The impact of globalisation
on work capability

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Abstract

This paper investigates whether globalised economies are able to offer expanded and equalized opportunities to their population in some key socio-economic domains, using the capability approach as its theoretical framework. We not only look at the quantity of work opportunities or its lack (employment/unemployment) but also the quality (working conditions) in order to obtain as complete a picture as possible of the 'employment freedom'. In addition, we consider different aspects of globalisation viz. economic, social and political, and study their impacts separately. Finally we adopt a novel modeling framework, the MIMIC model, that formulates that both globalisation and employment capability are directly unobservable as such, but manifest themselves through many indicators.

Keywords: globalisation, capability approach, opportunities, employment, freedom, institutions, social structure, cultural context, environmental factors, panel data.

1 Introduction

In this analysis we investigate whether globalised economies are able to offer expanded and equalised opportunities to their population in some key socio-economic domains. n particular, we focus on work capability covering both the quantity and quality aspects. Our theoretical framework is the capability approach developed by Amartya K. Sen, which defines human development as the enhancement of the individual's choices to lead a valuable life. The specific objective of this analysis is to examine whether globalisation has resulted in increased employment opportunities at the aggregate level. We put a special emphasis on the quality of such opportunities, by exploring whether they are accompanied by stronger rights for employees, such as freedom of association and rights of equal pay and work. To this end, we analyse information from different data sources for several countries in the period 2000-2009, using a structural econometric model.

This study contributes to the literature on the impact of globalisation on employment in many ways. First both the concepts of employment and globalisation are taken beyond their economic dimension. We not only look at the quantity of work opportunities or its lack (employment/unemployment) but also the quality (working conditions) in order to obtain as complete a picture as possible of the 'employment freedom' in a country. Next we consider different aspects of globalisation *viz.* economic, social and political, and study their impacts separately. Finally we adopt a novel modelling framework that formulates that both globalisation and employment capability are directly unobservable as such but manifest themselves through many indicators.

2 The capability to work

The main purpose of this analysis is to assess the impact of globalisation on some important dimensions of human development. To this end, we use the capability approach framework, developed by Amartya K. Sen, which can be interpreted as an alternative to standard economic frameworks that have been used to study poverty, inequality and development. Following this approach, human development is interpreted as the enhancement of people's choices towards a valuable life, encompassing different dimensions such as economic, political, cultural and environmental spheres. Sen's book *Development as Freedom* starts with this sentence: 'Development can be seen, it is argued here, as a process of expanding the real freedom that people enjoy' (Sen (1999)). The philosopher Martha Nussbaum, who has collaborated with Sen on issues of development and ethics, defines *capability* as 'what people are actually able to do and to be' (Nussbaum, 2001, p. 5). The set of choice is called *capability set*, while the

outcomes or achievements resulting from a choice are called *functionings*, i.e. a set of beings and doings. Well-being is indeed constituted by two parts: freedom to achieve valuable beings and doings (i.e. potential functionings) and the actual achievements (i.e. functionings). Taking a simple example, having access to school creates the *capability* of being educated, but this does not necessarily mean that the person will be well educated.

Looking at the capability to work means considering not only job market opportunities (quantity) but also the conditions of work (quality). To our knowledge this is one of the first studies to combine quantity and quality of work in analysing the impact of globalisation. Our quality indicators largely cover the concept of 'decent work' promoted by ILO.

3   Globalisation and the KOF Index

From a very general perspective, globalisation can be viewed as increasing forms of economic integration, global governance and social development. As underlined in Martens and Raza (2010, p. 280-281), globalisation can mean different things, such as 'the glowing interaction of markets and nation-states and the spread of technological advancement; receding geographical constraints on social and cultural arrangements; the increased dissemination of ideas and technologies; the threat to national sovereignty by trans-national actors; or the transformation of the economic, political and cultural foundations of societies'.

In the past globalisation was identified as a sort of economic process delineated by rising levels of deregulated trade, electronic communication and capital mobility, but then it started encompassing also social, cultural and environmental aspects. To better understand this vast phenomenon, scholars have recently introduced indices, which are based on subjective assumptions on indicators and weights. Several indices have been built in recent years and we select the KOF Index of Globalisation for our empirical analysis as we found it to be the most comprehensive index among all.

The KOF Index of Globalisation, produced by the KOF Swiss Economic Institute, was introduced in 2002. It is now available for 208 countries for the period 1970-2009. It involves three main dimensions, regarding economic globalisation (i.e. flows of goods, capital and services), social globalisation (i.e. spread of ideas, information, images and people) and political globalisation (i.e. diffusion of government policies) and ranges from 0 to 100. A sub-index is first calculated for each of three dimensions and then combined to form an overall index. (See Table 1 for the list of variables included in the index).

The first dimension is economic globalisation, which includes two aspects: one correlated with actual economic flows and the other referring to restrictions on trade and capital. The actual economic flows sub-index includes data on trade (i.e. sum of a country's exports and imports), foreign direct investment and portfolio investment (i.e. sum of a country's stock of assets and liabilities), while the restrictions on trade and capital sub-index includes hidden import barriers, mean tariff rates, taxes on international trade (as a share of current revenue) and an index of capital controls. Social globalisation is divided into three main categories: personal contacts (which includes direct interaction among people living in different countries and considers international telecom traffic, the degree of incoming and outgoing tourism, the percentage of total population represented by foreign nationals and the number of international letters sent and received), information flows (which measures the potential flow of ideas and images, through the number of internet users, the share of households with television and the value of trade in international newspaper as percentage of GDP) and cultural proximity (which considers the number of McDonald's restaurants and of IKEA shops, as well as the imports and exports of books in percent of GDP). The third component, political globalisation, is measured by the number of embassies and high commissions in a country and the number of membership in international organizations, the number of participations in United Nations peace missions and the number of treaties signed with other country/ies since 1945 (Dreher (2006) and Dreher et al. (2008)).

4   Data

The dataset used in this analysis assembles information from different data sources. We use World Bank data to obtain quantitative variables on labour market and the Cingranelli-Richards (CIRI) Human Rights Dataset containing annual quantitative information on human rights for different countries. Our employment data mainly come from two ILO (International Labour Organization) sources: KILM data on labour market outcomes and Normlex data about labour conventions on workers' rights ratified by each country. Finally, we use data from the KOF Index of Globalisation (2012). The final dataset includes information on 227 countries and 32 macro-areas/regions from 1960 to 2012, although availability of data varies greatly across countries and variables.

5 Empirical model

Our empirical model assumes that both the concepts of globalisation as well as work capability are hard to measure directly and many indicators can be used to represent them at the practical level. Thus we consider them as latent variables observed through multiple indicators. It is of course possible to focus on one or two key aspects and apply classical regression techniques to study the impact of one on the other. This is what the literature has mostly done. In this analysis we propose to simultaneously use the many available indicators to study our relationship. An ideal framework for using all the available information in the analysis is the structural equation modelling framework, and in particular the so-called MIMIC (Multiple Indicators Multiple Causes) model. The MIMIC model presents a system of equations which includes relationships between latent variables and a set of observable (endogenous) indicators (i.e. functionings), as well as relationships between the latent variables and a set of observable exogenous variables. For our study, we would like to consider two major dimensions of 'work opportunity': the quantity aspect and the quality aspect. The quantity aspect is observed through a set of indicators such as employment, unemployment and part-time employment that also include information on the vulnerability of the work situation, whereas the quality aspect includes indicators on conditions of work, labour protection, family responsibility and social security. We would like to point out that we observe two types of indices regarding 'quality' in our data set: a first type which reflects 'potential' quality consisting of the nature of labour conventions signed by the country, such as right to collective bargaining, abolition of forced labour, old age benefits, work environment, occupational safety and maternity protection. We say 'potential' because there is no information on the real implementation of these conventions. The second type is the 'actual' quality, which covers workers' rights through indices on the level of their enforcement. Hence we decided to have two different latent dimensions for the quality aspect: the 'potential' quality and the 'actual' quality.

Therefore, we have three latent factors, namely 'potential quality of work', 'actual quality of work' and 'quantity of work'. They are measured by different indicators and, more specifically, the first latent factor is measured by seven indicators (called 'g1', 'g2', 'g3', 'g4', 'g5', 'g6' and 'g7'), which refer to specific labour conventions (ILO) ratified by each country. The second latent factor is the 'actual quality of work', since its indicators are three indices from the Cingranelli-Richards Human Rights Dataset (Ciri), concerning workers' economic rights, women's economic rights and women's social rights (named 'Workers', 'Women-eco' and 'Women-soc' in the model). The corresponding dimension is called '*actual* quality of work' since its indicators measure precisely the enforcement of basic rights. The last latent factor is called 'quantity of work' and it is measured by five typical economic indicators, which look at the propor-

tion of people employed, unemployed, working part-time and working in the sectors of industry or services (these variables are called 'Empl15+', 'Unempl', 'Part-time', 'Empl-ind' and 'Empl-ser' respectively). Most of the countries in our dataset had many missing values in our variables of interest and consequently have been dropped from the MIMIC analysis. Furthermore, for the same reason, the model has been estimated for a restricted period of time, namely 2000-2009. Therefore, the final dataset consists of 50 countries analysed for 10 years. The countries selected are listed in Table 2. As one can see we have both developed countries (OECD) and developing countries (mainly from Latin America).

[Table 2 here]

Our key relationship is the one going from globalisation to work capability, and we assume that the three latent factors in the model (i.e. quantity, 'potential' quality and 'actual' quality) are influenced by political, social, demographic and economic variables. The exogenous variables selected in this analysis recall those used in Baqir (2002) and Krishnakumar et al. (2011). We use five World Bank variables: GDP-growth (annual percentage), population in working age (15-64) as percentage of the total population, population living in urban area as percentage of the total population, life expectancy at birth in years and proportion of labour force with tertiary education (as a human capital variable). We include also three Ciri indices: an index indicating the level of freedom of assembly and association (in general), an index related to the freedom of domestic movement and an index about free and fair elections. Regarding the measurement of globalisation, we use the KOF globalisation index and more specifically we use its six sub-indices.

To sum up, our model, as depicted in Figure 1, contains three latent factors measured by seven, three and five indicators respectively. Furthermore, the three unobserved variables are assumed to be caused by fourteen exogenous variables, which represent the social, economic, demographic and political determinants.

[Figure 1 here]

6   Results

Results show that globalisation does not have a uniform impact on the capability to work, with the effect varying according to the particular aspect of globalisation and the particular dimension of work freedom considered. More specifically, all globalisation

indices have a positive impact on the 'actual' quality of work except for 'economic flows' which is insignificant and cultural closeness which negatively affects the 'actual' quality of work. In other words less restrictions on trade and capital, more interaction among people living in different countries, more potential flow of ideas and images and more political globalisation all contribute positively to the 'actual' quality of work. The negative effect of the cultural proximity index, identified by the number of McDonald's Restaurants and Ikea shops per capita, could be a net effect between better working conditions in some countries (e.g. in Latin America) due to the presence of McDonald's Restaurants and Ikea shops possibly raising labour standards, and perhaps worse conditions in other (European) countries.

'Potential' quality of work is affected positively by economic openness and cultural closeness, negatively by personal exchanges, and all other measures of globalisation have no significant impact.

Finally, the quantity of work is positively affected by the personal contacts component of globalisation, which has the highest impact, by the economic flows index and by the political globalisation index. Loosening of trade and capital movement restrictions, information flows and cultural closeness negatively affect this variable.

Overall, there are more positive and significant impacts than negative and significant ones on all three dimensions of employment capability. However all three dimensions do undergo negative influences from some aspect of globalisation. Most of the negative influences are due to the social globalisation components. The only negative impact of economic globalisation is that loosening capital account restrictions leads to less quantity of employment which implies that encouraging foreign ownership of companies may result in job losses. Finally political globalisation is positive for both quantity and quality, meaning that the diffusion of government policies and increasing international linkages promote the implementation of policies that improve labour rights possibly through implicit political pressure to conform to international standards.

[Table 3 here]

7   Concluding remarks

Overall, globalisation has more positive and significant impacts than negative and significant ones on all three dimensions of work capability. However all dimensions do undergo negative influences from some aspect of globalisation.

Most of the negative influences are due to the social globalisation components. Political globalisation is positive for both quantity and quality, meaning that the diffusion of government policies and increasing international linkages promote the implementation

of policies that improve labour rights, possibly through implicit political pressure to conform to international standards. We explored a different variant of our model introducing some vulnerability indicators (underemployment, contributing family workers and vulnerable employment) in our measurement model but do not report the results due to poor fit in spite of the fact that all these variables have negative coefficients for the quality of work and positive ones for the quantity of work as can theoretically be expected. Hence we would like to pursue this extension in the future. As a further extension, we would like to model heterogeneity of behaviour across geographical areas. Finally, we also wish to introduce a measure of social capital as a mediating variable in the relationship between globalisation, opportunities and outcomes.

To complete the analysis, it is our intention to model heterogeneity of behaviour across geographical areas. We would further like to extend our empirical model to include other capabilities such as education and access to credit, taking into account the interactions among different dimensions. Finally, we also wish to introduce a measure of social capital as a mediating variable of the relationship between globalisation, opportunities and outcomes.

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8 Appendix

Table 1: Indices and variables of the KOF Index of Globalisation

Indices and Variables	Weights
Economic Globalisation	36%
i)_Actual Flows_	50%
Trade (percent of GDP)	21%
Foreign Direct Investment, stocks (percent of GDP)	28%
Portfolio Investment (percent of GDP)	24%
Income Payments to Foreign Nationals (percent of GDP)	27%
ii)_Restrictions_	50%
Hidden Import Barriers	24%
Mean Tariff Rate	27%
Taxes on International Trade (percent of current revenue)	26%
Capital Account Restrictions	23%
Social Globalisation	37%
i)_Data on Personal Contact_	34%
Telephone Traffic	25%
Transfers (percent of GDP)	4%
International Tourism	26%
Foreign Population (percent of total population)	21%
International letters (per capita)	25%
ii)_Data on Information Flows_	35%
Internet Users (per 1000 people)	33%
Television (per 1000 people)	36%
Trade in Newspapers (percent of GDP)	32%
iii)_Data on Cultural Proximity_	31%
Number of McDonald's Restaurants (per capita)	44%
Number of Ikea (per capita)	45%
Trade in books (percent of GDP)	11%
Political globalisation	26%
Embassies in Country	25%
Membership in International Organizations	28%
Participation in U.N. Security Council Missions	22%
International Treaties	25%

Source: Dreher (2006), Updated in: Dreher et al. (2008).

Table 2: Countries by area - MIMIC model

Area	List of countries
Europe & Central Asia	Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Hungary, Ireland, Iceland, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Sweden and Turkey.
Latin America & Caribbean	Argentina, Bolivia, Brazil, Colombia, Ecuador, Honduras, Peru, El Salvador, Uruguay and Bolivarian Republic of Venezuela.
East Asia & Pacific	Australia, Indonesia, Japan, Republic of Korea, New Zealand and Singapore.
North America	Canada and United States.
Middle East & North Africa	Israel.

Table 3: Causal Relationship - MIMIC model

Exogenous Variable	Parameter		Std. Coefficient
'Potential' quality: f1 ON			
GDP-growth	-0.018	**	-0.103
Pop-1564	-0.089	***	-0.314
Pop-urb	-0.019	***	-0.349
Life	0.051	***	0.295
Education	-0.019	***	-0.293
Association	0.065		0.045
Movement	0.285	***	0.163
Election	-0.066		-0.034
Glob-flows	0.020	***	0.475
Glob-rest	-0.003		-0.050
Glob-person	-0.008	*	-0.220
Glob-info	0.005		0.092
Glob-cult	0.009	***	0.287
Glob-polit	-0.003		-0.059
'Actual' quality: f2 ON			
GDP-growth	-0.012		-0.082
Pop-1564	-0.039	**	-0.163
Pop-urb	0.005	*	0.112
Life	0.015		0.099
Education	0.003		0.058
Association	0.182	**	0.146
Movement	0.140		0.094
Election	0.352	***	0.212
Glob-flows	0.002		0.051
Glob-rest	0.010	***	0.230
Glob-person	0.007	*	0.227
Glob-info	0.010	**	0.228
Glob-cult	-0.003	*	-0.129
Glob-polit	0.008	**	0.168
Quantity: f3 ON			
GDP-growth	0.035		0.020
Pop-1564	-0.333	**	-0.122
Pop-urb	0.114	***	0.218
Life	0.376	***	0.223
Education	0.189	***	0.295
Association	1.126	*	0.080
Movement	0.140		0.008
Election	1.358	*	0.072
Glob-flows	0.053	**	0.130
Glob-rest	-0.062	**	-0.128
Glob-person	0.165	***	0.457
Glob-info	-0.217	***	-0.418
Glob-cult	-0.039	***	-0.135
Glob-polit	0.049	*	0.097

*, **, *** denote significance at 10%, 5% and 1% level respectively.

List of Figures

Figure 1: Structure of the MIMIC model