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**International Inequality Dynamics:  
Issues and Evidence of a Redistribution Kuznets Curve**  
*Paul J.J. Welfens/Vladimir Udalov*

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## 20 Years of EIIW: 2015 – Conference in Berlin and Wuppertal

- **Award-winning research; *Euro Crisis anticipated in Oct 2008***  
National / International Networks

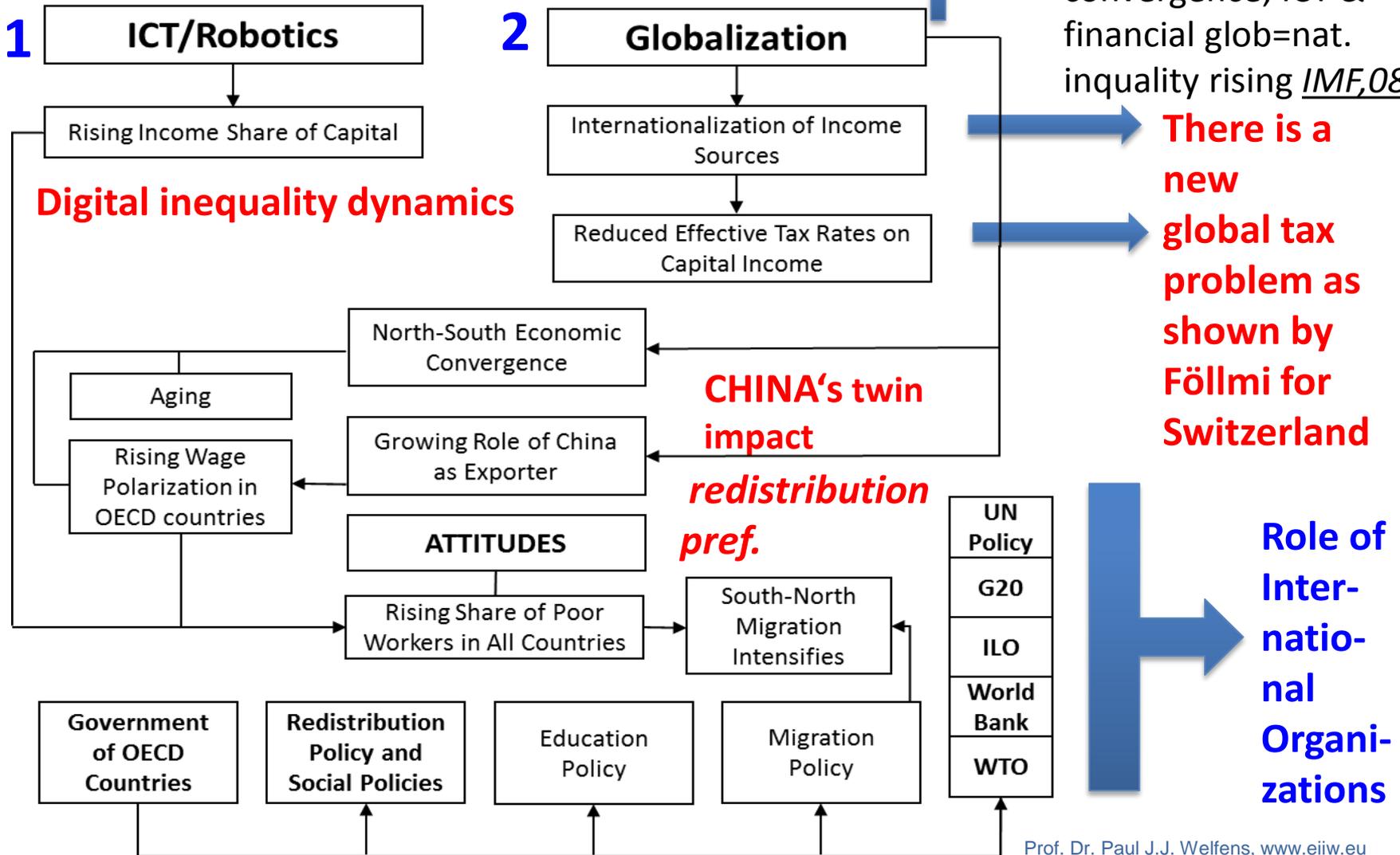


# Outline

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- 2) The Modern Social Market Economy: Normative Aspects and Selected Key Issues
- 3) Inequality and Attitudes in the World Value Survey
- 4) Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve
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  - 4.2) Empirical strategy
  - 4.3) Results
- 5) Economic Policy Conclusions

# Appendix 3

## Figure 5: Inequality and Redistribution



## Two other Issues about Inequality

- 1) Focus should be on long run per capita maximization of consumption (or C/L times lifetime) = checking needed **whether golden rule conditions** of growth model fulfilled
- 2) **How strong is redistribution as a means of improving opportunity for younger aged cohorts, but ALSO how strong is redistribution policy weakening incentives for young people (and their parents) to invest in education:** see LANDERSO/HECKMAN paper on comparing Denmark and the US in the Scandinavian Journal of Economics (2017)

# 1. Introduction

- The inequality dynamics are two-pronged (Jaumotte et al., 2008):
  - **Across countries there is trade-driven convergence** since the 1980s
  - **Within countries, inequality has increased in many countries, ICT expansion and financial globalization rarely benefit the poor strata (except for falling absolute digital prices=real income gain)**
- **Given the demographic changes in the North, there are many challenges in the field of social policies.**
- The interaction between the dynamics in the South and in the North will be partly visible in **global capital markets in the medium term, while the more long-term challenges of capital accumulation are part of the long run globalization process (WELFENS, 2013)**
- **Immigration pressure has increased in the EU and in ASEAN countries** where the creation of a single market – EU in 1993, ASEAN in 2016 – brought not only freedom of trade/capital flows but also more migration.

# 1. Introduction

- The following analysis uses the results of the **World Value Survey** to assess key questions raised. **In particular, we are interested in whether or not a critical per capita income value exists above which more income redistribution is desired – this is the question of the existence of an “Income Redistribution Kuznets Curve”.**
- A major analytical focus of the subsequent analysis is to get a better understanding about the attitude of individuals for/against government income redistribution – and, in particular, to determine to what extent there is a change in this attitude along the dynamics of economic catching-up.
- Are individuals’ preferences in the field of income redistribution a positive or negative function of per capita income?

## 2. The Modern Social Market Economy: Normative Aspects and Selected Key Issues

- The share of **social security expenditures in OECD countries increased considerably even before aging has become a more pressing topic** on the policy agenda in the early 21st century
- **As regards a normative view of income redistribution, an influential book was RAWLS' Theory of Justice (1971) and several publications of SEN**
- In Europe, practically all gainfully employed persons are covered by some basic form of public health insurance – much in contrast to the United States where about 15% of the population are not covered by a health insurance system: **Western EU countries have a higher life expectancy than the US (and lower child mortality) which is crucial for enhanced income analysis; namely, taking into account life expectancy; and US health expenditure/GDP = almost 2x GER/FRA**

### 3. Inequality and Attitudes in the World Value Survey

#### *Looking at Selected Findings from the Literature*

- There are several remarkable features of income inequality dynamics in the world economy:
  - The capital income share of capital in national income is rising in many countries
  - There is still a recent history of **considerable redistribution from labor to banks and this artificially increased banks' profitability in OECD countries: bundling loans to households and payment protection insurance = CASE of UK: 2011-18= 2% of (annual) GDP reclaimed by private households**
  - In a world of liberalized capital markets, distortions in major national capital markets will have distorting internat. spillovers
  - **In the North there is often a view that income redistribution policies combined with “active” education policy** will help to bring about more efficiency as well as a more equitable society (analysis see: Heckman paper (Denmark/US) in Swedish J. of Political Economy

### 3. Inequality Issues and Attitudes in the World Value Survey

#### *Looking at Selected Findings from the Literature*

- An important aspect that has recently been studied for **the US, Germany and China**, are the **links between income distribution and current account imbalance**.
- Empirical analysis has shown for **OECD countries that import competition from China has brought about new labor market polarization (BREEMERSCH ET AL., 2017)**.
- In many EU countries fiscal devaluation (=higher VAT rate, lower social security contributions – holding public sector deficit constant) has been considered as a new potentially useful option with regard to economic policy= **more jobs through lower labor costs, higher VAT rate reduces demand for tradables = CA improvement**
- A new global challenge is the apparent **rise of immigration pressure**
  - largely from the **South to the North**
- **The effects of aging in societies** are important in many countries

### 3. Inequality and Attitudes in the World Value Survey

#### *International Income Dispersion and National Income Inequality*

- The analysis of income inequality has many aspects and several authors have made key contributions – with only a few papers selected subsequently:
  - **The World Development Report of the WORLD BANK (2006)** has considered the transition of countries from low income to medium income, where the analysis has **taken into account the role of wealth** distribution.
  - **CORAK (2013)** has shown evidence that countries with high inequality tend to have lower intergenerational mobility.
- **The aim of the analysis is to empirically examine the Kuznets curve** at the individual level

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

### 4.1. Description of variables

- The corresponding **dependent variable** is constructed from individuals' responses to the following statement:

***Q. Governments taxing the rich and subsidizing the poor is an essential characteristic of democracy?*** (1: Strongly disagree, 10: Strongly agree)

Table 1: Dependent variable

Variable	Type	Frequency									
		1	2	3	4	5	6	7	8	9	10
Equal	Ordinal 1-10	Full sample									
		6,290	2,666	3,539	3,539	7,621	5,128	6,862	8,766	5,650	13,110
Equal	Ordinal 1-10	High income									
		2,556	1,018	1,614	1,645	4,046	2,714	3,785	4,389	2,147	5,467
Equal	Ordinal 1-10	Low income									
		3,734	1,648	1,925	1,894	3,575	2,414	3,077	4,377	3,503	7,643

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

### 4.1. Description of variables

- Since our aim is to empirically examine the Kuznets curve at the individual level, our main dependent variable is constructed from individuals' responses to the following question:

Q. ***How satisfied are you with the financial situation of your household?*** (1: Completely dissatisfied, 10: Completely satisfied)

Table 2: Independent Variable

Variable	Type	Frequency									
		1	2	3	4	5	6	7	8	9	10
Income	Ordinal 1-10	Full Sample									
		4,427	2,445	4,741	5,299	10,405	8,825	10,205	9,556	4,150	5,687
Income	Ordinal 1-10	High income									
		1,462	879	2,006	2,372	4,540	4,134	5,329	5,109	2,278	2,523
Income	Ordinal 1-10	Low income									
		2,965	1,566	2,735	2,927	5,865	4,691	4,876	4,447	1,872	3,156

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

### 4.1. Description of variables

- A vector of **economic and social control variables** includes several socio-economic and attitudinal characteristics which might also be relevant for individuals' perception of inequality. Because individual-level responses are pooled across countries, unobservable cultural or geographic differences are considered by including **country dummies (in version 3 of our regressions)**.
- **Control variables: postmaterial (eco?); rich (wants to accumulate wealth)**

Table 3: Control Variables

Variables	Type	Frequency									
		0	1	2	3	4	5	6	7	8	9
female		31,317	34,907								
education			3,784	3,312	7,000	4,413	12,891	5,024	11,067	5,508	12,552
postmat		7,135	15,565	19,280	13,434	4,341	941				
trust		47,609	16,836								
child_dum my		20,027	45,919								
age_code			4,664	15,166	13,086	11,865	9,765	7,053	3,691	834	30
rich			9,731	16,774	12,001	11,438	9,097	5,274			

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve – **Ordered Logit Model**

### 4.2. Empirical strategy

- Since our corresponding dependent variable is an ordered variable, we apply an ordered logit model on the pooled sample of individual responses. We consider the following baseline specification where quasi-income is entering the equation with  $\beta_1$  (income) and  $\beta_2$  (income squared):
- (1)
- Where:
  - Equality are the responses regarding the question of whether governments taxing the rich and subsidizing the poor is an essential characteristic of democracy
  - Income denotes the individuals' satisfaction with their financial situation
  - In order to examine the Kuznets curve, we include Income squared
  - $\sum^c$  are control variables at the individual and country level
  - $\gamma$  are country dummy variables and
  - $u$  are error terms

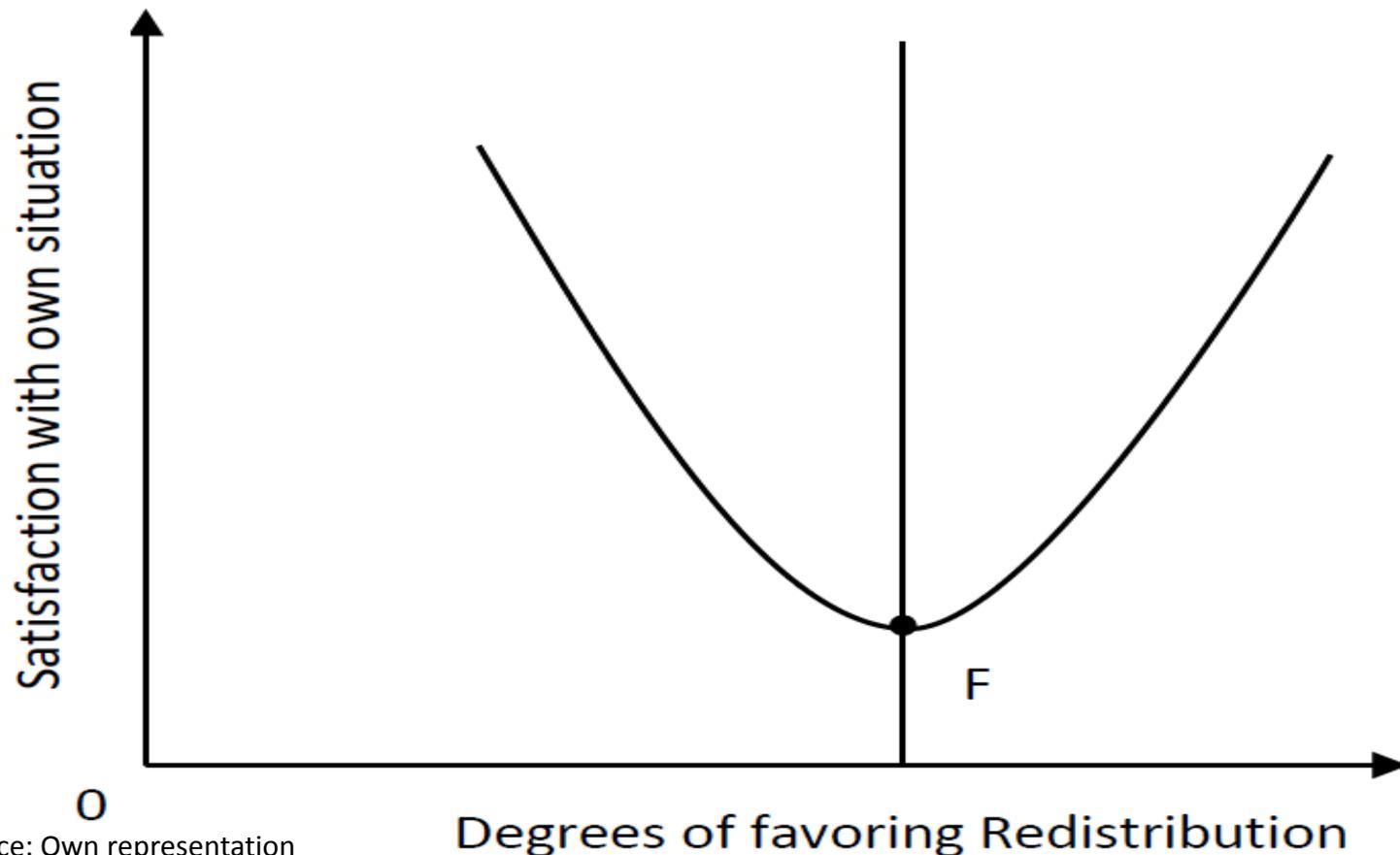
## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

### 4.3. Results

- **The results obtained are fairly robust:**
  - **The results across several regression approaches always clearly indicate empirical evidence for a Kuznets-type redistribution curve**
  - In the first model specification (1), we include only variables of interest (quasi-income and quasi-income squared) and country dummies; in the second specification (2), we additionally include all control variables - however, country dummies are excluded; and the third specification (3) differs from the second through the inclusion of country dummies and all control variables
  - The subsequent control variables have a rather uniform pattern across the regressions (1), (2), (3),

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

**Figure 1: Income Redistribution Kuznets Curve**



Source: Own representation



## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

	Full sample			High-income			Low-income		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Equality									
income_new	-.1942577***	-.1572860***	-.1747475***	-.2545316***	-.2210209***	-.2490616***	-.1663751***	-.1319956***	-.1427976***
income2	.01527562***	.01063141***	.0137048***	.01779398***	.01330059***	.01722429***	.01482666***	.01063042***	.01281413***
Female		.02873528*	.02252703		.01440811	.02029872		.04005816**	.02208344
Education		-.0402645***	-.0232542***		-.0605419***	-.0370174***		-.0243559***	-.0161811***
age_code		.0160661***	.02333495***		.01339352*	.0376668***		.0260492***	.01323922*
child_dummy		.03918666**	-.02390114		.00724955	-.04290595		.05869561**	-.00791042
Trust		.06812464***	-.02245795		.00863334	.04301241*		.1404690***	-.0736198***
Postmat		-.0305833***	-.00288085		.0888481***	.0716341***		-.1124564***	-.0618136***
Rich		.00920653*	-.0273872***		.03951417***	-.0347069***		-.00711729	-.0216789***
Cut 1_cons	-3.934451***	-2.861670***	-4.090820***	-2.766683***	-3.201380***	-2.658755***	-3.644522***	-2.619633***	-3.842466***
Cut 2_cons	-3.520987***	-2.452456***	-3.669041***	-2.38338***	-2.817119***	-2.265958***	-3.207961***	-2.1918847***	-3.4002727***
Cut 3_cons	-3.104116***	-2.053344***	-3.252089***	-1.935346***	-2.373546***	-1.809726***	-2.811301***	-1.8166813***	-3.0056019***
Cut 4_cons	-2.764966***	-1.727899***	-2.908787***	-1.576806***	-2.017422***	-1.441781***	-2.485432***	-1.5085024***	-2.6770655***
Cut 5_cons	-2.164341***	-1.168967***	-2.312991***	-.8875273***	-1.353783***	-.7492653***	-1.958986***	-1.0219233***	-2.1521975***
Cut 6_cons	-1.803234***	-.8358066***	-1.954499***	-.4839073***	-.9696942***	-.3442288***	-1.636132***	-.72598472***	-1.8301287***
Cut 7_cons	-1.330428***	-.38979676***	-1.4729383***	.06765808	-.4239141***	.2313272*	-1.233701***	-.35315353***	-1.422594***
Cut 8_cons	-.6759124***	.23128108***	-.80341744***	.7863 8912***	.3017614***	.98967839***	-.6305030***	.20243761***	-.8149276***
Cut 9_cons	-.16202746*	.72687902***	-.27541968***	1.2327015***	.7454122***	1.447869***	-.06248181	.73877743***	-.23550443**
Country dummies	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Pseudo R2	0.0236	0.0022	0.0250	0.0172	0.0045	0.0199	0.0281	0.0030	0.0289
Number of Observations	62,832	55,604	55,604	29,102	24,401	24,401	33,730	31,203	31,203

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

### 4.3. Results

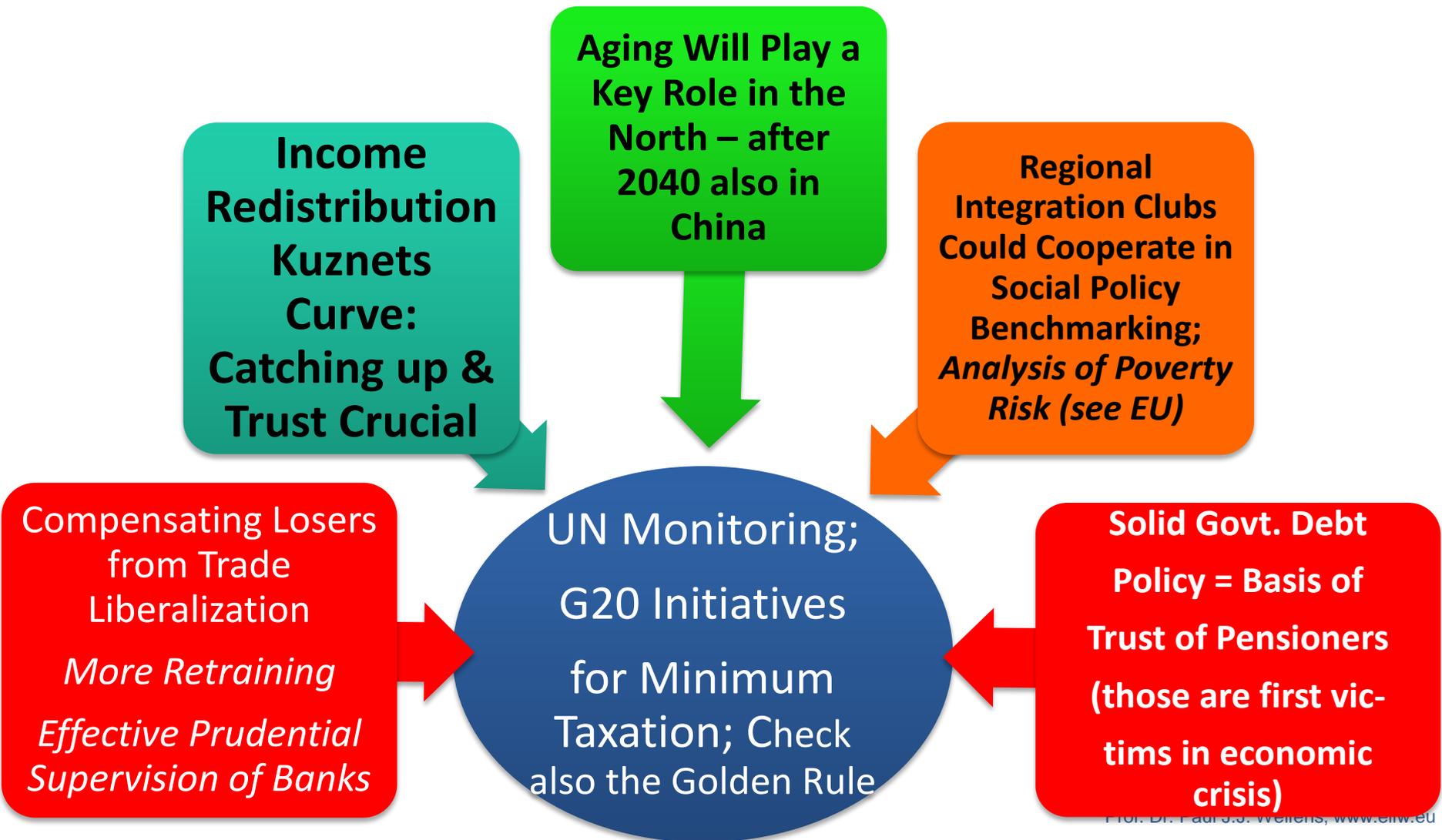
- **The framework and key findings are as follows:**
  - As regards the control variables in the ordered logit regression, we include gender, education, having children, age, trust, the role of high wealth (“rich”) and postmaterial attitudes
  - **Education and a postmaterial attitude have a negative coefficient**
  - **Rich (personal goal) = neg. impact on support for redistribution**
  - Child variable: Negative impact on the support of redistribution in poor c.
  - In all regressions with country dummies (1, 2, 3) **the trust variable** (trust in other people) **has a positive significant impact**
  - **Postmaterial attitudes could weaken redistributive preferences as respondents might fear a trade-off (redistribution=lower edu. exp)**
  - The female variable has a positive sign
  - Age has a positive effect on support for redistribution

## 4. Empirical Analysis of the WVS Results: Evidence for an Income Redistribution Kuznets Curve

### 4.3. Results

- Looking at the years until 2050 one may point out:
  - **aging could strongly reinforce a worldwide role** of more redistribution and social policies, respectively;
  - **more global redistribution could be a starting point for more international benchmarking and hence efficiency gains** in redistribution policy and social policy, respectively
  - Before one starts with narrow redistribution policy analysis consider at first the **Golden Rule Condition from neoclassical growth models: if not fulfilled → output growth rate = equal to real interest rate, there is a major problem as consumption per capita is not maximized = major problem in poor countries; problems with COMPETITION & CAPITAL MARKETS (see cases of post-socialist countries); CHINA: violating golden rule (WELFENS, 2015)**

## Conclusions for the UN and Partner Organizations



## 5. Economic Policy Conclusions

- Evidence for a broad group of countries from the **World Value Survey** the **existence of an Income Redistribution Kuznets Curve** – while the US is considered to be an outlier in the group of countries considered
- **Key conclusions concern the willingness of countries to cooperate:** Countries with relatively high per capita income could be expected to engage in income redistribution in direct and indirect ways; those countries could develop cooperation in social security and income redistribution in order to develop optimal policies
- **Sustained globalization & global economic growth** could help poor countries to achieve the critical per capita income level – and then international cooperation in income redistribution policies & social security could become easier
- **Potential Role of UN: Monitoring, benchmarking; picking up e.g. G20 initiatives** – **potentially on agenda of (G20) cooperation in future minimum income taxation and the willingness to impose minimum corporate taxation**

## 5. Economic Policy Conclusions

- There can be **effective and efficient redistribution policy – including relevant pillars of social policies (e.g. health care financing in EU countries, some Newly Industrialized Countries and certain developing countries)**, but there are several critical questions:
  - **Are current redistribution policies/social policies excessive, namely non-sustainable, so that government will go bankrupt**, lose access to international capital markets? **Adequate debt policy (debt brake) = basis for growth.**
  - **If government is financing increased redistribution and more generous social policies in a way that the debt-GDP ratio is rising critically and hence the rating of government bonds falling strongly**, then there is a risk of excessive redistribution coupled with an unsustainable government debt plus a national banking crisis.
  - **International political free-rider behavior could be avoided by adequate institutional rules for regional integration clubs.**

## 5. Economic Policy Conclusions

- The risk of poverty in most OECD countries is strongly correlated with long-term unemployment rates; and with rising poverty levels, income redistribution becomes a more urgent political aspect on the political agenda
- **To the extent that workplace security is rather weak – as in many developing countries – many unskilled workers will indirectly pay a “lifetime tax”, namely facing a reduced life expectancy compared to skilled workers; better workplace security = field for ILO initiatives**

# Thank you for your kind attention

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