade and GDP, internal income distribution,

AUGUR WP1

NOTE OF SYNTHESIS

inflation and quality of life (middle-income countries in Latin America, the CIS, Middle East and East Asia)

- public health, education, infrastructure and development of sustainable and diversified export industries (low-income countries in Africa and South Asia).

The main challenge for European policy-makers and institutions in the next decades is likely to be the need to maintain or improve security in many fields such as finance, employment, housing, personal income and savings, the environment and relationships with other countries including those surrounding Europe.

Specific fields for action will include

- job creation measures in regions with low employment rates
- income support for the ageing population
- more general redistribution of income and wealth to protect citizens financially and offset trends toward increased inequality
- investment in new technologies and adjustments of infrastructure to ensure energy security, adapt to climate change and reduce environmental impacts
- measures to cope with immigration and reduce income and employment gaps vis-a-vis neighbouring countries
- support for rapid development of public services, infrastructure and diversified production in low income countries in Africa and South Asia.

In each field government leadership and public funding have an important role to play. The finance of government itself is therefore a crucial issue. In Europe as in other parts of the world it is necessary to accept that public debt provides a necessary component of the financial system and a vital source of finance for government programs. International support for governments facing credit problems is unavoidable and should be provided on terms that minimize damage to government programs and economic conditions in the countries concerned.

PROJECT IDENTITY	
Coordinator	CNRS (Centre National de la Recherche Scientifique), France
Consortium	<p>CNRS-CEPN (Centre d'économie de Paris Nord), FRANCE</p> <p>UCAM (The Chancellor, Masters and Scholars of the University of Cambridge), UNITED KINGDOM</p> <p>SOAS (School of Oriental and African Studies, University of London), UNITED KINGDOM</p> <p>ISMERI- EUROPA, ITALY</p> <p>KU (Kozminski University), POLAND</p> <p>WIIW (Wiener Institut Fur Internationale Wirtschaftsvergleiche), AUSTRIA</p> <p>SMASH (Société de Mathématiques Appliquées et de Sciences Humaines), France</p>
European Commission	Domenico ROSSETTI, DG Research, Unit L.2
Duration	October 2009 – September 2012 (36 months)
Funding Scheme	Collaborative project funded under the 7 th Framework Programme of the European Community, FP7- SSH-2009, Challenges for Europe in the world of 2030
Budget	EU contribution: EUR 2 580 600
Website	www.augurproject.eu
Further reading	<p>European Policy Brief: The World of Finance 2030, forthcoming</p> <p>CAM Model of the World Economy Version 3.0 User Guide (download from AUGUR website)</p>
Related websites	UN DESA DPAD United Nations Global Policy Model
For more information	augurproject@gmail.com