

# List of Projects

## Alexandra Bykova

### **IV - Key economic indicators** (*wiiw Team Leader*)

*Federation of Austrian Industries*

*March 2014 - December 2024*

For many years, wiiw has been providing the Federation of Austrian Industry with 'Key Economic Indicators' for the countries of Central and Eastern Europe. Deliveries are timed to coincide with the publication of the spring and autumn forecasts.

### **Monthly updates of Addiko corporate loan data for 2023 and 2024** (*wiiw Team Leader*)

*Addiko Bank AG*

*January 2023 - December 2024*

Monthly updates of corporate loan data for 2023 and 2024 The project produces twelve monthly updates of historical data on corporate loans and their interest rates in 2023 and 2024 for the three countries where Addiko Bank AG operates.

### **Articles for the magazine 'European Voices'**

*DER ThinkTank*

*January 2024 - December 2024*

The Vienna Institute for International Economic Studies authors articles on economic policy issues for the foreign and economic policy magazine "European Voices". The articles consist of academic content, analyses and assessments by wiiw economists enriched with wiiw economic data and forecasts for the countries in the region. The magazine has a circulation of 50,000 and is distributed across borders to the most important decision-makers in the fields of politics, diplomacy and business throughout Europe.

### **Eastern Europe Before Transition: Digitisation of data and analysis of CESEE's command economies**

*Anniversary Fund of the Oesterreichische Nationalbank*

*May 2021 - September 2024*

In order to better understand the industrialisation spurt and later the (financial) crisis and collapse of the command economies of Central, East and Southeast Europe (CESEE) as well as the applied economic policy mix before and during their transition to market economies, including the decisive role of initial conditions, we will digitise and publish online wiiw's economic statistics for Central, East and Southeast Europe for the period 1944-1992; harmonise the historical data with current statistical classifications; digitise and publish online wiiw's research reports for 1972-1992; and produce a series of working papers describing the data, summarising the literature and providing economic analysis on the key research areas related to the development and demise of the command economies. The activities in this project will be coordinated in close cooperation with our partners in the Research Centre for the History of Transformations (RECET) research network of the University of Vienna.

Funded by the [Anniversary Fund of the Oesterreichische Nationalbank](#) (Project No. 18666).

### **Projections Ioans and IR Update 2024-2026**

*Addiko Bank AG*

*April 2024 - September 2024*

The project aims to generate forecasts for consumer and corporate loans, along with their corresponding interest rates, across the five countries where Addiko Bank operates for the years 2024 - 2026.

### **Russia Monitor**

*German Federal Ministry for Economic Affairs and Climate Action (BMWK)*

*January 2023 - April 2024*

In response to Russia's invasion of Ukraine, the EU, together with some other states, has imposed numerous sanctions on Russia, in order to restrict its ability to wage a war and increase the political and economic costs for the country's political and economic elites. Against this background, the project is set to create a database of macroeconomic indicators to continuously and systematically monitor key developments in the Russian economy and assess the effects of the sanctions. Carefully selected indicators from multiple sources are regularly compiled, evaluated with regards to their credibility and relevance, and cross-checked with alternative data, such as live ships tracking monitors (IfW) or the global sanctions database developed by CES-ifo. The database encompasses Russian exports and imports (including of sanctioned and dual-use goods), the state budget, production sector, domestic demand, labour market, price developments and financial markets. Based on this database, wiiw has launched a monthly Russia Monitor publication series analysing the key features and trends in the Russian economy. The project is based on a cooperation between wiiw as project coordinator, together with the Kiel Institute for the World Economy (IfW), the Leibniz Institute for Economic Research (ifo) and the Austrian Institute of Economic Research (WIFO).

### **Toward innovation-driven growth: innovation systems and policies in EU member states of Central Eastern Europe**

*Friedrich Ebert Stiftung*

*September 2023 - March 2024*

In this follow-up study building upon prior analyses of a new growth model for EU-CEE countries, our objectives are fivefold: (1) To explain in accessible terms the types of innovation systems and policies that foster the development of domestic innovation capabilities, drawing on global best practice. (2) To conduct a critical evaluation of the current innovation landscape in EU-CEE countries, considering the impacts of ongoing green and digital megatrends. (3) To assess the strengths and weaknesses of innovation policies within EU-CEE countries, encompassing both national initiatives and opportunities stemming from EU industrial and technology policy frameworks. (4) To formulate a set of actionable policy recommendations aimed at fostering innovation-driven growth in the EU-CEE countries, thereby increasing productivity and resource efficiency. These recommendations will be tailored to the medium-term timeframe and take into account the political and historical context of the EU-CEE countries. (5) To tailor the findings of the study to the specific development needs and opportunities of each country through the preparation of country-specific briefing notes, while remaining mindful of the common challenges and opportunities across the EU-CEE region.

### **Key Forecasts and Macro Scenario Analysis**

*Addiko Bank AG*

*May 2023 - February 2024*

The wiiw carried out the 'Key Forecasts and Macro Scenario Analysis' - a set of agreed macroeconomic indicators. For five Addiko countries (plus the euro area and other key markets where appropriate), wiiw produced forecasts (up to five years) for a set of agreed macroeconomic and financial indicators. For some of these indicators, wiiw produced three scenarios in addition to the baseline: optimistic, pessimistic and negative.

### **Entwicklung, Organisation, Durchführung und Evaluierung von Seminaren am Joint Vienna Institut (JVI)**

*Oesterreichische Nationalbank/Austrian Ministry of Finance*

*January 2023 - December 2023*

Das wiiw hat im Rahmen des Joint Vienna Institute (JVI) mehrere Kurse konzipiert und durchgeführt. Diese Kurse richten sich an Entscheidungsträger des öffentlichen Sektors aus den Transformationsländern Südosteuropas und der GUS und haben zum Ziel, aktuelle wirtschaftspolitische Themen zu vermitteln.

### **Online database for the Danube Region Monitor - People and Skills**

*Austrian Agency for Education and Internationalisation (OeAD) and L&R Sozialforschung*

*March 2022 - May 2023*

This project consists of developing a user-friendly online database with statistics and indicators on education systems and labour markets in the 14 countries participating in the European Union Strategy for the Danube Region (EUSDR). The online database is primarily designed for experts in ministries and (international) organisations who deal with the EUSDR and the fields of education and labour markets in a transnational context.

<https://peopleandskills.danube-region.eu/danube-region-monitor/>

### **Comparative Advantage in the Digital Era: New insights into trade in digital tasks and ICT capital**

*Anniversary Fund of the Oesterreichische Nationalbank*

*March 2021 - February 2023*

Comparative advantage remains one of the basic principles of international trade theory. This also holds true in times of globalisation and digitalisation. Taking into account the existence of international value chains and productivity differences across countries, this project identified comparative advantage of EU member states in the 'digital endowments', comprising 'digital tasks' and ICT capital. A major finding of the research is that the Heckscher-Ohlin-Vanek theorem is capable of predicting endowment-based comparative advantage in 'digital tasks' and ICT capital in the overwhelming majority of case. At the same time, the distribution of comparative advantage across EU member states does not seem to follow a clear pattern, in the sense, that EU innovation leaders necessarily have advantages in digital endowments as one might expect. Another hypothesis was conformed: in a comparison between the EU and the US, the latter emerged as holding comparative advantage in digital tasks, confirming the role of the US as a digital leader. Some of these results were also confirmed by additional competitiveness measures such as revealed comparative advantages (RCAs). Furthermore, econometric analyses showed that investment in R&D, in combination with industrial policies, are capable of shaping comparative advantage were investigated.

Funded by the [Anniversary Fund of the Oesterreichische Nationalbank](#) (Project No. 18641).

### **Capacity building for Central, East and Southeast Europe: Joint Vienna Institute**

*Oesterreichische Nationalbank/Austrian Ministry of Finance*

*January 2014 - December 2022*

For more than two decades, wiiw has been organising courses within the framework of the Joint Vienna Institute (JVI). These courses are aimed at decision-makers in the public sector and policy-makers from transition countries in Southeastern Europe and the CIS. wiiw organised six courses in 2022 and was responsible for the entire conception and implementation of these seminars as well as for the selection of the participants.

### **Wirtschaftliche Auswirkungen des Russisch-Ukrainischen Krieges auf Wien**

*City of Vienna*

*March 2022 - December 2022*

Die Invasion Russlands in der Ukraine führt neben den geopolitischen auch zu einer Reihe von geoökonomischen Auswirkungen, deren Intensität sowohl in der kurzen als auch in der mittleren und längeren Frist sehr hoch sein wird. Die akuten Effekte betreffen die globalen und insbesondere europäischen Märkte für Energie, sowie für landwirtschaftliche Güter und Nahrungsmittel. Millionen von Flüchtenden haben sich auf den Weg gemacht. Grundzüge der Nachkriegsordnung, insbesondere in den Bereichen Sicherheitspolitik, Energiepolitik und das damit einhergehende Wachstumsmodell werden aktuell überdacht. Diese Kurzstudie gab einen ersten Überblick vor allem über die potentiellen kurzfristigen wirtschaftlichen Effekte des Krieges auf die Stadt Wien.

### **Industrial Policy for a New Growth Model: A toolbox for EU-CEE countries**

*Friedrich Ebert Stiftung*

*July 2022 - December 2022*

The Central Eastern European member states of the EU (EU-CEE) marked impressive advancements in their socio-economic developments over the past decades and can be even regarded as one of the most dynamic regions in Europe. The countries' EU membership as well as their deep integration into regional and global value chains (GVCs) played a crucial role in this catch-up process. However, the period following the Great Recession has seen unimpressive labour productivity growth along with a somewhat slower, in some cases even derailed, convergence process. In the light of EU-CEE's positioning as 'factory economies' and their struggle to occupy the more sophisticated stages of manufacturing value chains, the key challenge faced by the region is to occupy higher value-added activities within the value chain. This study aims to strategically evaluate the countries' policy options in achieving this goal, and to design an appropriate industrial policy toolkit for them, taking full account of the ongoing

megatrends. It aims to guide policy makers in making the best possible use of the available policy space and taking full advantage of EU membership, while at the same time steering the industrial policy discussions at the EU-level to one that better fits the position and capabilities of the EU-CEE. The study defines industrial policy in the EU context and explores lessons learned from past successful industrialisers. It maps the EU-CEE's industrial development, with a particular focus on green and digital aspects, in order to identify most promising growth areas, along with key areas of vulnerability. Subsequently, it dives deep into the discussion of flagship industrial policy instruments and discusses how they could be more effectively deployed in EU-CEE.

### **Economic and Social Impacts of FDI in CSEE**

*Ost-Ausschuss der Deutschen Wirtschaft e.V.*

*January 2022 - November 2022*

The study analysed the economic impact FDI had on the economies of Central, East and Southeast Europe and discusses pros and cons of FDI inflows. The analysis was conducted at the aggregate level as well as at the level of broad industry categories (according to available NACE industries) such as for instance manufacturing, finance, trade or information and communication, over the longer run.

### **Market analysis' - projections and adverse scenarios**

*Addiko Bank AG*

*April 2020 - September 2022*

Scenario analysis wiiw provided forecasts for a set of agreed macroeconomic and financial indicators in five Addiko countries of operation as well as the euro area and where relevant, other key markets. For some of these indicators, in addition to the baseline, wiiw produced an optimistic, a pessimistic and an adverse scenario. The accompanying excel file included a full list of data to be provided. Countries covered: Slovenia, Croatia, Bosnia, Serbia, Montenegro, Euro area.

### **The Effect of Digitisation on Work in Europe**

*Anniversary Fund of the Oesterreichische Nationalbank*

*April 2020 - March 2022*

The project analyses digitisation and its impact on work from two different perspectives. On the one hand, it not only sheds light on regional digitisation patterns but also examines the effect of digitisation on employment in EU countries at the NUTS-2 level. Methodologically, it goes beyond standard approaches applied in the empirical literature and provides novel insights into regional and industry spillovers as well as non-linearities in the employment effects of digitisation. On the other hand, it explores the effects of digitisation on workers' well-being. It takes an integrated approach and simultaneously determines both positive and negative psychological effects of ICT use, as captured by work engagement and burnout, respectively. It also sheds light on the role of other (job and/or personal) characteristics in either reinforcing or mitigating the positive or negative effects of ICT use on workers' psychological well-being.

### **Growth and productivity accounts - Capital productivity and multi-factor productivity**

*Eurostat*

*July 2019 - December 2021*

Eurostat planned to publish for the first time capital productivity indicators (CAPI) and Multi-Factor Productivity to better meet the European policy needs. wiiw supported these activities with feasibility analyses, methodological developments, quality assessment of indicators and by raising awareness regarding capital productivity.

### **Update of loans and interest rates forecast for the years 2021-2023**

*Addiko Bank AG*

*September 2021 - December 2021*

Update Forecast 2021-2023 The project aims to generate forecasts for consumer and corporate loans, along with their corresponding interest rates, across the five countries where Addiko Bank operates for the years 2021-2023

### **The production side of 'digitalisation' and its impacts**

*Anniversary Fund of the Oesterreichische Nationalbank*

*September 2019 - October 2021*

The project comprised four main tasks linking the production and use side of the digital sector. In the first task the production and supply side of the ICT goods and services sectors was studied. An overview of the ICT industry across countries was provided based on various data sources at the industry and firm level. Determinants of ICT industries' performance and drivers of investment by ICT superstars across the European Union and the globe were analysed. The second task then focused on the patterns of trade of ICT goods and services linking the supply side of the digital sector to its demand. Furthermore, the impact of technical regulations and standards embedded within Technical Barriers to Trade (TBT) on patterns of trade flows of ICT goods were analysed. Task three focused on the investment in ICT capital assets and building up of an ICT capital stock across countries and industries. Gross capital formation and capital stocks in different asset types and their contribution to employment and value added growth were studied. The fourth task was devoted to the role of patenting in productivity and market share of firms active in the global ICT sectors. Finally, in the last part of task we studied whether and how ICT driven technical change impacts on structure of labour demand by various groupings.

Funded by the [Anniversary Fund of the Oesterreichische Nationalbank](#) (Project No. 18128).

### **Nearshoring Potential in the Western Balkans**

*Federal Ministry for Economic Cooperation and Development, Germany*

*August 2020 - May 2021*

This study aims to analyse whether and how the Western Balkan economies could benefit from near-shoring trends after the COVID-19 pandemic. It begins by discussing recent trends in foreign investment, and then presents an econometric analysis of determinants of foreign direct investment in the Western Balkans and East Asia. This is followed by a set of surveys, interviews and case studies, of different actors involved in global supply chains and investment, including foreign companies that have invested in the Western Balkans, foreign companies that are considering investing in the Western Balkans, local companies from the Western Balkans, and investment promotion agencies from these economies. The study concludes that Western Balkan economies can indeed benefit from near-shoring trends in the post-pandemic world, but would have to go beyond low labour costs in order to achieve that. Putting a focus on skilled labour, investment in education and training, improving infrastructure and governance would be the most important things to do.

### **A new growth model in EU-CEE**

*Friedrich Ebert Stiftung*

*August 2020 - May 2021*

The eleven EU member states from Central, East, and Southeast Europe (EU-CEE) have undergone three decades of transition to market capitalism and convergence with Western Europe. There have been many successes and challenges, and the level of economic and social development varies widely across the region. The study finds that the convergence process, especially for the more advanced countries, has slowed since 2007 and that the current growth model may well be reaching its limit. The authors find that it will take decades for EU-CEE's more developed countries to halve the remaining gap to Germany and other rich countries in Western Europe. This implies that it is high time to think about a new growth model for the region. The study outlines the main priorities for a strategic transition to a new growth model of EU-CEE and shows substantial opportunities in a greener, digitised, automated world.

### **Industrial Diagnostic Study Rwanda 2020**

*UNIDO*

*August 2020 - April 2021*

The Programme for Country Partnership (PCP) is one of UNIDO's key assistance programmes for Member States. It is a process aligned to the national priorities and strategies of countries thereby maintaining full ownership of beneficiary countries of the complete process by defining its needs and required support. The first step in the PCP Rwanda is a diagnostic report which wiiw staff supports in their role as international consultants. Based on a thorough analysis of the industrial development at the macro-economic, industry level and firm-level, the PCP diagnostic report reveals the major bottlenecks as well as the major areas and priority sectors for interventions. wiiw's contribution to the project is anchored in the macro-economic analysis of the industrial development in which five thematic components with high potential for fostering inclusive and sustainable industrial development were identified. These thematic components are integrated value chain development in agro-business and food processing; integrated value chain development in textiles and garments; development of sustainable energy, value added creation in a circular economy and adequate skills for industry 4.0.

## **Macroeconomic Forecast**

Sberbank

December 2020 - January 2021

Macroeconomic Forecast - Solomanagement Sberbank Europe AG: The wiiw team produced a short and a long version of a macroeconomic report in German and in English for the group and for the solo management report of Sberbank Europa AG. This report contained an analysis of the situation in 2020 as well as a forecast for 2021 for three regions: i) the world, ii) the EU and SEE/SEE, as well as iii) for eight countries: Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Germany, Hungary, Serbia, Slovenia).

## **Wirtschaftsbeziehungen Österreich - China: Künftige Kooperationspotenziale**

Federal Ministry of Labour, Social Affairs and Consumer Protection (BMASGK)

August 2020 - January 2021

Wirtschaftsbeziehungen Österreich - China: Künftige Kooperationspotenziale Am 28. Mai 1971 wurden die diplomatischen Beziehungen zwischen der Republik Österreich und der Volksrepublik China aufgenommen. Dieser Schritt der bilateralen Annäherung jährt sich somit im Jahr 2021 zum 50. Mal. Mit dieser Studie sollte eine Bestandsaufnahme der bilateralen wirtschaftlichen und wirtschaftspolitischen Beziehungen und ein Ausblick über künftige Chancen für den internationalen Handel und Kooperationsmöglichkeiten, insbesondere auch für die Schwerpunkte Forschung, Technologie und Innovation, erhoben werden. Darauf aufbauend wurden Empfehlungen als Input für die nationale und interministeriell abzustimmende China-Strategie aufgezeigt.

## **Importance of Services Trade for the EU Economy and the Impact of Brexit**

Anniversary Fund of the Oesterreichische Nationalbank

January 2019 - September 2020

Services are a key sector of the global economy, accounting for the bulk of GDP in most countries and for a significant share of global trade. The long history of economic integration created close ties between the UK and rest of the EU that are not so easy to disentangle. In order to estimate the potential costs of Brexit it is important to better understand the interdependency of the EU members' economies with respect to services trade as a rise in services trade cost post-Brexit would impact not only the UK services firms, but also services suppliers and manufacturing producers in the EU. It is likely that some trade diversion will take place both in the UK and the EU, resulting in reallocation of resources to less efficient firms and negative welfare effects. In our study we explored in detail the linkages between the UK and EU-27 economies with respect to services sectors and estimate possible effects of Brexit for both the UK and the remaining EU members.

## **Support the RCC Secretariat to prepare a diagnostic report to analyse the progress and conduct an evaluation of results related to the Multi-annual Action Plan for a Regional Economic Area (MAP REA) in the Western Balkans**

Regional Cooperation Council (RCC)

March 2020 - July 2020

The purpose of the consultancy was to support RCC Secretariat in assessing the results within the Multi-annual Action Plan for a Regional Economic Area (MAP REA) components, namely Investment, Mobility and Digital Integration. The consultancy aimed to provide a fully informed diagnostics of measures along each of the respective components and their corresponding activities, as well as proposals for an economic development agenda beyond MAP REA.

## **Studie 'Vom Nutzen in einer gut organisierten Stadt zu wohnen'**

Büro für Daseinsvorsorge und Kommunalwirtschaft der Stadt Wien und Österreichischer Städtebund

April 2020 - July 2020

Der Megatrend Urbanisierung hält ungehalten weiter an. Folgende Forschungsschwerpunkte wurden in dieser Studie erarbeitet: a) Zuspitzung des Gewinns des Einzelnen im gut organisierten urbanen Raum (im Vergleich zu anderen Räumen) zu leben auf eine Nutzenkennzahl im Europavergleich. b) Ausbildungs-, Gesundheitsausgaben, sowie Ausgaben für Wohnen. c) Europavergleich der städtischen Lebensqualität: u.a. Zufriedenheit mit dem öffentlichen Verkehr und anderen öffentlichen Dienstleistungen. Aus gegebenem Anlass wurde die Qualität der städtischen Gesundheitsinfrastruktur anhand der jüngsten Geschehnisse in Zusammenhang mit der Coronavirus-Krise evaluiert.

## **ArBeEi International - Grundlagen- und angewandte Arbeitsmarktanalysen**

*Federal Ministry of Labour, Social Affairs and Consumer Protection (BMASGK)*

*July 2017 - June 2020*

Der Prozess der Globalisierung sowie die zunehmende Integration Europas stellen den Arbeitsmarkt in Österreich vor große Herausforderungen. Zunehmende wirtschaftliche Verflechtungen (v.a. über Handel, Direktinvestitionen, Offshoring, Migration) haben erhebliche Auswirkungen auf die Bedingungen am Arbeitsmarkt, auf Lohn- und Einkommensentwicklungen und Beschäftigungsstrukturen. Evidenzbasierte Handlungsempfehlungen für die Wirtschaftspolitik im Allgemeinen und die Arbeitsmarktpolitik im Besonderen erfordern daher eine Analyse mit einer internationalen und vergleichenden Perspektive. Für Österreich bedeutet das, die arbeitsmarktrelevanten Entwicklungen seiner Nachbarländer, v.a. der mittel- und osteuropäischen Nachbarn, der Beitrittskandidaten und der EU Nachbarregionen genau zu analysieren, und natürlich auch eine globale Perspektive zu entwickeln. Dieses vom österreichischen Sozialministerium beauftragte Forschungsprojekt beschäftigt sich mit diesen Themen. Es ist auf drei Jahre angelegt und in vier Teilbereiche gegliedert: (1) Technologie, Globalisierung und Konvergenz in der EU, (2) Mobilität von Arbeitskräften und Migrationstrends, (3) Konjunktur, Beschäftigung und Arbeitslosigkeit und (4) institutionelle Rahmenbedingungen und deren Effekte auf Wachstum, Beschäftigung und Ungleichheit.

## **Linkages between Vienna and other European cities**

*City of Vienna*

*January 2020 - May 2020*

In this study, we introduce a measure of linkage for the relationship between cities/regions, based on time series features of search engine queries. The used features are backed by time series decomposition using STL, i.e. seasonal and trend decomposition using Loess, precisely the strength of the trend and the linearity of a time series. The combination of these two features for both sides of search interest, e.g. the search interest for a certain topic in the city of Berlin based on search queries posed in Vienna, allows for the analysis of the development of this computed measure of linkage for the period 2004-2020 in various search engine categories provided by Google Trends between cities/regions in Europe. We then present examples based on the city of Vienna as a point-of-interest for selected topics and propose a dashboard for policy decisions.

## **SEE Jobs Gateway**

*The World Bank*

*July 2016 - March 2020*

Within this project, an annual flagship report on *Western Balkans Labor Market Trends* is launched. The Report is based on a dedicated regional labour market database for the Western Balkans, established and compiled by wiiw in cooperation with the Statistical Offices of the region. It allows, for the first time, to calculate aggregate labour market indicators across the six Western Balkan countries and to directly compare them with each other and with selected EU peer countries. The reports and database are available on the wiiw website. Overall, the initiative aims to provide access to labour market information and data for national policy-makers in the Western Balkans, as well as the international and academic communities. At the same time, it aims to generate interest among the press, NGOs and the wider public and thereby to encourage the debate on labour market policies.

<https://data.wiiw.ac.at/seejobsgateway-q.html>

## **Macroeconomic Forecast**

*Sberbank*

*October 2019 - March 2020*

Countries - Macro-Economic Forecast: The wiiw statistics and country monitoring team provided on macro-economic indicators as well as forecasts for seven countries in Central, East and Southeast Europe to Sberbank Europe AG.

## **Industry level growth and productivity data with special focus on intangible assets (EUKLEMS update)**

*European Commission, DG Economic and Financial Affairs*

*July 2018 - October 2019*

Within this project, wiiw created a comprehensive set of reliable data for productivity measures and growth accounting. The work went in various aspects beyond the data that were officially available at this time, notably regarding the length of time series, the consistent application of industry and asset breakdowns, the quality adjustment of labour input measures and the respective attribution of wage shares, estimations of investments,



consumption of fixed capital and capital stock. The strong need for such a database has long been recognised and underlies the development of the EU KLEMS project, which was successfully concluded in 2009 as an FP6-funded research project. Within this service contract, wiiw updated the existing EU KLEMS database, extended it by an additional set of information on intangible assets, explored ways to integrate these measures into the growth accounting framework and provided results of such an exercise, distinguishing a statistical from an analytical module. Moreover, wiiw provided an analytical paper identifying the most important recent trends of the productivity dynamics in Europe and its determinants, with a particular focus on the role of intangible assets. The dataset has been published on a dedicated website ([www.euklems.eu](http://www.euklems.eu)) in October 2019.

<https://www.euklems.eu>

### **Of Smile Curves and Global Value Chains: The Role of Functional Specialisation for Economic Growth**

*Anniversary Fund of the Oesterreichische Nationalbank*

*January 2018 - June 2019*

The central insight of the smile curve is that different functions (or 'tasks') that need to be performed along a firm's value chain have different potentials for generating value added, with the production stage often being the least promising one. Project-level data on greenfield crossborder investments with information on both the industry and the function they serve are used to identify countries' functional specialisation. A metric labelled 'relative functional specialisation in global value chains' and a related measure, the 'relative production specialisation index', are developed. The descriptive part of the project will use these indicators to create 'portraits' of functional specialisation of EU Member States, NAFTA and the South East Asian region. In a second step, the implication of the smile curve, i.e. that countries specialised in the pre-production and post-production tasks of the value chain should capture higher value added, is tested econometrically. To this end the relative function specialisation measure and the relative production specialisation index are embedded into an empirical endogenous growth model.

### **Risikoanalyse zur wirtschaftlichen Entwicklung der Türkei**

*Österreichische Post AG/Austrian Post Office*

*June 2018 - September 2018*

The project aimed to assess current economic conditions and business risks in Turkey, and to make projections for how these could develop in the next ten years under three scenarios (baseline, negative, positive). In particular, indicators were assessed which are relevant for the valuation of a business and for due diligence. These included trends in domestic consumption, inflation, the labour market, the institutional framework and political risk factors. A risk matrix was also included, identifying key business risks over the next ten years, and ranking them based on likelihood and impact. The study is written in German.

### **Diagnostic Report for the Programme for Country Partnership (PCP): Morocco**

*UNIDO*

*June 2018 - August 2018*

The Program for Country Partnership (PCP) is the new type of UNIDO assistance for Member States. It is a process aligned to the national priorities and strategies of countries thereby maintaining full ownership of beneficiary countries of the complete process by defining its needs and required support. As usual, the first step in the PCP Morocco is a diagnostics report which wiiw staff supports in their role as international consultants. The PCP diagnostic report reveals the major bottlenecks as well as opportunities for an inclusive and sustainable industrial development (ISID). The growth diagnostics is undertaken in continuous reference to Morocco's industrial development plan, the Plan d'Accélération Industrielle (PAI). The diagnostics is based on a thorough portrayal of Morocco's macroeconomic situation as well as the key structural developments. In a next step promising manufacturing industries for Morocco's industrial development are identified. Moreover, the identified key manufacturing industries, such as agri-business, are analysed in depths as are important horizontal issues relevant for ISID such as the switch to a circular economy; the development potential of Moroccan industrial parks, the potentially disruptive impact of technologies related to Industry 4.0 and E-commerce. The entire growth diagnostics are yielding a set of policy recommendations that are intended to help Morocco achieving the objectives set out in their industrial development plan.

### **Austria's Economic Competitiveness in a Neighbourhood Context**

*Anniversary Fund of the Oesterreichische Nationalbank*

*August 2016 - July 2018*

Since the Eastern enlargement of the EU in 2004, Austria has lost global export market shares. At the same time



exports to Central, East and Southeast Europe have gained a significant portion of Austria's total exports. Moreover, in recent years Austrian GDP growth has slowed down and unemployment increased. In this context our main research question is whether the opening to the East had a structural lock-in effect for Austria's economy. In a novel approach on the territorial lock-in effect we will apply a multi-perspective view from a microeconomic (firm-level), mesoeconomic (industry-level) and macroeconomic (country-level) perspective. As regards data, we will have exclusive access to an update of the world input-output database including data for the Western Balkans. The new data will add substantially to the project, the current discussion on Austria's competitiveness and the development of policy recommendations.

### **Investitionspotentiale österreichischer Unternehmen in Bosnien-Herzegowina, Montenegro und Serbien**

*Federal Chancellery of the Republic of Austria*

*May 2018 - July 2018*

Austrian companies are among the most important investors in the Western Balkans. Much of the investment was made before the onset of the global financial crisis. For the selected countries of Bosnia-Herzegovina, Montenegro and Serbia the project aimed: (1) to give a detailed overview of Austrian direct investment; (2) to map the economic environment for Austrian companies locally and (3) to formulate policy recommendations to support Austrian companies in these countries. The study is written in German.

### **Economic policy implications of the Belt and Road Initiative for CESEE and Austria**

*Embassy of the Peoples Republic of China*

*October 2017 - March 2018*

The Belt and Road Initiative (BRI), a vision to revive the ancient 'Silk Road', was first presented by the Chinese President Xi Jinping in 2013. This initiative will affect more than forty countries throughout Eurasia and Africa. For Austria, it is particularly interesting, due to the country's strong economic relations with Eastern Europe and the Western Balkans. China has identified this region as the gateway to Western European markets, and emphasised its strategic importance with the initiation of a diplomatic initiative titled '16+1'. Furthermore, this region has a particularly high need for infrastructure investment, which form the core of the BRI. An analysis of developments in trade and investment, accompanied by the evaluation of the need for infrastructure investment in sixteen countries in Central, East, and Southeast Europe (CESEE), should allow for the identification of potential fields of cooperation between China and Austria in the context of the 'new Silk Road'.

### **Diagnostic Report for Partner Country Programme (PCP) Kyrgyzstan**

*UNIDO*

*August 2017 - November 2017*

At the moment, Kyrgyzstan's manufacturing sector is dominated by gold production, creating only a limited number of jobs but putting a heavy burden on the natural environment. Meanwhile, strong and inclusive growth, which would be consistent with the country's long-term objectives (such as those envisaged in the "40 steps to the New Era" government programme) and the UN Sustainable Development Goals, would require a stronger emphasis on manufacturing industries such as food and beverages, textiles, and wearing apparel. Their labour-intensive production processes and strong linkages with other sectors, particularly agriculture, could generate badly needed formal jobs and make the country less dependent on the informal sector and the inflow of remittances from abroad. Kyrgyzstan's inexpensive, trainable labour as well as low energy costs are internationally competitive, and represent clear advantages for the growth of such industries. However, these advantages are offset by the low productivity of firms, which tend to be too small and fragmented to reach a productivity level required to compete internationally and still suffer from insufficient access to credit. Besides, the country suffers from major logistical problems for trade, which were found to be greater than in other landlocked countries at a similar development level, such as Moldova and Laos.

### **Background paper contributions for the Industrial Development Report 2018, 'The Demand for Manufacturing. Inclusive and Sustainable Industrial Consumption, in a Globalized Economy'**

*UNIDO*

*October 2016 - February 2017*

The UNIDO Industrial Development Report (IDR) series is a unique UN publication monitoring and analysing industrial developments in industrialised and industrialising economies across the world. It covers 85 countries in Europe, North America, Asia and the Pacific and serves as an established source of reference for policymakers, as well as public and private stakeholders. wiiw will support UNIDO in producing the next IDR and draft two

background papers for chapter 4 of the report. The first background paper will analyse unit prices in manufacturing exports from advanced and developing countries, and explore whether there are significant difference in unit values of similar goods exported from developing and advanced economies to the same markets. The second background paper will discuss whether some segments of manufacturing production are becoming 'commodified' and what are the implications for developing countries and trade.

### **Production linkages, value added trade and employment in the wider Europe**

*Anniversary Fund of the Oesterreichische Nationalbank*

*January 2015 - December 2016*

The establishment of supply and production links has been a major driving force of the integration of the new EU Member States. Countries strongly integrated in production networks benefited in terms of productivity, value added and export growth. An important question on the further widening of Europe therefore is the integration of today's accession countries and possibly the EU neighbourhood countries in that respect. For a detailed study of actual patterns of production integration, a European multi-country input-output table is constructed allowing for an analysis of patterns of integration and value added trade in the wider European context. The potential impacts are further investigated by using a gravity modelling approach accounting for the importance of trade in intermediates and value added trade. Finally, various scenarios will be calculated providing evidence of potential impacts of further integration or disintegration on income and employment.

### **Tradability of Output and the Current Account in Europe**

*Anniversary Fund of the Oesterreichische Nationalbank*

*July 2015 - December 2016*

One aspect in the debate about current account imbalances in Europe is the consequence of 'de-industrialisation' observable in several European countries. This project highlights the role of tradability of output as a key determinant of the current account balance. The relationship between a country's specialisation in the production of tradables will be investigated empirically for 46 European countries over the period 1995-2014. To this end a tradability index is developed which can be understood as a country's expected degree of openness given its economic structure. The tradability hypothesis to be tested in this project suggests that countries specialising in the production of relatively more tradable output have a tendency to run current account surpluses. It is shown that this relationship is also predicted by intertemporal models of the current account. The tradability hypothesis is tested using both panel regressions and cross-country regression techniques.

### **Smart Public Intangibles (SPINTAN)**

*European Commission, 7th Framework Programme*

*December 2013 - November 2016*

The SPINTAN project extends both the theoretical and the empirical approach introduced by Corrado, Hulten and Sichel (2005, 2009) including the Public Sector intangibles in their analytical framework in different complementary directions. The main outcomes were: (1) A Public Sector Intangibles Database for a wide set of European Union (EU) countries, supplemented by some large non EU countries complementing the harmonised intangible measures developed by INTAN Invest. (2) Analysis of the key issues with regard to the boundaries of public intangibles between various public and private categories, such as R&D, skill formation and IT investment. New ways to measure Public Sector intangible capital services, and especially the rate of return on public intangibles, were developed. (3) Analysis of the impact of Public Sector intangibles on innovation, well being and "smart" growth. The project paid special attention to the consequences of austerity policies, i.e. the project measures the impact on intangible assets investment of the austerity policies after the crisis and quantifies its impact on growth and well being. The SPINTAN Project was carried out by 12 European partners and two non European Associated Members that joined in the first months of the project. wiiw was involved in the methodological and conceptual work to identify the relevant assets and has provided data for the new Member States and Austria to produce the envisaged cross-country harmonised database of public sector intangibles. It also contributed to the work on spillovers from intangibles and on austerity & recovery, focusing on the effects of government spending in an international input-output framework.

<http://www.spintan.net>

### **Asian Experiences with Global and Regional Value Chain Integration and Structural Change**

*UNIDO*

*July 2016 - November 2016*

This study was part of a larger research project on global and regional value chains in South and South East Asia undertaken by UNIDO and a Chinese partner (UIBE). Its main objective was to investigate the relationship between the intensification of global and regional value chains and structural indicators as well as export-related performance measures in South-East Asia and South Asia. The research was based on OECD's Inter-Country Input-Output Tables covering more than 60 countries over the period 1995-2011.

### **Socio-economic assessment of the Danube Region: state of the region, challenges and strategy development**

*Ministerium für Finanzen und Wirtschaft Baden-Württemberg  
July 2013 - October 2015*

The main objective of this project was an analysis of potential opportunities, requirements, challenges, and recommendations, in order to enhance the competitiveness, the innovative strength, the attractiveness, and the prosperity of the entire region of the Danube riparian countries and regions, and to develop strategic orientations in view of transnational and interregional cooperation for the period 2014-2020. wiw developed this assessment in cooperation with two German partners, the Centre for European Economic Research (ZEW) - which was also the leader of the project - and the Institut für Angewandte Wirtschaftsforschung (IAW). The focus on wiw's contribution was on labour markets, regional development, cluster development and cooperation in the Danube Region.

### **Energy efficiency and EU industrial competitiveness: energy costs and their impact on manufacturing activity (Competitiveness Report 2014)**

*European Commission, DG Enterprise and Industry  
October 2014 - November 2014*

This study serves as a background report for the annual European Competitiveness Report of the European Commission (DG ENTR). The European Commission is currently in the process of preparing a new energy and climate framework for the period up to 2030. For this purpose, DG ENTR has commissioned a study which should provide a comparative analysis of the impact of changing energy costs on EU industrial competitiveness at country and sectoral level, and vis-à-vis its main external competitors (the United States, Japan, China and Russia), with a view to identifying future trends in production and energy efficiency strategies. While the recent gains in energy efficiency in the EU manufacturing sector have been impressive, the gap in energy prices between the EU and the USA has widened, which might potentially undermine EU industrial competitiveness, particularly in energy-intensive sectors. To a large extent, the study relies on data from the latest version of the World Input-Output Database (WIOD).

### **Agglomeration, international linkages and the location choices of European foreign direct investors**

*Anniversary Fund of the Oesterreichische Nationalbank  
January 2013 - June 2014*

This project investigated the location decision of multinational companies from six European countries in the EU over the period 2003-2010. A conditional logit model was used to estimate the impact of agglomeration effects on location choices of FDI investors. In addition, we included international inter-industry linkages which reflect the openness of a host country. This framework allowed us to compare the importance of two potentially opposing factors relevant for FDI decisions.

### **Balance of payments constrained growth: Thirlwall's Law extended**

*Anniversary Fund of the Oesterreichische Nationalbank  
July 2012 - December 2013*

Thirlwall's Law represents an important approach to international macroeconomics. The Law parsimoniously characterises the link between economic growth and (balanced) external trade. However, since the early 1990s the theory and practice of the mainstream international economics has failed to incorporate the lessons derived from the Law and did not pay due attention to external imbalances. The post-2007 crisis has brought these imbalances to the fore. Controversies over the mode of 'rebalancing' within the euro area continue, necessitating the development of simple, yet powerful, ways to analyse the links between real growth and developments on external balances. This project not only reconsiders the original version of the Law (and some of its past extensions) but also propose some important modifications. The modified versions of the Law serve as the basis for empirical models to be specified also for the EU Member States.

## **A manufacturing imperative in the EU - Europe's position in global manufacturing and the role of industrial policy (Competitiveness Report 2013)**

*European Commission, DG Enterprise and Industry  
November 2012 - June 2013*

This study served as a background report for the annual European Competitiveness Report of the European Commission (DG ENTR). The objective was (i) to detect the structural changes that have occurred in the European economy in order to identify the major challenges that lie ahead European manufacturing and (ii) to analyse and evaluate past and current approaches to industrial policies (and instruments) at the European and the EU Member State level. Based on the structural challenges for the EU economy and experiences with industrial policies the study formulated suggestions for potential elements of a renewed European industrial policy. The policy conclusions took into account the interaction of industrial policy with related policies such as competition rules, innovation policies and trade policies. The study contains both qualitative and quantitative analyses, including cluster analysis and various econometric techniques and made use of numerous data sources such as the World Input-Output Database (WIOD), OECD ANBERD, Eurostat, European Commission State Aid Scoreboard database and the Community Innovation Survey (CIS).

## **Study on structural change (Competitiveness Report 2013)**

*European Commission, DG Enterprise and Industry  
November 2012 - June 2013*

This study serves as a background report for the yearly Competitiveness Report of the EC. It illustrates and analyses the broad trends in the relative weight of quite highly aggregated sectors within market activities. It provides an overview as well as an explanation of the broad patterns and trends of structural change for the EU-27 member states. Based on empirical evidence, economic consequences of the observed patterns of structural change will be examined with special attention to the implications of emerging middle-income growth traps. The results will include policy conclusions and provide evidence on the stylised facts of structural change in Europe, the importance of structural change for aggregate growth and the relevance of basic economic mechanisms at work. Furthermore, it will highlight the importance of manufacturing relative to other sectors, which is not sufficiently captured merely by the percentage of the workforce it uses. wiiw is partner is a consortium lead by The Nordic Institute for Studies in Innovation, Research and Education (NIFU).

## **Creation of a database for value added and gross output (sales) according to the KiA classification**

*Joint Research Centre (JRC)  
January 2012 - August 2012*

KiAs (Knowledge-intensive Activities) are defined as economic sectors in which more than 33% of the employed labour force has completed academic-oriented tertiary education. The Commission requested the compilation of a database for the two following series: value added and gross output (sales) according to the KiA classification, for all Member States of the European Union, EFTA countries, and the main competitors of the European Union, including the United States, Japan, Brazil, China and South Korea.