A SOCIAL PROTECTION INDEX FOR ASIA

Joe Wood, Halcrow Group Limited

Abstract

Quantitative information on social protection in Asia is generally lacking. This paper reports on a recent study which created an inventory of social protection programs for 31 Asian and Pacific countries. This information was then used to formulate a Social Protection Index (SPI) comprising four summary social protection indicators (cost, coverage, distribution and impact) for these countries. Key findings are that, on average, these countries spend under 5% of GDP on social protection, achieve an overall coverage level of 35% and provide some social protection to over half the poor population. However the impact of the benefits provided is generally low, averaging less than 25% of the poverty line income. There is substantial variation across countries with similar income levels indicating that there is scope for many Asian countries to extend their social protection programs. Examples are provided of ways in which the research can be used by international and national agencies involved in social protection.

Keywords (5): Asia; social protection; vulnerability; poverty

Abbreviations and Acronyms

ADB   Asian Development Bank

CWSN   Children with Special Needs

DFID   Department for International Development

FFW   Food for Work

GDP   Gross Domestic Product

GDP pc GDP per capita

HDI   Human Development Index

HIES   Household Income and Expenditure Survey

IFI   International Financing Institution

ILO   International Labor Office

LFS   Labor Force Survey

MCF   Micro-Credit Finance

MDG   Millennium Development Goals

NGO   Non-Government Organisation

OECD   Organisation of Economic Cooperation and Development

PPP   Purchasing Power Parity

PTR   Poverty Targeting Rate

SME   Small and medium Enterprises

SP   Social Protection

SPCOV Social Protection Coverage indicator

SPDIST Social Protection Distribution indicator

SPEXP Social Protection Expenditure indicator

SPI   Social Protection Index

SPIMP   Social Protection Impact Indicator

SPPER Social Protection Poverty Expenditure Ratio

SPSI   Social Protection Summary Indicator

UN(DP) United Nations (Development Program)

WB   World Bank

INTRODUCTION AND CONTEXT

Social protection is increasingly recognized by donors and national governments as a vital component of national development and poverty reduction policies. Effective social protection programs can help achieve the Millennium Development Goals (MDGs) related to poverty reduction, health and education. Social protection (SP) can also provide assistance to vulnerable groups not explicitly incorporated into the MDGs such as the elderly, the unemployed and the disabled. This is demonstrated by the inclusion of social protection objectives and policies in many national development strategies and by the multiplicity of SP programs currently operating in Asia and the Pacific (e.g. Socialist Republic of Vietnam, 2003; Government of Mongolia, 2003). At the same time, multi-lateral agencies have adopted Social Protection strategies (ADB, 2001; World Bank, 2001) while bilateral agencies have also been active in promoting SP interventions (De Haan/ DFID, 2001; Krech/ Government of Germany, 2007). Yet little information has been assembled and analysed on the quantitative aspects of SP in Asia.[1]

In order to address this situation, the Asian Development Bank (ADB) commissioned a pilot study in 2004 (ADB, 2006; Baulch, 2006) with the following primary objectives:

- To describe SP activities and compile statistical information on these activities in six countries: Bangladesh, Indonesia, Mongolia, Nepal, Pakistan and Vietnam.

- To derive statistical indicators of the provision of social protection in each country and hence develop a summary Social Protection Index (SPI).

- To generally raise awareness and about the need for social protection policies and programs.

Following the successful completion of this study, the ADB commissioned a second study (Baulch et al., 2008[2]) which had as its primary objective the replication of previous methodology in another 25 Asian and Pacific countries[3] so as to enable the calculation of SPIs and the creation of a database of Social Protection programs for the whole continent.

The SPI is a summary measurement tool that systematically and consistently quantifies national level social protection activities in Asian and Pacific countries thus providing (a) a starting point for diagnostic evaluations of national SP programs; (b) a means of monitoring of changes in SP provision over time; and (c) a benchmark for international comparisons of SP provision. The SPI is developed from four summary social protection indicators (SPSIs) each representing a

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[1] The most comprehensive extant SP databases are those of the ILO and OECD. Both include comprehensive data on expenditure but little on coverage and nothing on poverty impact. Only three Asian countries (Japan, Korea and China, Taipei) are included in OECD's SOCX database while the ILO's Social Security database contains some information for nine Asian countries.

[2] In addition to this publication, the study produced a Summary of Country Reports and a series of 24 Country Reports (Halcrow, 2007a, 2007b).

[3] Armenia, Azerbaijan, Bhutan, Cambodia, China, Cook Islands, Fiji, India, Japan, Kazakhstan, Kyrgyz Republic, Laos, Malaysia, Maldives, Marshall Islands, Nauru, Papua New Guinea, Philippines, South Korea, Sri Lanka, Tajikistan, Tonga, Tuvalu, Uzbekistan and Vanuatu.

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different facet of a country's social protection activities, e.g. their cost, coverage, poverty targeting and impact on incomes. These SPSIs are then scaled and weighted to produce the SPI - an additive index of the overall level of social protection provision. As a result of this research, a database of around 860 social protection programs has been created and the SPI has been computed for 31 Asian and Pacific countries.

This paper aims to provide a non-technical summary of the development, findings and policy uses of the SPI. We start with the definition of social protection used before describing how the SPI is formulated. We then move on to describe the results and provide some examples of how this information may be used by national and international policy makers. The paper is completed by a short concluding section and two annexes that respectively present the results for each country and the references used.

DEFINING SOCIAL PROTECTION

There are several competing definitions of social protection but the one adopted for this research was derived from the Asian Development Bank's Social Protection Strategy (ADB, 2001).[4] This defines social protection as:

"the set of policies and programs designed to reduce poverty and vulnerability by promoting efficient labor markets, diminishing people's exposure to risks, and enhancing their capacity to protect themselves against hazards and the interruption/loss of income." (Ortiz, 2001)

This definition corresponds to the broader view of social protection which includes labor market programs 9including job creation programs), education and health subsidies, social funds used for infrastructure and micro-credit programs[5]. It is wider than the definitions of social protection employed by the ILO and World Bank (which focus on social insurance and safety net schemes respectively).[6]

Nevertheless, we felt that it was essential to narrow the ADB's definition to draw a clear distinction between SP and more general growth promotion, poverty reduction and social development programs such as mainstream vocational training, basic nutrition, health and educational services, and community development. If we had not done this, there was a danger that the SPI would have been dominated by projects and activities falling outside most current definitions of SP thereby making it harder to assess the provision of these 'traditional' SP activities, e.g. social insurance, social welfare, and targeted assistance to the poor, e.g. cash transfers and food for work. This would undoubtedly have been the case if basic health and education services had been included.

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[4] See Baulch, Wood and Weber (2006) and Devereux and Sabates-Wheeler (2007) for a discussion of the competing definitions of social protection.

[5] The variety of activities that the ADB includes as falling within Social Protection is shown in Appendix 3 of the Social Protection Strategy - Progress Report to the Board of Directors (ADB, 2002). This Appendix includes projects such as Rural Health (Vietnam), Coastal Community Development and Fisheries (Indonesia), fisheries Resource Management (Philippines), Agriculture Sector Development Program (Mongolia), Basic Education (Laos), micro-finance in several countries, and Health and Nutrition Sector Development Programs (Indonesia). These programs appear to significantly extend the definition of SP cited above.

[6] See ILO (2000) and Holzman and Jorgenson (2000).

Following considerable discussion during the course of the first study, the definition of SP adopted for this study is as follows:

The set of policies and programs that enable vulnerable groups to prevent, reduce and /or cope with risks, AND that:

- *are targeted at the vulnerable groups;*

- *involve cash or in kind transfers; and*

- *are not activities which are usually associated with other sectors such as rural development, basic infrastructure, health and education.*

This definition has the practical advantage of allowing the quantification of the SP transfers, whether in cash or kind, which accrue to vulnerable groups. This definition also accords with most national perceptions that social protection consists primarily of activities related to labor markets, social insurance, social assistance and child protection. Table 1 contains a listing of the types of programs that are considered to fall within this definition and have therefore been incorporated into our calculations for the SPI. This is a generic list – some programs will not exist in some countries and some countries have qualifying programs not found elsewhere.

SP activities whose costs and impacts are not amenable to quantification (e.g. legislation relating to labor standards, women's and children's rights, or consciousness raising and empowerment projects and programs) are excluded for this very reason. Conversely, again following considerable discussion, micro-credit and micro-finance (MCF) programs have been included when they are targeted at the poor or are associated with micro-insurance schemes; mainstream rural credit programs have however been excluded. These were included both due to their importance in several Asian countries and because it was considered inconsistent to exclude these programs and yet simultaneously include loan programs designed to spur job creation by targeting small and medium sized enterprises – which are explicitly included in the ADB's definition.

Table 1: Generic Social Protection Programs included in the Calculation of the SPI

Social Protection Component/ Program	Comments
Labor Market Programs	
Direct employment generation through public works programs	Including Food for Work programs.
Direct employment generation through loan based programs	Included if loans are subsidized or job creation is an explicit objective of the program.
Labour exchanges	
Unemployment benefits	If distinct from Social Insurance and including retrenchment programs.
Skills development and training	Included if targeted at particular groups, e.g. the unemployed or disadvantaged children. General vocational training programs are excluded.
Social Insurance Programs	
Programs to cover the risks associated with unemployment, sickness, maternity, disability, industrial injury and old age	
Social Assistance and Welfare Programs	
Welfare and social services targeted at the sick, the poor, orphans, the disabled and other vulnerable groups	
Subsidized health treatment costs	
Cash/ in-kind transfers (e.g. food stamps, food aid)	
Targeted subsidies for utilities and staple foods	Only if imposed in times of crisis and if targeted at particular vulnerable groups. General subsidies are excluded.
Fee exemptions	When targeted at the poor and vulnerable, e.g. land tax
Micro and Area-based schemes	
Micro-credit/ finance schemes	Included only if targeted at poor households. Mainstream rural credit schemes are excluded.
Micro-insurance schemes	Excluding programs only providing life insurance and savings schemes.
Agricultural insurance	
Child protection	
Family allowances (e.g. in-kind or cash transfers to assist families with young children to meet part of their basic needs).	Excluding any transfers through the tax system.
Educational assistance (e.g. scholarships, fee waivers)	Including school feeding programs, subsidized / free textbooks or uniforms.
Health assistance (e.g. reduced fees for vulnerable groups)	Usually included under Social Assistance unless targeted specifically at children.
Street-children initiatives and youth programs	

NB. Unless stated to the contrary, all tables and figures are derived from the work carried out for this study.

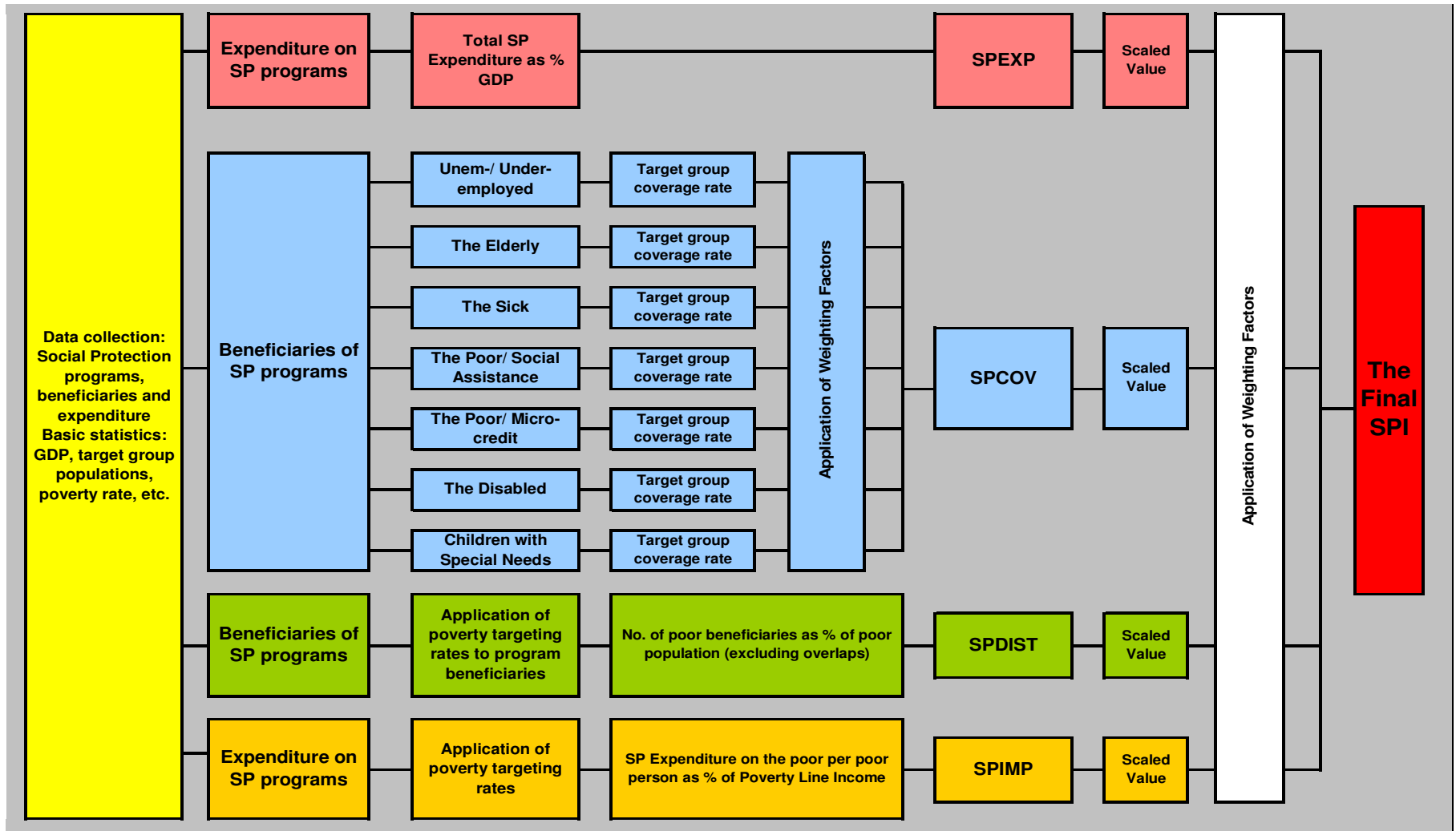# FORMULATION OF THE SOCIAL PROTECTION INDEX

The Overall Methodology

This section describes the methodology used for constructing the SPI for the 31 study countries. In devising this methodology, we have followed the general principles that the SPI should be computationally simple, capable of replication and understandable to policy makers. The methodology evolved from substantial discussions between the members of the study team[7], social protection experts from ADB, the ILO and government representatives. It should be remembered that the formulation of the SPI proposed represents a delicate balancing of theoretical considerations and the desire to produce an index that is based on accessible information, and is easy to construct and interpret.

Figure 1 provides a diagrammatic overview of the steps involved in constructing the SPI. The first step is to derive each of the four SPSIs indicators. This is relatively simple in the case of the expenditure (SPEXP) which involves expressing total SP expenditures as a percentage of GDP. It is also relatively straightforward for the impact indicator (SPIMP), which expresses the average SP expenditure for each poor person as a percentage of the national poverty line. However, a series of intermediate calculations are involved for the other two indicators. Once the four SPSIs have been calculated, they are then scaled and weighted to produce the final SPI.

The four SPSIs have been designed to summarize very different aspects of SP, namely the expenditure, coverage, distribution and impact on expenditures. There is also a symmetry in the selection of these indicators. The first two relate to social protection activities in general (SPEXP and SPCOV) while the last two (SPDIST and SPIMP) are designed to capture the inclusion and impact of social protection programs on the poor. Likewise, SPEXP and SPIMP are related to expenditure while SPCOV and SPDIST relate to coverage.

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[7] The study team consisted of international specialists and national consultants in each country.

Figure 1. Diagrammatic Representation of the Derivation of the Social Protection Index

The Social Protection Summary Indicators (SPSIs)

Social Protection Expenditure (SPEXP)

The expenditure indicator simply shows what percentage of a country's Gross Domestic Product is spent on social protection activities, whether implemented by government, quasi-government, NGOs or private sector agencies. Although relatively easy to calculate, SPEXP provides little information on the demand for social protection as it gives no indication of the extent to which key vulnerable groups (e.g. the elderly, the disabled and the poor) are receiving social protection benefits and the adequacy of these benefits.

### Social Protection Coverage (SPCOV)

The coverage indicator shows the extent to which different SP programs reach their target populations, and is broadly defined as the percentage of the target population who are receiving some social protection. Although conceptually simple, in practice, it proved difficult to define this SPSI.

Deriving a single coverage indicator by summing all beneficiaries of SP programs and dividing by the total population of the country was rejected as: (a) a coverage indicator derived in this way would be difficult to interpret as there would be no indication of overall need; (b) the resultant indicator would be dominated by the largest programs meaning that the smaller child protection and labor market components would have a minimal impact on the resultant indicator; and (c) it would be necessary to allow for double-counting between programs[8], otherwise the resultant indicator could exceed 100% which would appear illogical and would not improve the acceptability of the resultant indicator to policy makers and other interested parties. By the same token, deriving separate coverage rates for individual programs would be problematic as it would be difficult, if not impossible, to make inter-country comparisons as different countries have different types of program. Furthermore estimating the target population for many programs would be far from simple.

The approach finally adopted was to initially derive separate coverage rates for seven key target groups of Social Protection programs – the unemployed/ under-employed, the elderly, the sick, the poor, the disabled and children with special needs (CSWN) and then combine these into SPCOV, the summary coverage SPSI. Figure 2 shows the different steps needed to derive SPCOV. Conceptual reasons for preferring this approach were:

- It provides individual coverage ratios for each target group which will be more easily understandable to policy makers, e.g. the percentage of the elderly/ the poor / the disabled in a country who are receiving some SP assistance.

- It reflects the way that most SP programs and policies are formulated and targeted.

- It largely avoids the above-mentioned issue of double-counting.

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[8] I.e. where beneficiaries receive benefits from more than one program; also described as 'overlaps' in this paper.

Figure 2. Derivation of SPCOV
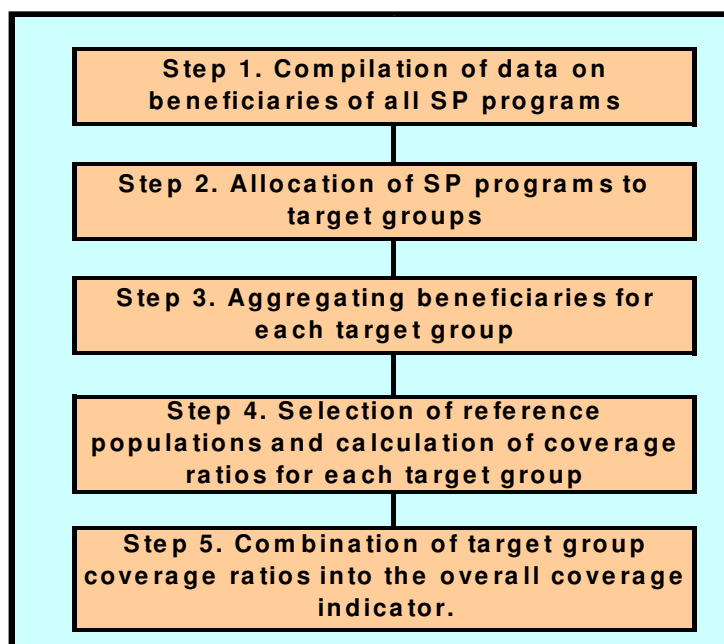
The reference populations used in calculating the coverage indicator are shown in Table 2. These are designed to approximate as far as possible the target population for each category of SP program in order to provide coverage ratios that are both comparable across countries and meaningful to national policy makers.

Table 2. SPCOV Reference Populations

Program Category/ Target Group	Reference Population
Labor Market Programs	Unemployed + underemployed*
Assistance to the elderly	Population Aged 60+ years
Health Care Assistance	Total population
The poor - social assistance	Poor population**
The poor - micro-credit	Poor population
Assistance to the disabled	The disabled population
Child Protection	Poor children, aged 5-14 years***

* Depending on data availability, the under-employed were defined on the basis of persons working less than 25 hours per week, unpaid family workers and seasonal laborers.

** According to the official national poverty line.

*** Defined in this way as the majority of applicable programs involved educational assistance, especially for primary and lower secondary schooling.

The seven target group coverage rates then need to be combined into an overall coverage indicator. There are three basic ways of doing this: (a) using the unweighted mean, which gives equal weight to each reference population; (b) weighting by size of the reference populations in each country, which gives greater weight to programs with larger reference populations; or (c) assigning weights based on policy makers' judgements. The first of these

approaches may be criticised as giving excessive weight to the smaller social protection programs (such as assistance to the disabled and child protection). Conversely, the second approach can be criticised for being dominated by the programs, such as health care and social assistance, which have the largest target groups. The success of the third approach, directly assigning weights, depends for its legitimacy on an agreed mechanism for obtaining a consensus of experts and policy makers.

Delphi exercises conducted in workshops and an international conference held during the course of this study did not reveal a strong preference between these three approaches. Indeed when responses were aggregated, the resultant weights were virtually identical to those obtained if one simply combined the first two approaches. On this basis, SPCOV has been obtained by using a simple average of the unweighted and reference population weights. We consider this to be reasonable as it reflects the need to take account of the different sizes of the reference populations whilst also giving an increased weight to programs targeted at the groups with smaller reference populations.

Two additional points need to be made. Firstly, it is important to realize that there is not always a one-to-one correspondence between program beneficiaries and reference populations. Beneficiaries can include persons who fall outside the reference populations used to calculate the indicator. For example, employment subsidies will benefit employed rather than unemployed workers; other examples are pension schemes that provide benefits to people below the age of 60 and MCF programs which do not exclusively target the poor population. Secondly, and for the same reasons, it is possible for the number of beneficiaries to exceed the total reference population, e.g. where the target population of programs was much wider than the defined reference population[9]. The approach adopted in these cases was to 'cap' the coverage ratio at 100% as allowing coverage ratios to exceed 100% would be less understandable to policy makers and would significantly complicate the calculations as overlaps between programs would need to be assessed in much greater detail.[10] For these reasons, the term coverage <u>ratio</u> is preferred to the term coverage rate, and will be used henceforward.

Social Protection Distribution (SPDIST)

The third SPSI measures the distribution effect of a country's SP programs, in particular the extent to which they reach the poor. It is defined as the percentage of the poor in each country[11] that receive some SP transfers or other SP benefits and is calculated by estimating

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[9] For instance in Korea where employment subsidies benefited far more than the number of registered unemployed. A more typical example were educational assistance programs which targeted schools in poor communities rather than poor children per se.

[10] Out of over 200 target group coverage ratios, there are about 20 instances where capping was necessary, half of which relate to poor children.

[11] Assessed based on national poverty lines derived from generally comparable methodologies based on the cost of a minimum needs food basket with an allowance for essential non-food expenditure. These were used in preference to the $1 a day international poverty line used to monitor the MDGs because: (a) the estimation of purchasing power parity (PPP) conversion factors used in these calculations are complicated; (b) national SP programs are almost always targeted on the basis of national poverty lines, and are thus more meaningful to most policy makers.

Poverty Targeting Rates (PTRs), defined as the percentage of poor to total beneficiaries for each program. The PTRs were obtained from Household Income and Expenditure Surveys (HIES) information, program evaluation reports, discussions with program implementers and professional judgement. The number of poor beneficiaries was then obtained by applying the PTRs to the total program beneficiaries.

The main difficulty that had to be faced in calculating SPDIST is the extent to which different SP programs benefit the same poor people. It is common, for example, for a significant proportion of poor households in many countries to receive both social assistance payments and other in-kind benefits, such as food-for-work or free health care. In countries, where there is good HIES information, overlaps between SP programs could be directly estimated. On occasion also, information on poverty targeting could be adduced from project evaluation reports and discussions with stakeholders. In most countries, however, such information is not available. We therefore developed a procedure for estimating the overlap rate based on number of additional poor beneficiaries of each program relative to the poor population. This involved making the assumption that the overlap rate for any SP program will be equal to the additional percentage of the poor covered by the program plus the cumulative coverage of the poor population by all previously considered programs. This procedure gives an estimate of the number of net poor beneficiaries from each program. These are then summed and divided by the poor population to give a 'best' estimate of SPDIST.

Impact on Expenditures

SPDIST provides an indication of the extent to which SP programs reach the poor. However it gives little indication of the 'effectiveness' of the interventions, i.e. what impact do these interventions have on the income/ expenditure of the poor. This is a crucial issue given that the over-arching goal of ADB and other multilateral and bilateral funding agencies is poverty reduction. Accordingly, SPIMP, the fourth SPSI was formulated based on the amount of SP expenditure going to the poor. This was obtained by simply applying the PTRs obtained for SPDIST to the total expenditure on each SP program instead of the number of beneficiaries; there is however no need to be concerned with overlaps.

Alternative denominators for SPIMP were considered including the poverty line, the poverty gap and the average income of the poor. Although intuitively attractive, use of the poverty gap as the denominator would complicate the calculation procedure and it would not be easy to assess what SP transfers were already included in the calculations of the incomes/ expenditures of the poor[12]. On the other hand, data availability issues preclude using the average income of the poor – there would need to be good and accessible HIES data. The consensus was therefore that the poverty line should be used as the denominator for this indicator.

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[12] It is unlikely for instance that the value of fee exemptions, in kind transfers such as free school meals or uniforms, or subsidized prices of goods will be included in household income or expenditure data.

The Derivation of the Social Protection Index

Having calculated the four summary indicators of SP for each country, these indicators must be scaled, weighted and aggregated to produce the overall SPI.

Scaling

Scaling is necessary because, although the four indicators are all expressed in percentages, their denominators and therefore ranges differ. If the four indicators were left unscaled, those with the highest percentages (such as coverage and poverty targeting) would dominate the final index. After consideration of various alternative scaling methods, the maximum value scaling method was adopted as it produces scaled values for the SPSIs that are simple to understand as they always vary between zero and one, and provide a direct comparison against the maximum achieved by any country in the dataset. In this method, the SPSI value for each country is divided by the maximum value for this indicator across all countries in the data set.[13]

The maximum values used for scaling the SPSIs were relatively easy to determine, as for all four indicators, Japan achieved the highest values of all the three countries (16% for SPEXP; 86% for SPCOV; 100% for SPDIST; and 132%[14] for SPIMP). In the cases of SPCOV and SPIMP, however, it was felt that maximum values of 100% were more realistic maxima for developing countries to achieve, and the maximum values for these SPSI were accordingly set at this level. For SPEXP, the Japanese value of 16% of GDP being spent of SP programs was retained as it is unlikely to be attained by other Asian countries in the near future and thus appears to be a reasonable benchmark. As maximum values of 100% were applied to all SPSIs except SPEXP, this was the only SPSI for which the scaled value was different from the calculated value.

Weighting and Aggregation

Finally, the four SPSI need to be weighted and aggregated to produce the SPI. There are two basic approaches for deriving the weighting system: (a) giving equal weights to each SPSI, as is the case for the HDI; and (b) assigning weights obtained from a consensus of experts and stakeholders (essentially a variant of the Delphi technique).

The Delphi exercises that we carried out with policy makers and social protection experts during the workshops and conference held during the study generated weights that were little different from those that one would get with equal weighting. Equal weighting also implies giving similar importance to the expenditure and coverage aspects of SP programs and to general SP (e.g., health care and pensions) and poverty targeted programs. These considerations pointed to the desirability of applying equal weights of 0.25 to each SPI summary indicator in order to obtain the overall SPI.

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[13] In practice, this method is very close to the range scaling method used by the Human Development Index (HDI) (UN, 2003) as when the minimum value approaches zero, as they do for all the SPSIs, the range and maximum scaling produce virtually identical results.

[14] This value is not illogical as some SP transfers will not be included in calculations of household income, e.g. subsidized health care.

A simple additive model was used to derive the final SPI. This approach has the advantage of being easily understandable to the non-specialist and making the trade-off between different summary indicators apparent when equal weighting is used. It also replicates the approach adopted for the HDI. The SPI was therefore simply obtained by summing the four SPSI scaled values and dividing by four.

Data Requirements, Sources and Compilation

The data requirements for calculating the SPI are substantial, involving a mixture of primary and secondary data sources, some of which will be published and be publicly available, but most of which will only be available via unpublished reports or the reports of the government departments, NGOs and private organisations involved in social protection activities. These requirements are summarized in Table 3 which lists the numerators and denominators for the four SPSIs.

Table 3. Data Requirements

SPSI	Numerator	Denominator
SPEXP	Total expenditure on all SP programs	Nominal GDP
SPCOV*	Beneficiaries of SP programs targeted at key target groups	Reference populations for the 7 categories of SP programs
SPDIST	Number of social protection beneficiaries who are poor	Poor population
SPIMP	Average SP expenditure for each poor person	Poverty line

The denominators are obtainable relatively easily from published sources (e.g. national accounts, labor force and HIES survey data). However, in most countries information on individual SP programs (i.e. the numerators) was not readily available from published sources. In consequence, this information had to be obtained from the bottom-up by collecting data on the activities, beneficiaries and expenditures directly from the numerous public, quasi-public and NGO organisations involved in implementing SP programs. In practice, an iterative approach involving repeated visits and careful cross-checking of information from different sources is needed to obtain all the data required for calculating the SPI on a consistent basis.

It should be emphasized that while much of the data work involved is not technically complex, it tends to be difficult and time-consuming because of the multiplicity of organisations involved. Depending on the size of the country, one or two national consultants were employed for a period of two to three months in each country to collect the requisite data. Guidance was provided via a handbook (Halcrow, 2005) prepared by the previous study and ongoing advice from the international team.

This information was then aggregated across the different categories of SP programs discussed above, in order to derive estimates of total and per capita expenditure and number of beneficiaries of involved. Data compilation and calculations were carried out using a series of linked spreadsheets which automated many of the calculations and

facilitated double-checking and sensitivity testing by national and international team members alike.

THE RESULTS

This section discusses the results obtained in calculating the SPI and its constituent SPSIs for 31 Asian countries. The data presented relate to 2004/05 for all countries except Indonesia for which only 2003/03 information was available, and Azerbaijan where 2005/06 data is used.   The results for all countries are contained in Annex A.

The Social Protection Summary Indicators

Table 4 presents the mean and median values of the four SPSIs for the 31 study countries.

Table 4. SPSI Values by Region and HDI Group

Region	Countries	SPEXP	HDI Group***	Countries	SPEXP
Central Asia	7	6.8%	High	5 (4)*	6.5% (7.8%)*
South Asia	7	3.1%	*High medium*	*11*	*4.4%*
East Asia	9 (7)	4.8% (2.8%)**	*Low medium*	*6*	*6.8%*
Pacific	8	4.5%	ALL Medium	17	5.2%
			Low	9	3.0%
ALL ASIA	**31 (29)**	**4.8% (4.3%)****	**ALL ASIA**	**31**	**4.8%**
Region	Countries	SPCOV	HDI Group	Countries	SPCOV
Central Asia	7	50%	High	5	55% (66%)*
South Asia	7	23%	High medium**	11	39%
East Asia	9	43% (33%)***	Low medium**	6	36%
Pacific	8	22%	Low**	9	17%
ALL ASIA	**31**	**35%**	**ALL ASIA**	**31**	**35%**
Region	Countries	SPDIST	HDI Group	Countries	SPDIST
Central Asia	7	75%	High	5	73% (89%)*
South Asia	7	55%	High medium	11	66%
East Asia	9	64% (54%)**	Low medium	6	56%
Pacific	8	35%	Low	9	38%
ALL ASIA	**31**	**57%**	**ALL ASIA**	**31**	**57%**
Region	Countries	SPIMP	HDI Group	Countries	SPIMP
Central Asia	7	33%	High	5	46% (57%)*
South Asia	7	15%	High medium	11	23%
East Asia	9	32% (15%)**	Low medium	6	23%
Pacific	8	11%	Low	9	9%
ALL ASIA	**31**	**23% (18%)****	**ALL ASIA**	**31**	**23%**

* Excluding Tonga.   ** Excluding Japan and Korea.

*** No Asian countries are in the UN's 'Low' HDI development category. Thus, apart from countries in the 'High' development group, all others are 'Medium' development nations. Countries identified as 'low development' in the table therefore have the lowest HDI values from the <u>Medium</u> development group.

On average, Asian and Pacific countries spend 4.8% of their GDPs on social protection (SPEXP) and achieve an overall coverage level of 35% of the seven key target populations

(SPCOV). The average proportion of the poor who receive some social protection benefits (SPDIST) is 57%, but the impact of social protection programs on the poor is relatively low averaging 23% of the poverty line (SPIMP).

These averages mask substantial variations between countries and regions, and are also inflated by the presence of Japan and Korea: when these two countries are excluded from sample, SPEXP drops to 4.3% and SPIMP to 18%. The four SPSIs, for the Central Asian countries perform well reflecting the existence of strong social protection systems dating from the pre-transition era. The South Asian countries generally have similar SPSI values to East Asian nations. Pacific countries tend to have the lowest SPSI values.

<u>Social Protection Expenditure</u>

Social protection expenditure (SPEXP) is dominated in the great majority of countries by expenditure on formal social insurance schemes. This explains why SPEXP in Central Asia, where social insurance schemes are pervasive, is more than double that in South Asia, where coverage of these schemes is generally limited to public and formal private-sector employees. The share of social insurance in total SP expenditure averages 55% across the 31 countries (Table 5). It drops below 40% in only eight countries due to a combination of an undeveloped social insurance system and substantial expenditure on other categories of social protection.[15] Another 30% of SP expenditures are made up of social assistance and micro-credit schemes (which are particularly important in some South and East Asian countries). On average, expenditure on child protection and labor market programs together account for 15% of total social protection expenditure. Countries where the combined expenditure on these categories exceeds 25 percent are Nauru (due to retrenchment programs for redundant phosphate workers), Korea (employment subsidies), Nepal (job creation programs); Bhutan, Cook Islands and Fiji which all have extensive targeted educational assistance and child benefits programs. Overall, discounting the pre-eminence of social insurance expenditure, there is considerable variation in the patterns of social protection expenditures.

Table 5. Social Protection Expenditure by Category of Program – Regions

| Region	Labor market Programs	Social Insurance	Social Assistance	MCF	Child Protection	All
High	9%	71%	11%	1%	8%	**100%**
High medium	*2%*	*60%*	*24%*	*9%*	*4%*	***100%***
Low medium	*4%*	*53%*	*21%*	*12%*	*10%*	***100%***
ALL Medium	3%	58%	23%	10%	6%	**100%**
Low	13%	42%	11%	25%	9%	**100%**
All Asia	**7%**	**55%**	**17%**	**13%**	**7%**	**100%**

* All social insurance including pensions, health insurance, maternity, survivors' and disability benefits.

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[15] These countries are Bhutan, Bangladesh, Cambodia, Fiji, Laos, Nauru, Tajikistan and Vanuatu.

<u>Social Protection Coverage</u>

SPCOV values exhibit a similar pattern to SPEXP. Coverage values are almost twice as high in Central Asia as elsewhere, and are especially low in Pacific and South Asian countries. There is a high degree of variability between the coverage ratios for the seven key target groups. Regional variations in coverage ratios are apparent for all target groups (Figure 3). For all target groups, coverage ratios are consistently higher in the Central Asian countries due to the legacy of the Soviet era. Conversely South Asia consistently achieves lower levels of coverage for all target groups except for MCF programs. Pacific countries exhibit higher coverage levels than South and East Asia for the disabled, the elderly and the unemployed/underemployed.

Figure 3. Target Group Coverage Ratios – Regional Averages
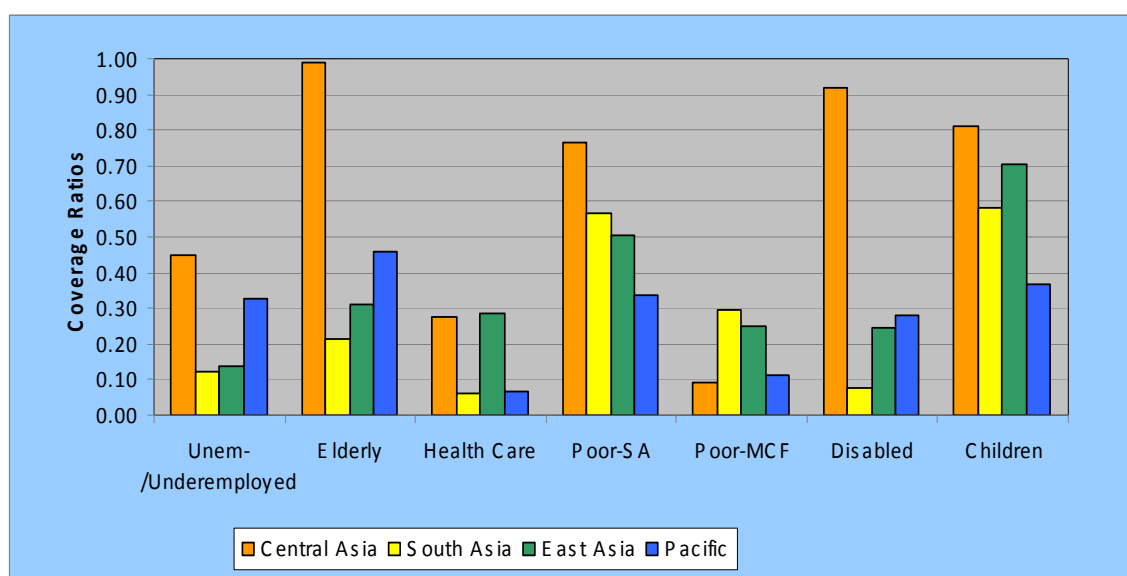
Coverage ratios tend to be highest for the elderly, poor adults in need of social assistance and poor children (through educational assistance programs) and lowest for the unemployed/ underemployed and micro-credit/finance programs. There are however, examples of high coverage ratios for all these groups: coverage of micro-credit/finance programs (as percentage of the poor) exceeds a third in six countries including Bangladesh, Sri Lanka, Laos and Cambodia while countries as diverse as Azerbaijan, Korea and Nauru have coverage rates above 75% for their labor market programs.

<u>Social Protection Distribution (Poverty Targeting)</u>

Targeting of the poor by social protection programs (SPDIST) averages 57% across Asia. Although the minimum value is only 1% (Papua New Guinea), only 11 of the 31 countries have values of SPDIST below 50% indicating that some social protection is received by over half the poor population in the majority of Asian countries. In addition to Japan and Korea, seven countries have SPDIST values in excess of 75%. Four of these are Central Asian countries (Kazakhstan, Kyrgyzstan, Mongolia and Azerbaijan) which have a range of diverse social assistance programs dating from the Soviet era. Two others are India and Sri Lanka

which both have major social assistance programs - Samurdhi in Sri Lanka and the public food distribution system in India.

At the other end of the scale, five of the six countries with values below 30% are Pacific countries which perhaps reflects the fact that poverty has not received the attention from governments that it has elsewhere in Asia while the fifth is Pakistan whose SP system is dominated by formal social insurance.
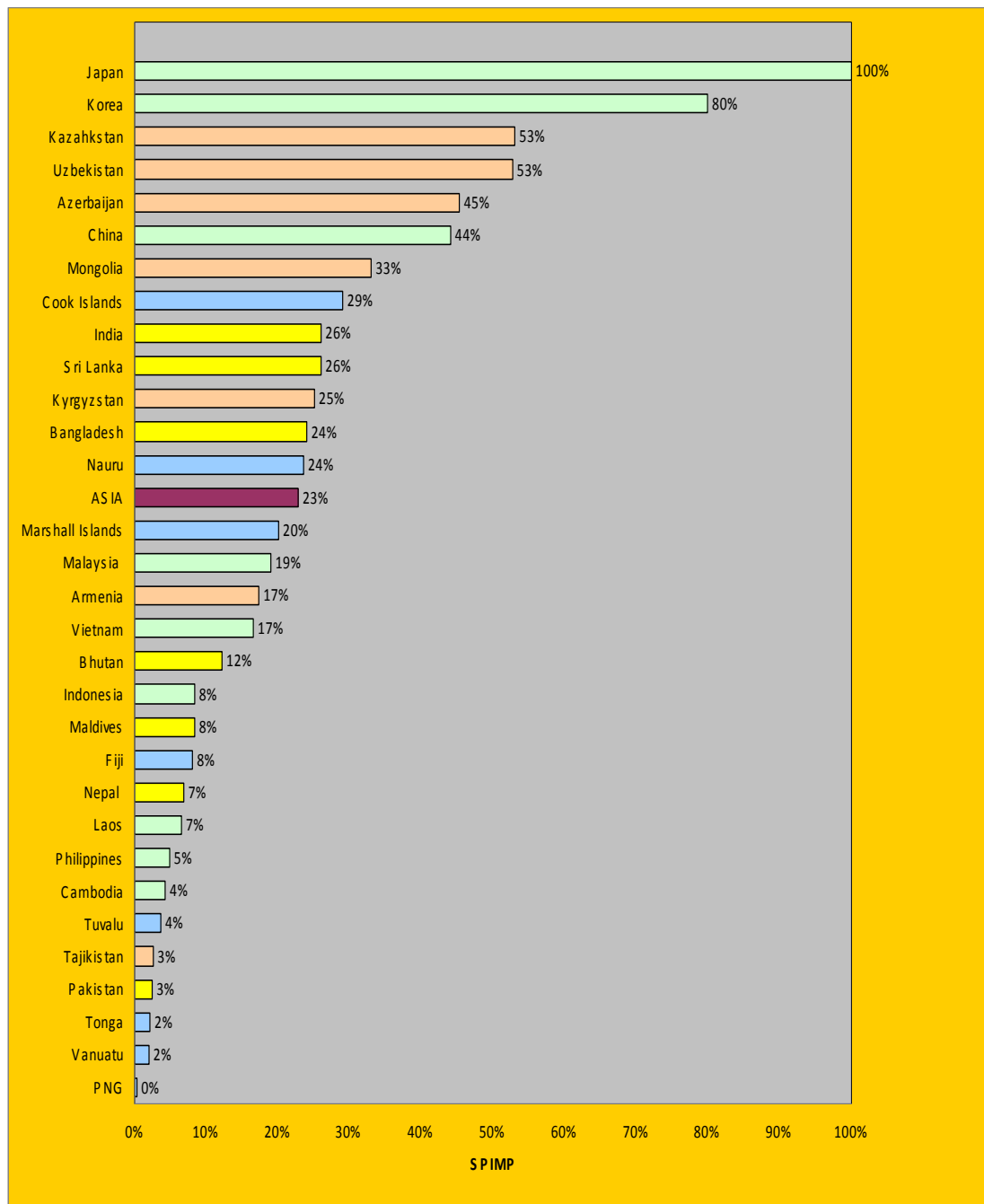
Social Protection Impact

The average SPIMP value is 23% but the range of SPIMP values is much greater than for the other variables, from under 1% (Papua New Guinea) to 132% (Japan). The average value is 23%; the median is significantly lower at 17% (Figure 4).

The Japanese value, although greater than 100%, is neither illogical nor unrealistic. Firstly, a substantial part of the expenditure relates to programs (e.g. subsidized health costs) which do not provide direct income transfers to the poor, and are therefore excluded from calculations of their income and expenditure. Secondly, Japan is one of the most developed and richest countries on earth with an all embracing social protection system. In these countries, poor and vulnerable households are far more reliant for their survival on social protection schemes provided by the state than those in developing countries.

Only five other countries have SPIMP values in excess of 40% although two of these (China and India) are the most populous. With respect to China, much of the expenditure to the poor is in the form of training, health care and other programs, which do not directly affect the incomes of the poor; actual cash allowances remain very low. Also in China, a disproportionate amount of SP expenditures also goes to the numerically less important poor urban population.

At the lower end of the scale, in 13 countries spread across the continent, the value of SPDIST did not exceed 10%; in a further 4 countries it ranged from 12% to 19%. Thus in almost half of Asian countries, social protection expenditure on the poor was equivalent to less than 20% of the poverty line income or expenditure. This suggests that, irrespective of the level of poverty targeting (SPDIST), the impact of social protection expenditure on the poor in the majority of Asian countries is rarely substantial.

Figure 4. Social Protection Impact (SPIMP) by Country

Country	SPIMP
Japan	100%
Korea	80%
Kazahkstan	53%
Uzbekistan	53%
Azerbaijan	45%
China	44%
Mongolia	33%
Cook Islands	29%
India	26%
Sri Lanka	26%
Kyrgyzstan	25%
Bangladesh	24%
Nauru	24%
ASIA	23%
Marshall Islands	20%
Malaysia	19%
Armenia	17%
Vietnam	17%
Bhutan	12%
Indonesia	8%
Maldives	8%
Fiji	8%
Nepal	7%
Laos	7%
Philippines	5%
Cambodia	4%
Tuvalu	4%
Tajikistan	3%
Pakistan	3%
Tonga	2%
Vanuatu	2%
PNG	0%

The SPSIs in Combination

Having looked at the SPSIs individually, we now look at them in combination. Figure 5 presents a star chart showing the SPSI values for each development (HDI) group relative to the assigned maximum values for the 4 SPSIs. Each grouping shows a broadly similar pattern with higher values for the two coverage SPSIs (SPCOV and SPDIST) and lower ones for the two expenditure indicators, SPEXP and SPIMP. Furthermore while the overall

pattern for the Medium development countries approximates that for Asia as a whole, the patterns for the High and Low development countries are respectively well above and well below the overall average. The diamond type pattern shown in Figure 5 is also found in the star charts for many countries (Annex A).

Figure 5. Star Charts of HDI Group SPSI Values
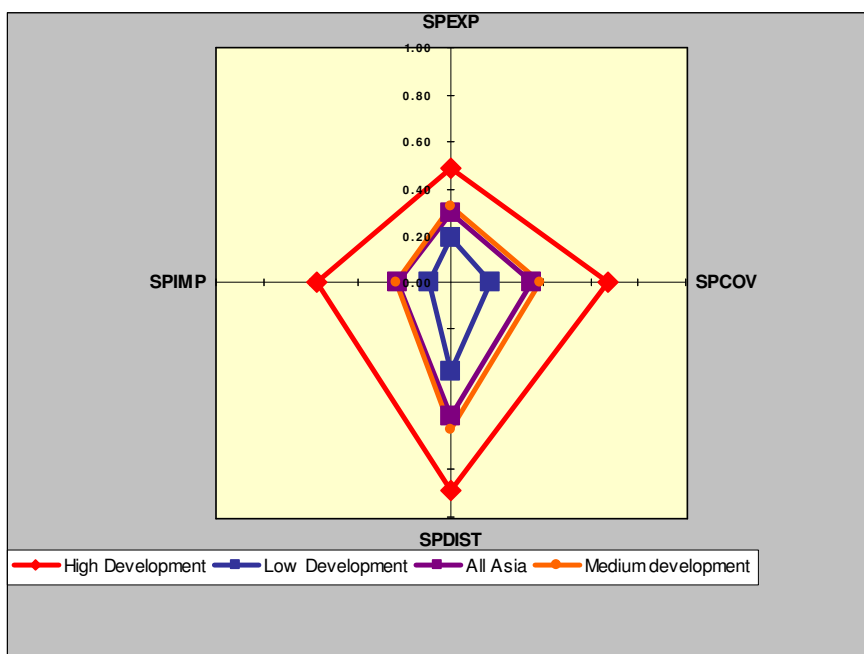
Given the similarity between the SPSI star charts for many countries, it is not surprising that there are statistically significant inter-correlations between all the SPSIs. These range from 0.4 to 0.82 for the Pearson r correlations and from 0.52 to 0.85 for Spearman rank correlations. The weakest correlations are between SPDIST and SPEXP and between SPIMP and SPDIST while the highest are between the two coverage indicators, SPDIST and SPCOV, and SPCOV and SPIMP. The general level of these implies some association between the SPSIs yet not such a strong link as to make any of them redundant[16]. Each SPSI thus embodies a different facet of the social protection, which is what they were designed to do.

The Social Protection Index

Variations in SPI Values

The Social Protection Indices (SPIs) calculated range from a high of 0.96 (Japan) to a low of 0.1 for Papua New Guinea (Table 6). The All Asia average is 0.36 or 0.33 if Japan and Korea are excluded. The distribution of SPI values is reasonably symmetric (the median value is 0.34 which is statistically indistinguishable from the mean) although there is a concentration of countries (mostly Pacific states) with SPI values under 0.2.

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[16] Correlations between the HDI components are similar: the correlation between life expectancy and GDP per capita is 0.71 and that between the life expectancy and the HDI education index is 0.59.

Table 6. Country SPI Values

SPI Values					
Above average		**Average***		**Below average**	
Japan	0.96	Nauru	0.42	Philippines	0.20
Korea	0.76	Vietnam	0.38	Laos	0.19
Kyrgyzstan	0.62	Malaysia	0.36	Nepal	0.19
Mongolia	0.60	Marshall Islands	0.34	Cambodia	0.19
Uzbekistan	0.57	Armenia	0.34	Bhutan	0.17
Cook Islands	0.55	Bangladesh	0.34	Fiji	0.15
Kazahkstan	0.54	Indonesia	0.33	Tonga	0.08
Azerbaijan	0.53	Tajikistan	0.33	Vanuatu	0.08
Sri Lanka	0.47	Tuvalu	0.30	Pakistan	0.07
India	0.46	Maldives	0.30	PNG	0.01
China	0.45				

* Within 2 standard errors of the mean.

HIGH development; MEDIUM development; LOW development.

Three broad groups of countries can be detected from the Table. In the first, 'high' social protection group, are 11 countries which include Japan, Korea followed by all but one of the Central Asian countries. Three of the South Asian countries (Sri Lanka, India and China) also appear in this group, though with values substantially lower than for the Central Asian countries due to lower SPEXP and SPIMP values. In these countries, which by definition have a relatively good provision of social protection, priorities for assistance could be improving the efficiency, functioning and targeting of the current social protection system rather than developing new programs.

The second group, 'medium' social development nations contains 10 countries as diverse as Armenia and the Maldives. The distinguishing features of SP in these countries is that two of their SPSIs - usually SPEXP and SPIMP - are much lower than the other two. This suggests an imbalance between these countries' ability to provide relatively extensive SP programs and the financing available to provide significant benefits.

The third, 'low' SP, group also consists of 10 countries. This group includes most of the Pacific countries together with the Pakistan, the Philippines, Nepal, Laos, Cambodia and Bhutan. In this group, all four SPSIs tend to be low suggesting the need to develop new, affordable social protection programs with higher coverage and greater targeting of the poor; financial constraints will however always be an issue.

Regional SPI values exhibit the same general patterns as the SPSIs. The Central Asian countries have the highest mean SPI value (0.50) while the Pacific countries have the lowest

mean value (0.24). The difference in the mean SPIs for South and East Asia (0.28 versus 0.30) would be greater if Japan and Korea were included in the East Asian sample.

The SPI and GDP per Capita

The correlation between the SPI and GDP per capita is statistically significant at 0.62, which is as one would expect – greater wealth leads to a higher level of SP provision. While Figure 6 shows that this is generally true, there is a wide variation in SPI values for countries with similar per capita incomes, especially those with GDP per capita under $7,000.   This variation is most marked for countries with per capita incomes in the $2,000 to $3,000 range were SPI values range from less than 0.1 in the case of Pakistan and Papua New Guinea to more than 0.55 in the case of Kyrgyzstan and Uzbekistan.

Figure 6. Country SPI and GDP per Capita (2004 PPP $)
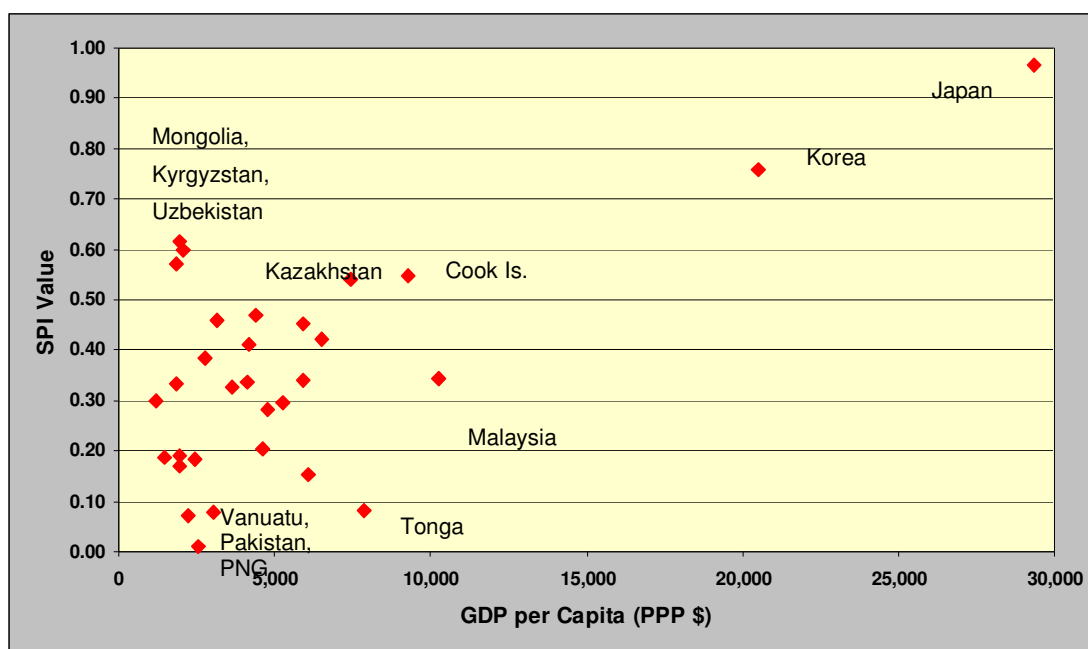
This suggests that individual countries' level of social protection provision is driven by factors other than just their relative incomes. By extension, this implies that countries can, irrespective of the level of GDP per capita, provide a degree, often significant, of social protection. At the other end of the scale, the positions of Japan and (South) Korea, underline their differences - both in terms of per capita incomes and SP provision - from the other 29 countries in our sample.

The Pro-Poor Targeting of Social Protection Expenditure

We also examined the pro-poor targeting of social protection expenditure: the proportion of total SP expenditure which goes to the poor expressed as a ratio of the national poverty rate

- tentatively entitled the Social Protection Poverty Expenditure Ratio (SPPER)[17]. If SPPER is greater than one, it denotes a degree of pro-poor targeting; if it is less than one, it means that social protection expenditure is being disproportionately spent on the not poor population. Table 7 summarizes the information on this indicator. The SPPER value can therefore have direct implications for government policy on social protection as governments may consider it desirable to improving the targeting of social protection programs if the SPPER value is well below 1.

Table 7. Pro-poor Targeting of Social Protection Expenditure

High Pro-Poor Targeting		Low Pro-Poor Targeting	
Country	SPPER	Country	SPPER
Cook Islands	2.70	Vanuatu	0.66
Kazahkstan	2.01	Indonesia	0.61
Bangladesh	1.79	Tonga	0.58
Azerbaijan	1.74	PNG	0.48
Cambodia	1.71	Philippines	0.44
Bhutan	1.52	Malaysia	0.43
Armenia	1.50	Pakistan	0.41
Japan	1.45	Marshall Islands	0.31
Korea	1.43	Tuvalu	0.29
Tajikistan	1.37		
NB. Listed countries are those with values ratios 30% above or below a value of 1.			
Statistic	Value	Correlations	r
Maximum	2.70	SPEXP	0.05
Minimum	0.29	SPCOV	0.46
Average	1.11	SPDIST	0.55
Median	1.12	SPIMP	0.43
Standard Deviation	0.56	HDI	0.14
Ratio: St. Dev/ Mean	0.50	GDP per Capita	0.18

The Asia wide average SPPER value is 1.1 indicating a small overall degree of pro-poor targeting of SP expenditure. The range is however wide from 2.7 in the Cook Islands to 0.3 in Tuvalu and the Marshall Islands. In general, higher development countries exhibit higher degrees of pro-poor targeting and vice-versa – most of the countries with the lowest values are from the 'low' HDI group. There are nonetheless exceptions with the low SPPER value for Malaysia being arguably the most significant. Central Asian countries all exhibit high ratios as they do for all the SPSIs. Korea, Japan and Cook Islands do well because of comprehensive social protection systems while Bangladesh, Bhutan and Cambodia have important MCF programs which reach significant proportions of the poor. Reasons for low SPPER values include: the dominance of social protection expenditure by formal social insurance schemes, which do not provide cover for the poor; the absence of major social assistance programs targeted at the poor; and the existence of targeted programs which however provide little in the way of benefits.

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[17] This indicator was developed during the recent study and thus could not be considered for inclusion in the formulation of the SPI as there was no consultative mechanism to make this possible.

Of greater interest are the very low correlation coefficients between SPPER and the HDI and GDP per capita implying that pro-poor targeting of social protection expenditure can be attained by governments with very different levels of wealth, poverty and social development. This analysis therefore corroborates the previous conclusion that even poor countries have substantial potential for improving the pro-poor targeting of their social protection expenditure.

The SPI and the HDI

The relationship between the SPI and the HDI has also been explored. SPI values vary substantially depending on the HDI: countries in the High Human Development Group have an average SPI of 0.54 (0.65 if Tonga is excluded) while those in the Medium and Low Human Developments Groups have average SPIs of 0.39 and 0.21 respectively. Variations in HDI and SPI rankings are shown in Figure 7.

Figure 7. Differences of SPI and HDI Rankings
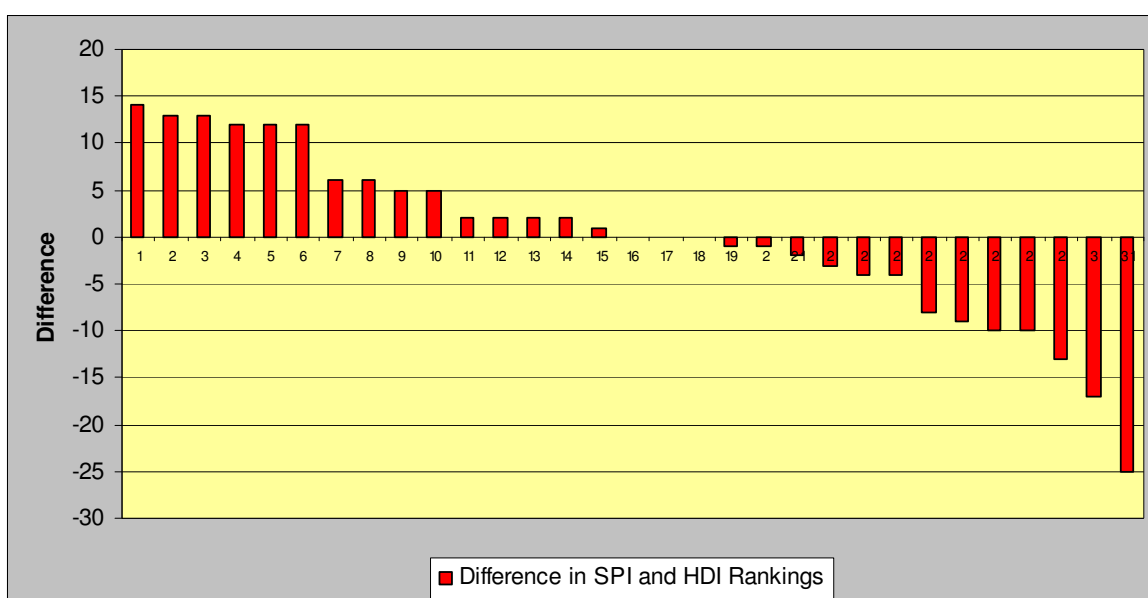
NB1. Countries with higher SPI than HDI rankings are shown on the left of the figure; countries with lower SPI than HDI rankings appear on the right.

NB2. For technical reasons it is not possible to include country names.

Overall, 14 countries (almost half) have similar or identical SPI and HDI rankings while 6 countries have much higher SPI rankings and 5 have much higher HDI rankings. The other 8 countries have rankings which differ by between 4 and 9 places. Of the countries with similar HDI and SPI rankings, six (Bhutan, Cambodia, Laos, Pakistan, PNG and Tajikistan) are at the bottom of both distributions. Table 8 lists those countries which have large differences between their SPI and HDI rankings as well as likely reasons for these differences. [18]

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[18] For more detailed analysis and descriptions of the characteristics of SP in individual countries, the interested reader should refer to the Country Reports produced by the study (Halcrow, 2007a, 2007b).

Table 8. Countries with Divergent SPI and HDI Rankings

Country	SPI Rank	HDI Rank	Diff.	Possible Reason(s)
Countries with much higher SPI than HDI rankings				
Mongolia	4	18	-14	Comprehensive social protection system partly remains from Soviet era.
Kyrgyzstan	3	16	-13	
Nauru	12	25	-13	Impoverished island state highly dependent on international aid, where social protection is major component of survival.
Uzbekistan	5	17	-12	Comprehensive social protection system partly remains from Soviet era.
India	10	22	-12	Major targeted social protection programs
Bangladesh	17	29	-12	High level of micro-credit provision
Countries with much higher HDI than SPI rankings				
Malaysia	14	4	10	Comprehensive health and education systems; absence of major pro-poor targeted programs; formal social insurance only covers formal and public sectors.
Vanuatu	29	19	10	Very low level of social provision.
Philippines	22	9	13	Little in the way of major pro-poor targeted programs; social insurance system for formal sector only.
Fiji	27	10	17	Very low level of social provision.
Tonga	28	3	25	Very low level of social provision. HDI value also seems high.

Social Protection in Asia – A Brief Overview

Based on the totality of the information compiled for this study, some conclusions can be drawn about the current level of social protection in Asia and the Pacific.

On average Asian and Pacific countries spend just under 5% of their GDP on social protection and achieve an overall average coverage level of 35% of the seven key target groups. The average proportion of the poor (using national poverty lines) who receive some social protection benefits is 57% implying that the majority of Asia's poor receive some social protection. Per capita SP expenditure on the poor however averages less than 25% of the poverty line; it thus brings only limited benefits to most recipients.

These averages mask substantial variations. At the top end of the scale, two distinct groups of countries can be identified. First, Japan and Korea, by virtue of their status as developed high income countries, achieve the highest values on most of the SPSIs. Second, the Central Asian countries (including Mongolia) have generally high levels of social protection resulting from the comprehensive social protection systems introduced in these countries during the Soviet era. Variations between South and East Asian countries (excluding Japan and Korea) are however less pronounced. The indicators for the Pacific countries, with the exception of expenditure as a percentage of GDP (which approximates the Asia average) are lower than those for the other regions. Countries in this region however exhibit greater variations with the Cook Islands having generally high indicators while those for Tonga, Vanuatu and Papua New Guinea are uniformly low. This may be due to the fact that in several Pacific countries, poverty reduction is not a major government priority. The

Marshalls, the Cooks and Nauru have higher values but they are unusual in that they are highly dependent on aid, from the USA, New Zealand and Australia respectively.

In most Asian and Pacific countries, the majority of expenditure on social protection is provided through formal social insurance systems. This is just as likely to be the case in rich as in poor countries. It can therefore reflect either a well developed social insurance system with high coverage (e.g. Korea and some Central Asian countries) OR countries with social insurance systems which are largely confined to the formal sector (e.g. civil servants and the military) and are of little relevance to the poor (e.g. Pakistan and Papua New Guinea). Countries with below average proportions of expenditure on social insurance tend to be those with less developed social insurance systems but with substantial other social protection expenditures. Examples are Bangladesh, Laos, Cambodia and Bhutan (all of which have substantial micro-credit programs), Nauru (redundancy payments for ex phosphate workers), and Tajikistan (extensive social assistance programs).

In contrast to social insurance schemes, the programs that provide the greatest coverage of, and greatest benefits to, the poor are the targeted programs: educational assistance, subsidized health care, food for work programs, and MCF schemes, which are a very important component of SP in countries with such diverse characteristics as Bangladesh, Kyrgyzstan, Laos, Philippines and Tuvalu. Conversely, formal means tested social assistance programs involving direct cash handouts are rarely important and are usually targeted only at the poorest and the most vulnerable. Coverage levels for the seven key target groups vary widely both within and between countries with the highest ratios tending to be for poor children (educational assistance programs), social assistance to the poor, and the elderly (pensions and targeted health and social welfare schemes).

There is a clear positive association between the SPI and both the HDI and GDP per capita (PPP$). Countries with high human development levels have average SPI/ SPSI values that are 2.3 to 6.3 times those of low human development countries. This disparity is particularly marked for SPIMP indicating that low development countries provide little in the way of substantive social protection to their poor populations even where coverage is quite high. This general relationship is as one would expect: higher levels of development are associated with increased social protection activities, as firstly higher GDP enables greater expenditure on social protection; and secondly better education and health indicators permit governments to devote more attention to social protection issues. Yet in both cases, there is substantial variation in SPIs for countries with similar HDI or GDP per capita values. Furthermore the pro-poor targeting of this assistance is uncorrelated with both the HDI and GDP per capita. What this means is that, if governments are willing, virtually every country has scope for providing some level of social protection to its vulnerable populations.

USES AND APPLICATIONS OF THE SPI AND THE SPSIs

The SPI and the SPSIs provide a valuable and relatively simple tool which can act as the starting point for more detailed diagnostic analysis of national social provision. Some examples of these potential uses are summarized in Table 9.

Table 9. Potential Uses of the SPI and its Constituent Information

Level of Analysis	Value to Policy Makers	Possible uses
SPI	Relative social protection provision; changes over time.	Policies to improve SP provision; targeting of countries for assistance; demonstration of effectiveness of new (or extended) SP programs.
SPSIs	Aspects of SP which are above and below average.	Where to concentrate more detailed investigations.
Distribution of SP Expenditure/ target group coverage ratios	Categories of SP where expenditure is 'lagging'; target groups where coverage is particularly low.	Increased SP provision/ expenditure to target groups with below average coverage ratios.
SP Programs*	Targeting of programs; average benefits; extent of coverage, etc.	Reviews of the effectiveness and targeting of existing programs.

* Using the information contained in the Country Reports.

Information of value to national and international policy makers is provided by each of four levels of analysis shown. The analysis should proceed downward through the information provided in this study, i.e. the reverse of the way in which it was compiled. This approach essentially mirrors the use of the HDI or indeed the MDGs, the examination of which is only a prelude to a more detailed analysis of a country's human development situation.

 For international agencies, the prime uses of the SPI and the SPSIs will be firstly to identify and examine Asia wide trends in social protection provision and its characteristics; and secondly to inform policy dialogues with individual countries designed to increase donor assistance on social protection. For national governments, the information in the SPI, SPSI and associated Country Reports provide a starting point for more detailed investigations of social protection activities and the design of measures to improve the overall level of provision. Some examples of these potential uses are presented below.

The Differences in SPI and HDI Rankings

Figure 7 showed the differences between countries' SPI and HDI rankings and identified three categories of countries for potential assistance from donors and IFIs concerned with social protection:

- Countries where SPI values are substantially higher than HDI rankings: in these countries, resources may be limited so the priority would be to improve the efficiency and targeting of existing SP programs and assess the sustainability of the current level of social protection.

- Countries where the HDI is relatively high but social protection seems to be lagging: by virtue of good HDI values, these countries could be receptive to thorough performance reviews of their existing social protection system leading to the formulation of new social protection programs.

- Countries with uniformly low SPI and HDI rankings where social protection urgently needs to be improved but resources are likely to be more heavily constrained. In these cases, the priority is likely to be the formulation of interventions that are innovative and highly targeted.

Variations in SPSI Rankings

A 'traffic lights' system can be used to classify the SPI and SPSIs thereby identifying which aspects of social protection should be given the greatest emphasis within a country. This system works by identifying countries which have SPIs substantially higher or lower than the all Asian value and categorizes SPSI values in the same way, e.g. 30%. Based on this criterion, the SPSI and SPI values for each country are colour coded: green (higher than average), amber (average), and red (lower than average). Three groups of countries emerge from this analysis (Table 10):

The largest category are the 14 countries where the SPI and SPSI 'lights' are all the same colour. Half of these countries have uniformly red SPSIs and these countries should therefore be assessed as having generally inadequate social protection systems. Four more countries (Armenia, Bangladesh, Malaysia and Vietnam) have all amber SPSI, in which the financing and coverage of existing social protection program are balanced at a moderate level. Only three countries (Japan, Korea and Mongolia) have all uniformly green SPSIs, indicating generally extensive and effective social protection systems.

10 countries have three SPSI in the same category. In most of these countries, either SPDIST or SPCOV is in a better (amber or green) grouping than the final SPI. This suggests an imbalance between countries desire to implement social protection programs and the funding available to do this. In these countries, the policy focus should be to investigate how to improve the financing of existing SP programs, which are already achieving reasonable coverage or poverty targeting.

Finally, seven countries have two or more SPSIs falling into different groups. Of these, only two countries, Marshall Islands and Tuvalu, have indicators falling into all three (red, amber and green) categories.[19] In three of the remaining five (Indonesia, Tajikistan and Uzbekistan), both SPDIST and SPCOV are in a higher grouping than SPEXP and SPIMP, again suggesting that funding of SP programs lags behind their coverage and poverty targeting. In the final two countries (Azerbaijan and Kazakhstan), SPIMP is green while SPEXP is amber, indicating that existing programs are having a significant impact on a relatively small population. The presence of all but one of the Central Asian countries in this group is indicative of the strains that the economic transition to a market economy is placing on these formerly planned economies.

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[19] Marshall Islands is a special case due to its high expenditure for victims of nuclear accidents. In Tuvalu, overall expenditure on social protection (SPEXP) and coverage of the poor (SPDIST) are above average but little of the expenditure actually reaches this group (SPIMP is low).

Table 10. Countries by High, Average and Low SPI/ SPSI Values

Country	SPI		SPEXP	SPCOV	SPDIST	SPIMP
Azerbaijan	Green		Orange	Green	Orange	Green
Cook Is	Green		Orange	Green	Green	Orange
Japan	Green		Green	Green	Green	Green
Kazahkstan	Green		Orange	Orange	Green	Green
Korea	Green		Green	Green	Green	Green
Kyrgyzstan	Green		Green	Green	Green	Orange
Mongolia	Green		Green	Green	Green	Green
Uzbekistan	Green		Green	Orange	Orange	Green
Armenia	Orange		Orange	Orange	Orange	Orange
Bangladesh	Orange		Orange	Orange	Orange	Orange
China	Orange		Orange	Orange	Orange	Green
India	Orange		Orange	Orange	Green	Orange
Indonesia	Orange		Red	Orange	Orange	Red
Malaysia	Orange		Orange	Orange	Orange	Orange
Maldives	Orange		Red	Red	Orange	Red
Marshall Is	Orange		Green	Orange	Red	Orange
Nauru	Orange		Green	Orange	Orange	Orange
Sri Lanka	Orange		Orange	Orange	Green	Orange
Tajikistan	Orange		Red	Orange	Orange	Red
Tuvalu	Orange		Green	Red	Orange	Red
Vietnam	Orange		Orange	Orange	Orange	Orange
Bhutan	Red		Red	Red	Red	Red
Cambodia	Red		Red	Red	Orange	Red
Fiji	Red		Red	Red	Red	Red
Laos	Red		Red	Red	Orange	Red
Nepal	Red		Red	Red	Red	Red
Pakistan	Red		Red	Red	Red	Red
Philippines	Red		Red	Orange	Red	Red
PNG	Red		Red	Red	Red	Red
Tonga	Red		Red	Red	Red	Red
Vanuatu	Red		Red	Red	Red	Red

Monitoring SP Provision over Time

One of the study's objectives was to enable the monitoring of changes in SP provision over time. A concrete example of this is provided by the changes which have occurred in the last 2-3 years in some of the countries from the original study. These changes, summarized in Table 11, show that improvements in SP provision (i.e. higher SPI and SPSI values) occurred in all these countries but were especially substantial in Bangladesh, Vietnam and Mongolia. These increases in SP have been achieved by a combination of extending the coverage of existing programs, increasing the benefits from these programs and introducing new programs. The extent of these changes further confirms that the importance of SP is being increasingly recognized by governments in Asia.

Table 11. Changes in SPI and SPSI Values, Selected Countries

	Bangladesh	**Mongolia**	**Nepal**	**Pakistan**	**Vietnam**
SPI: 2002/03	0.19	0.49	0.16	0.06	0.28
SPI: 2004/05	0.33	0.60	0.19	0.07	0.38
Change	0.14	0.11	0.03	0.01	0.10
% Change	70%	22%	19%	17%	38%
SP Expenditure	Increased share for MCF	Big increase for CWSN	Increase in FFW schemes	Little change	Increased share for MCF
SP coverage	Big increase for most groups	Now, very high coverage of CWSN	Increases in coverage of poor, children and unemployed	Little change	Increased coverage of health schemes for the poor, MCF, the poor - social assistance and children.
SP coverage of the poor (SPDIST)	Large increase	Substantial increase	Some increase	Small increase	Substantial increase
Impact on incomes (SPIMP)	Substantial increase		Little or no increase		Small increase

Variations in Sub-National Social Protection

At the Chinese consultants' suggestion, separate calculations were made of the SPSIs for urban and rural areas. This is particularly relevant for China given the widespread concern over urban-rural inequalities. It also proved relatively simple as virtually all the major SP programs are focussed on either rural or urban areas, not both. The results are presented in Table 12.

The Table shows significantly better social protection provision in urban than in rural areas. While the overall pattern of the SPSIs is similar with higher values for the coverage indicators, the differences between the expenditure and coverage indicators are greater and more accentuated in rural areas. These differences persist despite the introduction of major rural social security and targeted health insurance programs in recent years.   An indication of these differences can be obtained by looking at the rankings implied by the rural and urban SPSIs: the urban SPSI would rank China 5th amongst all Asian countries but the rural ranking would make it 17th, i.e. in the lower half of the distribution.

The extension of social protection to rural areas is of relatively recent origin. Schemes are being developed, piloted and extended all the time. This is happening so fast that the consultants were very careful to confirm that the reference year for this study was 2005 and not 2006! It also means that all the Chinese indicators would have been substantially lower only a few years ago and would probably be significantly better if the reference year had been 2006 or 2007. Again this demonstrates the value of the SPI/ SPSI methodology to monitor the impact of the major changes to the Chinese social protection system now being introduced.

Table 12. China – Urban and Rural SPI and SPSIs

SPSI	Rural	Urban	National
SPEXP (actual value)	0.01	0.06	0.05
SPEXP (scaled value)	*0.08*	*0.37*	*0.29*
SPCOV	0.32	0.43	0.39
SPDIST	0.59	1.00	0.69
SPIMP	0.32	0.56	0.44
SPI	**0.33**	**0.59**	**0.45**

Disaggregating the SPSIs

Just as Figure 7 showed how analysing the SPSIs can generate policy implications, so can the disaggregation of SPEXP and SPCOV as these comprise separate sub-components. An example is provided in Figure 8 which shows the variation in target group coverage ratios for four countries, and hence the strengths and weaknesses of social protection coverage in each country thereby providing an initial indication of where efforts to improve social protection coverage could be focussed.

Thus a potential issue of concern in Japan would be the low coverage ratio for the poor whilst in Sri Lanka it would be the low coverage for the elderly and the disabled. Concern for the elderly is also likely to be an issue in Vietnam and Kyrgyzstan. In all four countries, coverage of poor children is high implying that an evaluation of the provision for this group should concentrate on the effectiveness and impact of the assistance provided.

Figure 8. Country Target Group Coverage Ratios for Selected Countries
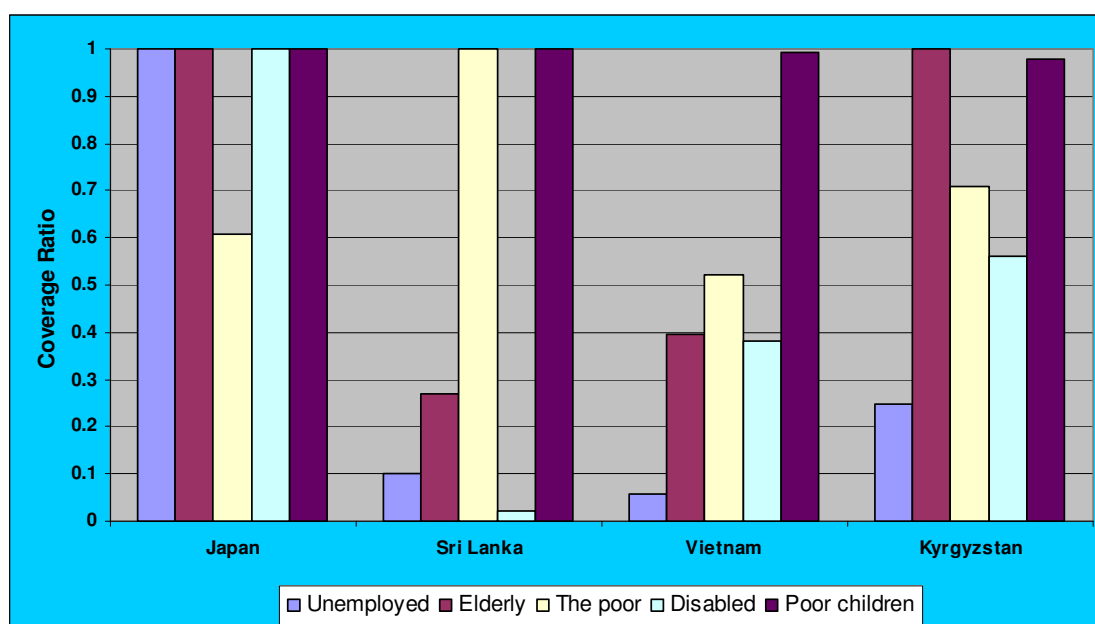
CONCLUSIONS

This paper has summarized the methodology and results of a major study designed to provide an understanding of the different social protection systems currently operating in Asia and the Pacific based on quantitative data. The SPI, the SPSIs and associated database of social protection programs now cover 31 Asian and Pacific countries and thus provide an important addition to the previously limited statistical information on social protection in the region. Together with the individual country reports, we believe that these data will serve to raise awareness of the importance of social protection as a crucial component of national poverty reduction strategies notwithstanding that the evidence from the increases in the SPIs for countries which were the subject of the original study, and known expansions of SP provision in Azerbaijan and China, suggest that awareness of the importance of SP is increasing all the time.

The SPI as currently formulated is considered to be robust, easy to interpret and, above all, useful for policy purposes. Thus the correlations between the SPSIs, and between the SPI and the SPSIs, are all strong but without being so high as to render any of the four indicators redundant. These correlations are also comparable to those between the HDI and its component indicators. Allied to its constituent SPSIs and the SP program database, the information can be used by international agencies and national governments to enhance their SP activities. Several examples have been provided to show how this can be done.

For international agencies, the prime uses of the SPI and the SPSIs will be to examine international trends in SP provision, prioritise their SP activities and inform policy dialogues with individual countries designed to increase donor assistance on social protection.

For national governments, the information in this paper and the Country Reports will provide a starting point for more detailed investigations of social protection activities and the design of measures to improve the overall level of provision. It can do this by helping to identify the main strengths and weaknesses of the current social protection system, e.g. which vulnerable groups receive the greatest benefit from these programs and which benefit the least, which programs generate the most SP expenditure on the poor and which provide the least.

The SPI/ SPSIs can also provide a sound basis for monitoring changes in SP provision over time – an important consideration given the increases in SP which are taking place in several Asian countries. For this to be feasible, the information contained in the database will need to be updated. However updating should not be that difficult as the hard work has been done. For this study, national consultants, concentrating on the major SP programs, were able to produce short updating reports with 2-3 week inputs, which is not particularly onerous.

As with any analysis of summary indicators, interpretation issues will arise: countries can have similar SPI values but very different patterns of social protection provision; high coverage indicators can co-exist with low levels of benefits provided; low poverty targeting may be due to social assistance programs explicitly targeting the severe or extremely poor rather than all those who live below the poverty line; and identical values can reflect very

different patterns of SP. In addition, the overall level of social protection will, to some extent, reflect different national development priorities, e.g. improving physical and social infrastructure to poor rural and urban communities. When such issues arise, the Country Reports should have the necessary information to resolve them. In this study, apparent anomalies in the SPSIs were found, on examination, to reflect actual characteristics of Sp in that country rather than vagaries in the calculation methodology. This is, of course, not to say that improvements are not possible. Prime candidates for further investigation are considered to be the coverage indicator and the possible inclusion of the poverty targeting of SP expenditure into the SPI.

Arguably however the most important findings are the substantial variation in SPI and SPSI values for countries with similar income levels and the lack of correlation between the pro-poor targeting of SP expenditure and both HDI and GDP per capita. What this means is that even poorer and less developed countries (e.g. India, Kyrgyzstan and Bangladesh) can provide significant social protection given the political will to do so.

Annex A1. Country SPSIs Values - Actual and Scaled

| Country	Region	HDI group	HDI	HDI rank	SPEXP	SPCOV	SPDIST	SPIMP	SPEXP scaled	SPCOV scaled	SPDIST scaled	SPIMP scaled	SPI	SPI rank
Armenia	1	2	0.768	8	0.045	0.36	0.53	0.17	0.28	0.36	0.53	0.17	0.34	16
Azerbaijan	1	2	0.736	13	0.053	0.55	0.78	0.45	0.33	0.55	0.78	0.45	0.53	8
Bangladesh	2	4	0.530	29	0.053	0.23	0.53	0.24	0.33	0.23	0.53	0.24	0.33	17
Bhutan	2	4	0.538	28	0.014	0.17	0.30	0.12	0.09	0.17	0.30	0.12	0.17	26
Cambodia	3	4	0.583	23	0.014	0.18	0.43	0.04	0.09	0.18	0.43	0.04	0.19	25
China	3	2	0.768	7	0.046	0.39	0.69	0.44	0.29	0.39	0.69	0.44	0.45	11
Cook Islands	4	1	0.800*	5	0.036	0.67	1.00	0.29	0.23	0.67	1.00	0.29	0.55	6
Fiji	4	2	0.758	10	0.03	0.13	0.22	0.08	0.18	0.13	0.22	0.08	0.15	27
India	2	3	0.611	22	0.040	0.33	1.00	0.26	0.25	0.33	1.00	0.26	0.46	10
Indonesia	3	2	0.711	14	0.019	0.40	0.71	0.08	0.12	0.40	0.71	0.08	0.33	18
Japan	3	1	0.949	1	0.160	0.86	1.00	1.00	1.00	0.86	1.00	1.00	0.96	1
Kazahkstan	1	2	0.774	6	0.046	0.44	0.90	0.53	0.29	0.44	0.90	0.53	0.54	7
Korea	3	1	0.912	2	0.075	0.77	1.00	0.80	0.47	0.77	1.00	0.80	0.76	2
Kyrgyzstan	1	2	0.705	16	0.110	0.67	0.86	0.25	0.69	0.67	0.86	0.25	0.62	3
Laos	3	4	0.553	24	0.013	0.21	0.40	0.07	0.08	0.21	0.40	0.07	0.19	23
Malaysia	3	1	0.805	4	0.040	0.38	0.56	0.19	0.25	0.38	0.56	0.19	0.35	14
Maldives	2	2	0.739	12	0.015	0.22	0.74	0.08	0.09	0.22	0.74	0.08	0.28	21
Marshall Is.	4	3	0.660*	20	0.14	0.23	0.09	0.20	0.84	0.23	0.09	0.20	0.34	15
Mongolia	1	3	0.691	18	0.098	0.67	0.78	0.33	0.61	0.67	0.78	0.33	0.60	4
Nauru	4	4	0.551	25	0.065	0.31	0.74	0.24	0.41	0.31	0.74	0.24	0.42	12
Nepal	2	4	0.527	30	0.023	0.18	0.35	0.07	0.14	0.18	0.35	0.07	0.19	24
Pakistan	2	4	0.539	27	0.016	0.07	0.08	0.03	0.10	0.07	0.08	0.03	0.07	30
Philippines	3	2	0.763	9	0.022	0.33	0.30	0.05	0.14	0.33	0.30	0.05	0.21	22
PNG	4	4	0.523	31	0.003	0.009	0.009	0.003	0.02	0.01	0.01	0.00	0.01	31
Sri Lanka	2	2	0.755	11	0.057	0.41	0.85	0.26	0.36	0.41	0.85	0.26	0.47	9
Tajikistan	1	3	0.652	21	0.010	0.38	0.73	0.03	0.06	0.38	0.73	0.03	0.30	19
Tonga	4	1	0.815	3	0.013	0.11	0.11	0.02	0.08	0.11	0.11	0.02	0.08	28
Tuvalu	4	4	0.550	26	0.069	0.17	0.55	0.04	0.43	0.17	0.55	0.04	0.26	20
Uzbekistan	1	3	0.696	17	0.111	0.40	0.66	0.53	0.69	0.40	0.66	0.53	0.57	5
Vanuatu	4	3	0.67	19	0.01	0.13	0.10	0.02	0.07	0.13	0.10	0.02	0.08	29
Vietnam	3	2	0.709	15	0.041	0.40	0.71	0.17	0.26	0.40	0.71	0.17	0.38	13

A Social Protection Index for Asia, Wood/ Halcrow for APPAM conference, 2009.

November 2008.

Annex A2. SPSI Sub-Categories

Country	Expenditure by Category of Program					Target Group Coverage Ratios						
	Labor Market	Social Insurance	Social Assistance	Micro Area based	Child Protection	Unem/Under Employed	Elderly	Health care	Poor -Social assistance	The Poor – Micro-credit	Disabled	Children
Armenia	0.3%	56.2%	43.1%	0.1%	0.3%	9.4%	99.8%	2.2%	64.6%	0.0%	100.4%	62.4%
Azerbaijan	0.3%	60.1%	34.8%	0.3%	4.5%	100.0%	100.1%	17.2%	100.5%	2.2%	100.2%	99.9%
Bangladesh	6.3%	5.4%	22.3%	62.5%	3.4%	14.8%	25.9%	2.5%	42.2%	34.3%	22.2%	46.1%
Bhutan	11.0%	1.0%	0.0%	43.0%	45.0%	13%	1%	0%	34%	14%	0%	100%
Cambodia	3.0%	30.0%	13.0%	47.0%	7.0%	5.0%	8.0%	7.0%	16.0%	41.0%	9.0%	45.0%
China	7.0%	84.0%	6.0%	1.0%	1.0%	31.0%	26.0%	29.0%	99.0%	10.0%	28.0%	100.0%
Cook Islands	0.0%	53.0%	15.0%	5.0%	27.0%	50.0%	100.0%	50.0%	100.0%	28.0%	100.0%	100.0%
Fiji	5.5%	24.8%	48.5%	0.4%	20.8%	28%	11%	0%	30%	1%	20%	29%
India	10.4%	59.7%	20.1%	7.0%	2.7%	14.0%	22.9%	10.1%	100.0%	15.6%	12.7%	100.0%
Indonesia	0.8%	70.9%	19.7%	3.3%	5.3%	6.5%	63.9%	29.9%	99.4%	5.8%	3.0%	98.9%
Japan	0.3%	79.8%	17.8%	0.1%	2.0%	100.0%	100.0%	100.0%	60.6%	18.3%	100.0%	100.0%
Kazahkstan	3.0%	73.2%	15.6%	3.8%	4.6%	62.5%	100.5%	2.4%	99.7%	3.6%	99.6%	99.8%
Korea	26.0%	60.0%	12.0%	0.0%	2.0%	100.0%	82.0%	100.0%	58.0%	0.0%	73.0%	52.0%
Kyrgyzstan	1.0%	48.0%	26.0%	22.0%	3.0%	25.0%	100.0%	83.0%	71.0%	33.0%	56.0%	98.0%
Laos	10.0%	31.0%	15.0%	36.0%	9.0%	19.0%	7.0%	3.0%	18.0%	57.0%	10.0%	44.0%
Malaysia	1.0%	90.0%	4.0%	0.0%	5.0%	21.0%	59.0%	24.0%	64.0%	0.0%	61.0%	99.0%
Maldives	0.0%	64.8%	25.0%	6.2%	3.9%	0.0%	27.9%	10.9%	96.0%	5.0%	10.6%	17.3%
Marshall Is.	3.3%	51.9%	41.2%	0.1%	3.6%	13%	99%	0%	18%	0%	59%	77%
Mongolia	1.6%	71.2%	10.5%	2.1%	14.7%	41.0%	100.0%	82.0%	55.4%	11.6%	96.7%	98.9%
Nauru	65.1%	9.3%	18.4%	0.0%	7.1%	77.0%	63.0%	0.0%	70.0%	0.0%	7.0%	51.0%
Nepal	20.9%	44.5%	7.6%	21.4%	5.5%	26.7%	35.3%	3.3%	17.6%	27.7%	5.6%	40.4%
Pakistan	1.6%	85.0%	6.3%	6.0%	1.0%	8.4%	9.3%	7.8%	8.1%	9.6%	0.3%	2.1%
Philippines	0.1%	79.2%	3.6%	17.0%	0.0%	7.0%	16.0%	70.0%	5.0%	32.0%	24.0%	5.0%
PNG	0.0%	86.0%	10.7%	0.9%	2.4%	4.1%	0.9%	0.5%	0.8%	0.0%	0.0%	2.5%
Sri Lanka	1.0%	50.0%	11.0%	36.0%	2.0%	40.7%	91.2%	0.1%	74.0%	7.2%	100.0%	35.6%
Tajikistan	6.0%	29.0%	37.0%	14.0%	14.0%	55.0%	10.0%	3.0%	15.0%	3.0%	12.0%	9.0%
Tonga	17.0%	71.0%	7.0%	2.0%	3.0%	26.0%	19.0%	0.0%	20.0%	47.0%	22.0%	9.0%
Tuvalu	0.0%	89.0%	3.0%	8.0%	0.0%	36.9%	99.8%	7.6%	70.7%	6.2%	89.8%	74.2%
Uzbekistan	0.2%	71.5%	4.3%	2.1%	22.0%	10%	66%	1%	14%	11%	5%	17%
Vanuatu	3.9%	35.5%	14.3%	46.3%	0.0%	5.9%	39.5%	36.7%	52.3%	29.6%	38.0%	99.3%
Vietnam	7.7%	49.7%	27.4%	13.6%	1.6%	9.4%	99.8%	2.2%	64.6%	0.0%	100.4%	62.4%

Annex A3. SPSI Star Charts for Selected Countries
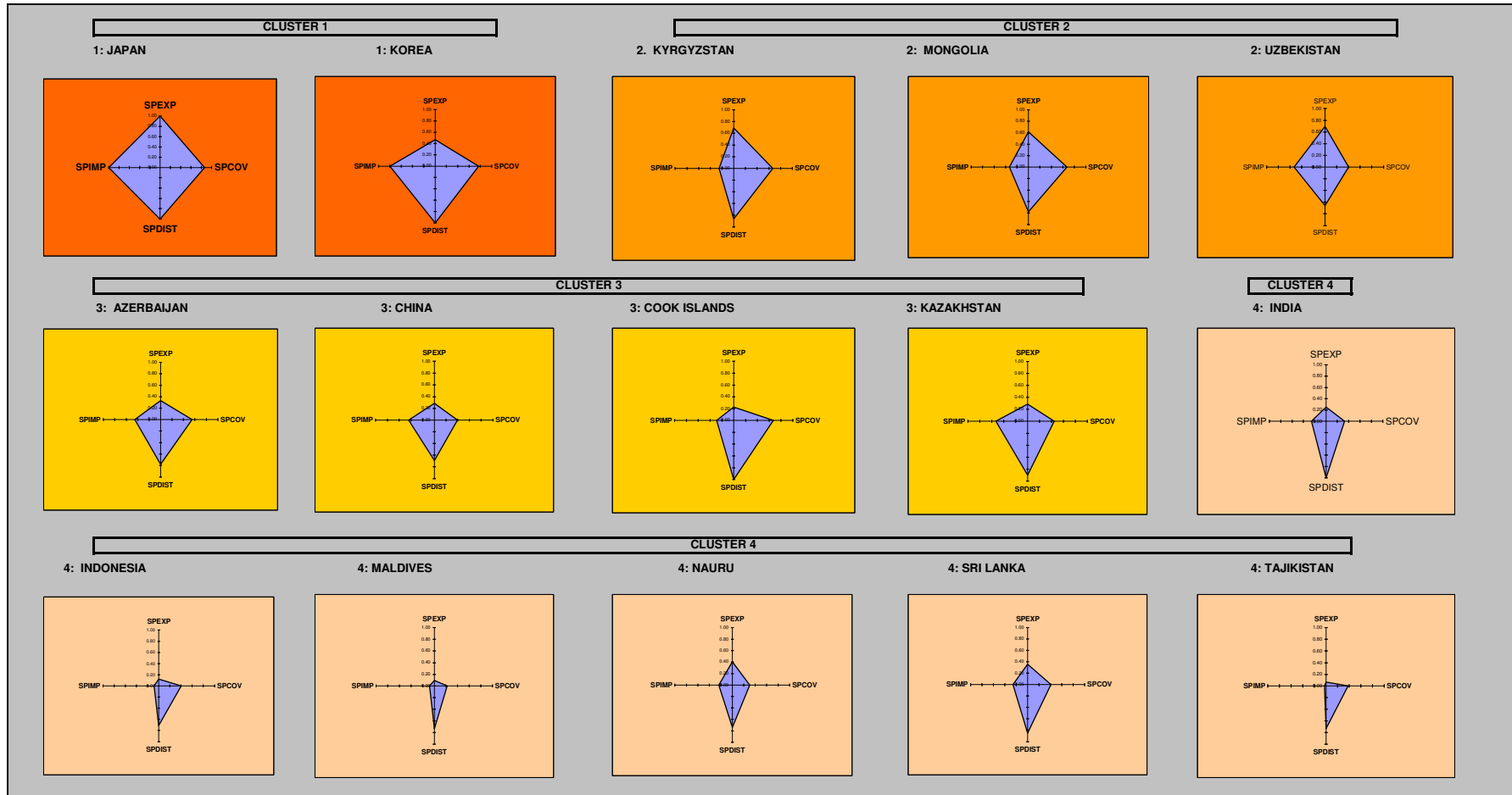
NB1. Clusters refer to groupings of countries derived through cluster analysis.

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