Wellbeing and welfare states: cross-national comparison of quality of life in market and transition economies

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Abstract

Cross-national comparisons of quality of life in countries in different stages of transition to a market economy, with old and established economies in Europe and USA will yield valuable lessons. Equally interesting will be to compare these transitional economies to a developing country. In this paper we examine differences in quality of life between the different countries of Western, Eastern and Central Europe, Russia and the USA, and some possible explanations for these variations. We then go on to compare quality of life in the Indian state of Kerala to that in the other nations.

Our results show wide disparities in quality of life among these countries with Switzerland, Denmark, Sweden and the Netherlands leading the league table. The lowest levels of quality of life were in Russia, Italy and Greece, followed by the Czech Republic and Poland. Countries with high average quality of life tended to have less inequality in quality of life. Compared to social-democratic welfare regimes, other regime types had reduced quality of life The typology of welfare regime explained 63% of the variation among the countries. When indicators of decommodification and social stratification styles were modelled, 91% of the variation between countries was explained.

Kerala had a quality of life better than Italy, Greece, and Russia. There was a definite gradient in quality of life with education. Muslims had lower quality of life and so did tribal people. Both education and operational measures of capability were strongly predictive of quality of life in Kerala.

From these findings we conclude that state policies, especially those countering market forces, can explain much of the differences among market and transition economies in

quality of life. Similarly fostering human capabilities can also enhance quality of life. However, inequalities in quality of life among sub-populations need to be addressed.

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Towards the end of the twentieth century, a major development was the transition of many central and eastern European countries and member states of the Soviet Union towards a market economy.[1] Much research has been directed to understand the impact of these changes on the health and wellbeing of people in these countries and in comparison with the established market economies, the transition economies fare poorly in health.[2] However it is believed that as market economies become more established in these nations, their conditions will improve.[3]

Taken together, Europe, Russia and the USA, provide a fair sample of countries in different stages of transition to a market economy, with old and established economies like the western European countries and the USA, those who have just left the transitional stage like Poland and the Czech Republic, and those still in transition like Russia. Recently, data from large national surveys, which used the same measure of quality of life, have become available allowing for valid cross-national comparisons of wellbeing in these countries.

Opportunely, similar data, albeit from a small survey, has become available from a developing country. Kerala has fascinated development economists and others with its high levels of human development, so much as to lend its name to an eponymous model: the Kerala Model.[4] However to some this is a puzzle because this high achievement has taken place in the context poor economic circumstances. Kerala was a poor state in a poor country with human development indices similar to highly developed affluent countries in the West. Explanations for this anomalous situation included among others support-led

development, female literacy, historical legacy from far sighted rulers, and land reforms.[5] Kerala's poor record in economic development always cast the shadow of doubt on the sustainability of the Kerala Model.[6] However the indices still remain high, but what is different is that Kerala in the past decade had shown an economic vitality so that in many spheres of growth it leads the country and its per capita GDP is 60% above the national average.[7] A phrase now being used in conjunction with Kerala's economy is "crouching tiger".[7] That sense of vitality is shared by all transitional economies we study here. Kerala shares something more with them- a political ideology based on communism. In 1957, then newly constituted state of Kerala elected into power the Communist Party, the first time communists had come to power through the democratic process anywhere in the world.[8] Since then communists have led the government in Kerala on and off.

We pose our research questions with in this framework: How does quality of life vary between the different countries of Western, Eastern and Central Europe, Russia and the USA? What can explain these variations? What is the quality of life in Kerala and what determines it?

Methods

Primary outcome measure

Quality of life measured using CASP-12, .[9] CASP stands for the four domains included in the measure: control, autonomy, self-realisation, and pleasure. The first two domains have theoretical underpinnings taken from Maslow's hierarchy of needs,[10] but with contextualisation of the relative importance of needs and generalisation from specific needs, such as the need for food or self-expression, to more basic orientations towards the

world, such as the need for freedom from want.[11] The domains of self-realisation and pleasure are based on recognition of the vulnerability of the sense of self in late modernity, and the demand on individuals for a reflexive construction of the self..[12] CASP is now increasingly widely used in studies of early old age ("The Third Age"), now thought to be a life stage when, , freed from the responsibilities of family formation and paid employment, and given the delayed onset of physical dependency, is devoted to self-realization.[13]

The original measure, the CASP-19, has 19 items. In this paper a shorter form, the CASP-12 has been used.

Data:

Survey of Health, Aging and Retirement in Europe (SHARE)[14]

Survey of Health, Aging and Retirement in Europe (SHARE) was conceived as a pan-European interdisciplinary panel study. The cross-national, multidisciplinary and longitudinal Features make SHARE a unique survey. The present study makes use of the First wave data From the survey. There were 11 countries participating in the project: Scandinavia (Sweden, Denmark), Western and Central Europe (France, Belgium, The Netherlands, Germany, Switzerland, Austria) to the Mediterranean (Spain, Italy, Greece). SHARE has a representative population of the countries included as shown by comparison with the European Union Labour Force Survey (EU-LFS,2004), the European Community Household Panel (ECHP, wave 7 in 2000), and the European Social Survey (ESS, wave 1 in 2002).

Health and Retirement Survey, USA[15]

This is a national longitudinal study started in 1992 and carried out by university of Michigan with funding support from National Institute of ageing. In the present research we use the cross-sectional data from 2004 wave, which contained CASP-19 questions.

British household panel survey (BHPS)[16]

This is an annual survey of nationally representative sample of more than 5,000 households, making a total of approximately 10,000 individual interviews. The most recent wave of the survey is Wave 11 and it will be used in the present study. Wave 11 includes an additional sample from Northern Ireland, and therefore is more representative of the whole of the United Kingdom than earlier waves. About 7000 adults of age 50 or above are available in the survey. The survey used self enumerated CASP19 questions.

Health, Alcohol and Psychosocial factors In Eastern Europe (HAPIEE Study)[17]

This is a multi-centre study assessing the effects of dietary factors, alcohol consumption and psychosocial factors on health on cardio-vascular diseases in Eastern Europe. The HAPIEE study collected quality of life information from a restricted sample of those who are 55-70 years old. We were thus forced to restrict data from other surveys also to this age range. In addition, the CASP-19 was administered only to those who are not working.

Quality of life in Kerala pilot data

The aim of collecting this data was cross-cultural adaptation of CASP-19 into Malayalam, the language spoken in Kerala. Therefore the data comes from a mixture of convenience and purposive sampling. 100 subjects, who were ambulatory and had no medical complaints, were recruited from visitors to the Government Dental Clinic. They represented socio-economically less advantaged sections of the population. A further 90 persons were recruited from the more affluent sections of the population of Calicut City, predominantly through snowballing. Finally, 68 people who were living in a tribal colony in a village in the hill ranges were recruited. CASP-19 was administered during face to face interviews.

Explanatory variables:

We used *age* and *sex* to adjust levels of quality of life for comparison between countries.

To explain differences between European countries, Russia and USA we used the following variables:

Welfare regimes: Based on Esping-Andersen[18] and Fenger[19] we classified the countries as conservative (Austria, Germany, Netherlands, and France); liberal (USA, UK, and Switzerland); familialistic or Mediterranean (Spain, Italy, and Greece); social-democratic (Denmark, and Sweden); post-communist (Czech Republic, and Poland); and former USSR (Russia).

For those countries in our data set included in Esping-Andersen's original study, we used following variables:

Welfare state stratification: conservatism, liberalism, and socialism. Each style was scored as 0 for low, 0.5 for medium, and 1 for strong. Countries can have a mix of these styles, Data from Esping-Andersen.[20]

Indices of decommodification: unemployment replacement rate, sickness replacement rate, and pension replacement rate. Data from Esping-Andersen[20]

There were no comparable variables (other than age and sex) for the Kerala sample. Instead we explore the determinants the quality of life in Kerala with other available variables.

Religion: We noted the respondents' religion as Hindu, Muslim, Christian, Buddhist and others. No attempt was made to subdivide into castes.

Marginalisation: We considered the tribal sample as representing a marginalised population and indicated it with a binary variable.

Education: A categorical variable representing years of education was used (no education, 1-4 years of education, 5-9 years of education, and 10+ years of education). In addition, we used years of education as a continuous variable.

Operational measure of capability: Following Sen,[21] [22] who attributed the high performance on indices of human development by Kerala to enhanced capability, we tried to operationalised capability as activities (achieved functionings), opportunity (set of all alternative functionings) and satisfaction (an evaluation of the individual life). A seven point visual analogue scale was used to measure each of these using the question:

Compared to when you were in you thirties, please tick the box that comes closest to describing you today:

I can do fewer things than I used to….same….I can do more

I have fewer opportunities to do things....same….more opportunities

I have less satisfaction….same….I am more satisfied

Analysis:

For comparing quality of life between countries we used age and sex adjusted means. We used the coefficient of variation as a measure of inequality in quality of life within countries.

We used multilevel models to test whether welfare regimes and their characteristics explain the differences in quality of life among the countries. First we collapsed CASP-12 data into 5 year age bands separately for men and women. By doing this, we reduced the individual level variation to that due to age and sex only. To explain variations at the country level, we used dummy variables for welfare regime typologies (social-democratic as reference) and in a separate model the indicators of decommodification as continuous and those of social stratification as categorical variables. The models were fitted using Mlwin version 2.2.

For data from Kerala, we summarised the CASP-12 score and used multiple regression to study the determinants of quality of life. The analysis was done using STATA version 9.2.

Results

The mean age and sex adjusted CASP-12 score for the whole sample was 24.4 (SD 5.5). Table 1 shows Switzerland at the top (28.7 SD 5.0) followed by Denmark (28.4 SD 4.5) and The Netherlands (27.8 SD 5.1); with, at the bottom of the list, Russia (20.1 SD 5.8), Italy (22.3 SD 5.9) and Greece (22.5 SD 5.3). The coefficient of variation ranged from 16% to 29%. There was a very strong negative correlation between average level of quality of life and the level of inequality in quality of life (Spearman $\rho = -0.94$).

Results of the multilevel analysis are given in Table 2. While quality of life reduces with age, sex did not make any difference. Age and sex explained about 35% of within country variation. Welfare regime types had a significant influence on quality of life. Compared to the social democratic regime all other regimes had significantly lower levels. As expected, former USSR type regimes were found to have the lowest quality of life. Post-communist and familialistic type regimes came next, showing similar levels. of reduction in quality of life relative to the social democratic type. These were followed by liberal and conservative regime. Regime types could explain 63% of between country variations. Of the decommodification indicators only the unemployment replacement rate had a significant coefficient, and it was large. Similarly, among the social stratification styles liberalism and socialism had positive and significant coefficients. Among all the models, this one explained the maximum amount of between country variations (91%). It is noteworthy that the country level variables had very little impact on individual level variation. After the initial 35% decrease in variation when age and sex were added to the model, the individual variation remained almost the same.

The mean CASP-12 score for the Kerala sample was 22.5 (SD 6.9) (Table 3). Men had greater scores (23.8 ± 7.5) compared to women (21.6 ± 6.2). As years of education increase so does the quality of life. With 10 or more years education the mean CASP-12 score for men was 28.1 (SD 5.9) and that for women was 25.1 (SD 4.2). While Hindus and Christians had similar quality of life the Muslims were 4.5 CASP-12 points below them. The point estimates of CASP-12 scores were better for women among Christians (+ 2 points) and for men among Hindus (+ 3.8 points). The tribal subgroup had the lowest CASP-12 score (19.0 ± 6.8) and were 4.7 points below the rest of the sample. When we regressed CASP-12 scores on these variables, only education had an independent effect (R^2 0.20).

30% of the variation in CASP-12 scores could be explained by the operational measures of capability (activity, opportunity and satisfaction). However, there were sex differences. Table 4 shows beta coefficients from regression models for the whole sample and for men and women separately. While for the whole sample all three beta coefficients were significant, in women only opportunities was significant and in men activities and satisfaction were significant only below 10% level.

Based on further exploratory analyses, we conceived a structure for the relationship between education, operational measures of capability and quality of life. Figure 1 shows the pathways leading from education to well-being through capability. The only exogenous variable in our model was education. A path from education leads directly to quality of life (path coefficient 0.26) and the remaining effect of education is through the measures of activities (path coefficient 0.46) and satisfaction (path coefficient 0.20). The other significant effect on quality of life is from opportunities (path coefficient 0.41).

Although we found that education had no direct influence on opportunities, throught activities and satisfaction it exerted some effect.

Discussion

The main strength of this research is that it has been able to use a validated measure of quality of life which was common to all countries. Previous research on wellbeing has relied on single questions or proxy measures. Having that very same measure applied to a developing country add value to this research. Quality of life in Europe, Russia and USA varied over a vast range, 8.6 points (20.1 for Russia to 28.7 for Switzerland). The countries were almost evenly distributed across this range. Kerala came above Italy, Greece, and Russia. The population of Kerala has, as it has been often pointed out, a life expectancy more than that of American Blacks and very close to all men in USA, but was more than 4 points away from USA in terms of quality of life. However, there were segments of the Kerala population (e.g. men with 10+ years of education) whose average quality of life score was higher than that of the average Swiss, who leads the league table of countries in this study. These comparisons were made with unadjusted means (not reported in tables) due to large proportion of missing age information in the Kerala sample. The low overall score in Kerala reflects the inequalities in quality of life that existed there and was compatible with the results from the Western countries showing that within-country inequalities in quality of life correlated highly with the average quality of life scores. The previously described north-south divide in Europe[23] was modified when some transitional economies were introduced included in the comparison.

The Czech Republic and Poland had similar or higher quality of life scores than many South European countries

Our results substantiate the life course perspective whereby social processes are seen to shape individual lives,[24] of which the most striking example would be the definition of old age with reference to a social institution, retirement.[25] Social institutions and policies determine the extent of poverty and dependency in old age, independent of chronology. This has been termed 'the political economy of ageing'.[26] Our results supported these concepts. A welfare regime typology and its indicators could explain most variation between the countries in their quality of life. The social- democratic regime was associated with high quality of life, followed by the conservative and liberal types. Mediterranean and post-communist regimes were similar. The 'former USSR' welfare regime type, represented by Russia, was associated with the lowest quality of life. Almost 90% of variation between countries could be explained by using indicators of decommodification and styles of social stratification.

We could not assign a welfare regime type to Kerala and instead we adapted Sen's capability perspectives to explain the variation of quality of life between social groups in Kerala. Our results supports the idea that the high performance of Kerala on human development is the result of the high level of literacy and educational policies in the state.[4 5 27] About 6% of the state domestic product is spent on education.[27] Our structural model suggests that education, in addition to having direct influence on quality of life, also exerted an effect through enhanced capabilities. The structure we found among the three items used to operationalised capability needs further confirmation. Using capability as an explanation of well-being rather than as an outcome measuring well-

being avoids a lot of criticisms aimed at Sen's approach, especially by Cohen.[28] It has not escaped us that placing our operationalised measure of capability between goods (here education) and utility (quality of life) treat it as *midfare*.[28] It is as it should be because *midfare* is "close to the idea of functionings" (Reference 29 p3).

Although we have different models to explain variations in quality of life in Europe and in Kerala, they both highlight the need for policies that will reduce the inequalities in quality of life with in countries. In Kerala one of the interesting finding is that women in most sub-populations had worse quality of life compared to men. This is in contrast to the prevalent ideas of feminine empowerment in Kerala. The marginalised tribals similarly had very low quality of life. However, as we showed the answers to these ills lie in education. However education in this study, where the average age of the subjects was above 60, should be interpreted in terms of the life chances these people had. A poorer education suggests a disadvantaged early life and an unfavourable trajectory in life. Therefore, improving educational infrastructure would help future generations, but for the present we need policies which would protect the vulnerable sectors in the population, in short welfare policies.

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Table 1: Mean (Standard deviation) CASP-12 scores for countries in Europe and the USA.

Country	Number	Age and sex adjusted	Coefficient of variation
Switzerland	320	28.7 (5.0)	17.4
Denmark	542	28.4 (4.5)	15.8
Netherlands	1038	27.8 (5.1)	18.3
Sweden	1110	27.5 (4.7)	17.1
Austria	908	27.2 (5.7)	21.0
USA	1393	27.0 (5.5)	20.4
Germany	968	26.3 (6.0)	22.8
United Kingdom	3072	25.0 (5.6)	22.4
France	509	24.6 (5.6)	22.8
Poland	4700	24.4 (5.9)	24.2
Spain	659	24.3 (6.4)	26.3
Czech Republic	3069	22.9 (5.4)	23.6
Greece	811	22.5 (5.3)	23.6
Italy	807	22.3 (5.9)	26.5
Russia	3537	20.1 (5.8)	28.9

Table 2: Models explaining cross-national differences in quality of life.

Variables	Models			
	0	**1**	**2**	**3**
Intercept	**24.73**	**26.13**	**29.41**	**23.19**
Age		**-0.36**	**-0.36**	**-0.29**
Sex		0.46	0.46	0.18
Welfare regime				
Social-democratic			Reference	
Conservative			**-2.15**	
Liberal			**-3.3**	
Familialistic			**-4.51**	
Post-communist			**-4.55**	
Former USSR			**-7.76**	
Decommodification				
Unemployment replacement rate				**4.34**
Sickness replacement rate				-0.45
Pension replacement rate				-0.42
Stratification				
Conservatism				-0.72
Liberalism				**1.41**
Socialism				**2.09**
Variance components				
Between countries	4.5	4.71	1.73 [63]	0.43 [91]
Within countries	3.64	2.37 [35] †	2.36	2.15

† Variation explained compared to Model 0
Significant values are emboldened.

Table 3. Mean CASP_12 scores for different sub-groups in Kerala

	Mean (SD) CASP-12 scores		
	Men	**Women**	**Both**
All	23.8(7.5)	21.6 (6.2)	22.5 (6.8)
Education			
None	19.4 (7.1)	20.1 (6.0)	19.9 (6.2)
1-4 years	20.1 (6.2)	19.0 (7.2)	19.5 (6.7)
5-9 years	23.6 (7.5)	22.8 (5.9)	23.1 (6.6)
10+ years	28.1 (5.9)	25.1 (4.2)	26.8 (5.4)
Religion			
Hindu	27.6 (6.2)	23.8 (5.7)	24.8 (6.3)
Christian	23.2 (5.7)	25.2 (6.6)	24.6 (6.2)
Muslim	19.8 (6.3)	21.0 (7.6)	20.3 (6.8)
Marginalisation			
Tribal	18.8 (7.4)	19.2 (6.5)	19.0 (6.8)
Non-tribal	25.2 (6.9)	22.7 (5.8)	23.7 (6.5)

Table 4. Relationship of operational measures of capability and quality of life

Capability operationalised by	**Beta coefficients (p-values)**		
	Whole sample	**Men**	**Women**
Activities	0.82 (0.040)	0.99 (0.087)	0.21 (0.722)
Opportunities	1.24 (0.004)	0.59 (0.317)	2.23 (0.002)
Satisfaction	0.70 (0.037)	0.97 (0.066)	0.28 (0.328)
Variation explained (%)	30	31	28

Figure1. Pathways leading from education to quality of life through capability in Kerala.