

## **The Labour Share of Income around the World. Evidence from a Panel Dataset**

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**Abstract:** Functional income distribution has been central to the discussions on distribution since the beginning of the 19<sup>th</sup> century. However, since the 1960s, attention towards it has been declining. In very recent years, a renewed interest has brought the subject back to the fore. Nevertheless, there has been little systematic attempt to put together a common database. Two main reasons can be identified: first, because of their nature, factor shares are very difficult to define and many issues arise from their measurement, especially concerning the treatment of self-employment income; second, they have for a long time been perceived as constant across time and space.

This paper intends to target both these issues. Firstly, by suggesting an adjustment to the usual approaches of measurement, it compiles an extensive dataset of the labour share across 89 countries - both developing and developed - for all or part of the period 1970-2009. Results show that the measure, when compared to other five measures previously used in the literature, is correlated but non-redundant. The dataset may therefore be very useful for further research on the determinants of income shares.

Secondly, this study uses descriptive statistics to provide an account of the performance of factor shares over time and across countries. Contrary to the traditional assumption of stability of factor shares, our data present evidence of considerable variability: there seems to be a general reduction in the labour share around the world over the last few decades, in particular from the mid-1980s onwards. Moreover, the analysis shows that, as soon as we take self-employment into proper consideration, the relationship between factor shares and levels of economic development is not any more straightforward. In other words, it is not entirely true that poorer countries have lower labour shares, as suggested by previous literature.

**JEL classifications:** E25, J30, E01.

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## 1. Introduction

Functional income distribution has long been studied in economics. Since the beginning of the 19<sup>th</sup> century and Ricardo's theory of distribution<sup>2</sup>, many different approaches have been proposed and every major school of thought has developed its own theory of income distribution (Atkinson, 1983; Glyn, 2009; Goldfarb & Leonard, 2005).

However, factor shares have always been problematic to measure (Kravis, 1959; Kuznets, 1959). Since the 1960s, with the increased predominance of neoclassical economics, a shift of emphasis away from functional income distribution has occurred, turning to personal income distribution. This change of research interest has been facilitated by a deviation in focus from classes to individuals and by the assumption that factor shares are constant across time and space (Gottschalk & Smeeding, 1997; Goldfarb & Leonard, 2005).

In the neoclassical framework, Ricardo's (Ricardo, 1821) principle of decreasing marginal productivity is extended to determine the price of all factors of production. Therefore, if the elasticity of substitution between capital and labour is one – as, for example, in the case of a Cobb Douglas aggregate production function – factor shares are relatively constant. Solow himself, however, expressed "scepticism" about the constancy of the labour share (Solow, 1958) and suggested some improvements to the framework, for example, the introduction of technological progress<sup>3</sup>.

In recent years, a renewed interest around functional distribution of income has brought the issue back to the agenda of academic research (Atkinson, 2009; Bentolila & Saint-Paul, 2003; Daudey & Garcia-Penalosa, 2007; Gollin, 2002; Krueger, 1999). In particular, a few studies have documented the decline of the labour share in advanced economies since the 1980s, capturing the attention of policy discussions (Ben Bernanke and Robert Reich have frequently drawn interest to it), international organisations (EC, 2007; ILO, 2008; IMF, 2007) and the press (Bond & Harding, 2011). This is happening in the light of the recent global economic situation, with many of the industrialised countries experiencing millions of jobs losses and unemployment rates at their all-time high (Smeeding & Thompson, 2010).

Atkinson (2009) listed at least three reasons for studying factor shares. First, functional distribution of income may help draw a connection between macroeconomic measures of economic performance and incomes at the household level. Even though there is no longer a

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<sup>2</sup> In 1817, Ricardo stated: «*The produce of the earth - all that is derived from its surface by the united application of labour, machinery, and capital, is divided among three classes of the community; namely, the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the labourers by whose industry it is cultivated. [...] To determine the laws which regulate this distribution, is the principal problem in Political Economy*» (Ricardo, 1821).

<sup>3</sup> The stability of the labour share has been considered as one of the "stylized facts" of growth (Kaldor, 1961), but also "a bit of a miracle" (Keynes, 1939), and a "mirage" (Solow, 1958).

simple link between class distinctions (workers/capitalists) and sources of income (labour/capital), factor shares «*provide a valuable starting point*» (Atkinson, 2009). Second, the study of factor shares may facilitate the understanding of income inequality. The link between the two distributions is very complex, especially nowadays with the diffusion of the so-called “*popular capitalism*” (Glyn, 2009). However, wealth is still more unequally distributed than labour endowments; therefore, factor income distribution may be an important determinant of personal income distribution (Ryan, 1996; Checchi & Garcia-Penalosa, 2009; Daudey & Garcia-Penalosa, 2007)<sup>4</sup>. Third, factor shares and welfare economics are relevant to address concerns of social justice. It is in fact reasonable to think that employees’ evaluations of “fair wages” depend on their employers’ profits (Goldfarb & Leonard, 2005).

In conclusion, factor shares are very important for the study of the functioning of the economy. Up until now, there has been little systematic attempt to put together a common database and look at the conceptual issues around the measurement. Much needs to be done to understand their behaviour, to explain their determinants and to evaluate their impact.

## **2. Measuring labour shares: conceptual issues and different approaches**

### *2.1 The definition*

‘Income shares’ or ‘factor shares’ refer to the shares of national income which reward the different factors of production. Being related to the macroeconomic functioning of the economy, they are typically measured from aggregate data<sup>5</sup>. Labour share, which “*shows how much of national income accrues to labour*” (Lübker, 2007), is computed first, while returns to capital are the residual. Though they are considered elementary to determine, a few issues arise from their measurement.

Firstly, as Krueger (1999) points out, the type of computations used to determine income shares forces income into two artificial categories: labour and non-labour income. In reality, however, there are many different types of labour, “*labour and capital no longer divide so neatly into mutually exclusive categories*” (Krueger, 1999), and each economic agent derives their earnings from several different sources. Therefore, the greater majority of the criticisms

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<sup>4</sup> Once we combine the two distributions together, we may obtain a very rich set of distributional outcomes (Glyn, 2009).

<sup>5</sup> A few studies have recently proposed some methods for the estimation of labour shares using micro-level survey data (Ryan, 1996; García-Verdú, 2005; Wolff and Zacharias, 2007). However, they have also mentioned a few limitations.

to functional income distribution today originate from the concern that it may be hazardous to draw a clear demarcation line between the two classes<sup>6</sup>.

Secondly, there are a few problems of definition. The labour share is conventionally calculated dividing total compensation of employees<sup>7</sup> by national income. The measure of employees' compensation is a better measure than the simple 'wages and salaries', because it considers also some other forms of non-wage compensation - such as commissions, bonuses, tips, family allowances, employers' contributions to social security programmes and pension schemes -. However, as explained in Krueger (1999) and Gollin (2002), it still suffers from a very big limitation.

From a conceptual perspective, in fact, the so computed share differs from labour income share because it disregards the self-employed and their contribution to labour income. By incorporating only payments to corporate workers, it implicitly classifies all the earnings from the self-employed as capital income. This incorrectly underestimates the actual measure of labour share and may bias international comparisons. The income earned by the self-employed, in fact, clearly represents both returns to work and returns to capital. Thus, in the computation of the share, its labour income component needs to be derived and added to the compensation of employees (Johnson, 1954; Kravis, 1959; Kuznets, 1959).

Especially in developing countries, the self-employed and the people working in family enterprises account for a very big portion of the workforce<sup>8</sup>. Self-employment represents not only emerging entrepreneurship and business start-up, but also marginal employment and disguised unemployment (Gollin, 2002). As a result, in developing countries labour income is badly understated by the employees' compensation measure, which also risks changing significantly only as a consequence of a possible trend away from informal employment.

## *2.2 Data and computation of alternative approaches*

The exact measurement of the nominator and the denominator of the share is not straightforward (Gomme and Rupert, 2004). This study decides to follow the methodologies proposed by Krueger (1999) and Glyn (2009) in their analyses of functional distribution of income in the United States, and Gollin (2002) in his cross-country study of both developing

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<sup>6</sup> Other questions arise: How do we define 'workers'? Where do we place those incomes earned by directors and administrative cadres (who are employees, but more akin to entrepreneurs)? Should we consider human capital as capital? How do we deal with 'non-market' sectors?

<sup>7</sup> See Appendix A for glossary definitions.

<sup>8</sup> The share of self-employment tends to be between 10% and 15% of all non-agricultural employment in industrialised countries (Blanchflower, 2000) and between 50% and 75% in developing countries (ILO, 2002).

and developed countries. They all highlight the importance of accurate measurement and introduce a few adjustments to take self-employment income into consideration.

Gollin (2002) suggests using national aggregate data from the United Nations National Accounts Statistics, a database consisting of a series of analytical national accounts tables for 178 countries from 1946 onwards, prepared by the Statistics Division of the Department for Economic and Social Affairs of the UN Secretariat. For the majority of the countries, it provides yearly data on main national aggregates, collected using the System of National Accounts 1993 (then updated into the System of National Accounts 2008)<sup>9</sup>. It is maintained and updated on the basis of annual collections of official national accounts statistics, and supplemented by estimates<sup>10</sup> for those years and countries with incomplete or inconsistent information. Even though comparability issues are present in the data (Hartwig, 2006), the estimations of the UN System of National Accounts are incredibly meaningful measures and have already been used in the literature on labour share (Bernanke & Gürkaynak, 2001; Diwan, 2001; Harrison, 2002; Jayadev, 2007).

The labour share is a ratio. For the computation of its denominator - the income aggregate - a few adjustments are needed. First, Taxes on Production and Imports (minus Subsidies) have been removed from the Gross Value Added at basic prices<sup>11</sup>, converting the income aggregate to factor cost. It is in fact necessary to consider value added from the point of view of the producer: indirect taxes are subtracted because they do not represent any kind of return to property or capital, and cannot be considered as non-labour income; subsidies, instead, are retained (Glyn, 2009). Second, the standard definition of capital income implies measuring it net of capital consumption. Therefore, where data are available, Consumption of Fixed Capital have been subtracted from the measure of value added, obtaining a net measure (Kuznets, 1959).

But what about the numerator of the ratio? Taking Krueger's (1999) and Gollin's (2002) observations into consideration, six different measures of labour share have been computed and compared: the unadjusted measure, four other measures previously used in the literature, and one last measure suggested in this paper.

**LS1.** The unadjusted labour share is the ratio of the compensation of employees to the value added (net of indirect taxes and consumption of fixed capital):

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<sup>9</sup> The 'System of National Accounts 1993' was adopted by the UN Statistical Commission in 1993 as the international standard for compilation of national accounts statistics.

<sup>10</sup> Computed on the basis of surveys of enterprises or establishments and government accounts.

<sup>11</sup> When not present, we have used Gross Domestic Product in its stead.

$$\text{LS (unadjusted) or LS1} = \frac{\text{compensation of employees}}{\text{Value added (- indirect taxes - fixed capital)}}$$

As previously presented, even if this measure has been widely used in the literature (Daudey & Garcia-Penalosa, 2007; Diwan, 2001; Jayadev, 2007; Rodrik, 1997), it is an underestimation of the actual value of the labour share. A few adjustments have been suggested.

The SNA 1993 method breaks down value added into: compensation of employees, operating surplus (from rent and capital) and mixed income from the self-employed. The UN National Accounts Statistics provide information on mixed income for a large number of countries<sup>12</sup>. These data have been employed to produce a few ‘adjusted’ measures of labour share.

**LS2.** A common rule, proposed by Johnson (1954), is to impute two-thirds of self-employment income to labour income, and the rest to capital income<sup>13</sup>:

$$\text{LS2} = \frac{\text{compensation of employees} + \frac{2}{3} \text{ mixed income}}{\text{Value added (- indirect taxes - fixed capital)}}$$

Of course, the main problem with this measure is that the value ‘2/3’, even if quite realistic, is arbitrary and treats all the countries in the same way. Moreover, given that the division of income remains constant over time, it may ignore possible forces which may shift the balance between labour and capital income over time.

**LS3.** A second adjustment (Kravis, 1959) consists in attributing all of self-employment income to labour income. The rationale of this measurement is that in developing countries most of the self-employed provide pure labour services. However, using this approach, the labour share is overstated. In reality, some self-employed businesses do generate and use considerable amounts of capital, even in developing countries.

$$\text{LS3} = \frac{\text{compensation of employees} + \text{mixed income}}{\text{Value added (- indirect taxes - fixed capital)}}$$

**LS4.** It is also possible to consider self-employment income as composed of the same combination of labour and capital as the rest of the economy’s income (Atkinson, 1983; Kravis, 1959). The labour share is scaled up by a factor that takes into account the self-employed, who are attributed a wage equal to the average wage of employees:

$$\text{LS4} = \frac{\text{compensation of employees}}{\text{Value added (- indirect taxes - fixed capital) - mixed income}}$$

<sup>12</sup> For the majority of the countries, data refer to Gross Mixed Income (see Appendix C).

<sup>13</sup> Such a rule of thumb has been extensively used in the literature (see, for example, Guscina, 2006).

This adjustment assumes that income distribution is approximately the same in private unincorporated enterprises and in large corporations (or in the government sector). In reality, they are very different agents, in terms of size, structure and labour-intensiveness, and vary a lot from one country to another<sup>14</sup>. However, even if problematic, this approach is more reasonable than the previous one, because it allows for the possibility that the self-employed generate some capital income. Moreover, being quite straightforward, it has already been used in the literature (Ryan, 1996; Harrison, 2002).

The main problem related to these three methods of adjustment (LS2, LS3 and LS4) is that they require data on self-employment income. As previously mentioned, the UN National Accounts Statistics tables report the value of ‘mixed income’ or operating surplus of private unincorporated enterprises (OSPUE) and this category is assumed to represent the overall income of the self-employed. Unfortunately, however, data on this category are not available for every state or territory<sup>15</sup>: the majority of countries report only operating surplus, recording the income from self-employment together with capital income.

**LS5.** An alternative method is needed. Gollin (2002) suggests a fourth adjustment, based on the fact that, even when we do not possess information on income, we may have data on the composition of the workforce. In fact, not only is it easier to collect data on the number of self-employed than on their actual earnings, but studies have also shown that the self-employed tend to underreport their income (Hurst, Li, & Pugsley, 2010). This approach has been widely used in the literature for industrialised countries (Bentolila & Saint-Paul, 2003; Ellis & Smith, 2007; IMF, 2007) and has been applied by the OECD and the EC in their calculations.

The ILO Yearbooks of Labour Statistics are the most fundamental publications of statistical reference on labour questions. Their country profiles provide statistics on the composition of total employment for nearly 200 countries and territories from 1969 to 2008. Based on the International Classification of Status in Employment ICSE-1993, they classify the workforce into: 1. Employees; 2. Employers; 3. Own-account workers; 4. Members of producers’ cooperatives; 5. Contributing family workers; 6. Workers not classifiable by status (see Appendix B). As well as the *employers*, also the members of the last four categories in the classification hold a ‘self-employment job’. They represent those self-employed who produce mixed income, and they are precisely those workers involved in self-employment activities

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<sup>14</sup> Moreover, some studies show that for some countries this adjustment leads to very unrealistic results, like, for example, labour shares greater than 1 (Bernanke and Gürkaynak, 2001).

<sup>15</sup> See Appendix C for a summary of data availability for each country.

who engage in some form of labour. Gollin's (2002) measurement, therefore, imputes average employees' compensation to all the five categories of "self-employment jobs". Therefore, all types of workers who are not *employees* are assumed to receive the same average wages as the employees themselves:

$$LS5 = \frac{\frac{\text{compensation of employees} * \text{total workforce}}{\text{number of employees}}}{\text{Value added (-indirect taxes - fixed capital)}}$$

Because of greater availability of data, this approach is preferred to the previous ones. Moreover, especially in countries where the number of self-employed people is very large, it may provide a better approximation of the actual value of the labour share. The advantage is that it considers the composition of the workforce in the different countries and in the different periods of time. The disadvantage is that it requires detailed micro-data. Moreover, it may be problematic in case there are systematic differences between the employees and the self-employed<sup>16</sup>.

**LS6.** As a further adjustment, this study proposes one last measurement which completely removes the income earned by the "employers" from the adjusted numerator. LS6 attributes the average employees' wage to all those workers who hold *self-employment jobs* but are not classified as "employers" (therefore, categories 3, 4, 5 and 6 in the International Classification of Status in Employment ICSE-1993). They only represent the self-employed who produce mixed income:

$$LS6 = \frac{\frac{\text{compensation of employees}}{\text{number of employees}} \cdot (\text{total workforce} - \text{employers})}{\text{Value added (-indirect taxes - fixed capital)}}$$

From my point of view, Gollin's computations overestimate the labour share<sup>17</sup>. Therefore, it is possible that considering the entire workforce net of employers is a better choice. Employers, in fact, receive a negligible amount of labour income, not comparable to what earned by the employees or by the other self-employed.

Finally, other approaches have been suggested in the literature. However, they require very detailed information, which are impossible to obtain for a large number of countries,

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<sup>16</sup> As a response to this criticism, Bernanke and Gürkaynak (2001) constructed a measure of labour share which combines information on the corporate share of the labour force and the aggregate operating surplus. However, their computation is not convincing, because it is based on the assumption that the corporate share of total private-sector income is the same as the share of the labour force employed in the corporate sector. Income and employment shares may instead be very different. Their results are in fact unreasonable for those countries with very low corporate employment shares. It is only with corporate employee share exceeding 0.5 or 0.6 that their estimated labour shares are realistic.

<sup>17</sup> Bernanke and Gürkaynak (2001) replicated and updated Gollin's calculations, obtaining unrealistic results of labour shares greater than 1. Part of the income of the *employers* was probably considered twice: in the operating surplus and as wage income of the self-employed.

especially the developing ones. Glyn (2009), for example, proposed attributing the average agricultural wage to the labour income component of self-employment income<sup>18</sup>. The rationale behind this method is that in developing countries the self-employed are mainly concentrated in agriculture, where average income (and wages) are very low and normally below the national average. A possible improvement to this approach would be valuing the services of labour and capital in accordance with the returns prevailing in each sector of the economy, rather than in the economy as a whole, and allocate to labour the income the self-employed would have received on average as paid employees in the same sector of the economy (Feinstein, 1968). Disaggregating national income data by sector would also allow capturing possible variations of the share across industries which, as documented, are quite considerable: agriculture and primary commodity production, when compared to manufacturing and services, seem to have lower employee compensation shares (Glyn, 2009; Gollin, 2002; Kravis, 1959; Solow, 1958).

Young (1995), instead, constructed estimates of labour shares by attributing implicit wages to the self-employed and unpaid workers on the basis of their sector of employment, sex, age and education, under the assumption that they earn an implicit wage equal to the hourly wage of employees in the same industry, with similar sex, age and education<sup>19</sup>. This approach, which has been recently used in the literature (Freeman, 2011), is extremely accurate, but it suffers from possible selection bias and it is highly data-demanding.

Finally, some scholars have tried to mitigate the problem of self-employment income by excluding agriculture and focussing only on the manufacturing sector, where the self-employed are less numerous, arguing that this would reduce problems of comparability across countries (Azmat, Manning, & Reenen, 2007; Daudey & Garcia-Penalosa, 2007; Ortega & Rodriguez, 2006; Rodrik, 1997). However, this approach does not eliminate the problem and may be problematic in those countries with a high concentration of self-employed in agriculture and other low-wage sectors. Depending on the relevance of the manufacturing sector in the economy, these measures of labour share will be more or less similar to the actual values we want to measure.

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<sup>18</sup> The value of the labour component of self-employment income will then be equal to that of a hired worker in agriculture, while the capital portion of the income will be the residual.

<sup>19</sup> He estimated sector-specific wage equations for the employees, and then used the estimated coefficients to impute wages to the self-employed.

### 3. Labour shares around the world: a panel dataset

Labour shares of income have been computed using all the six methods (LS1-LS6), constructing a panel dataset for both developed and developing countries<sup>20</sup>. Data on 141 countries have been collected: 33 in Africa, 29 in the Americas, 32 in Asia, 38 in Europe and 9 in Oceania. For the majority of the countries and on average, data cover a 20-year span, and most of the observations are concentrated in the period 1990s-2000s (with the most recent information related to 2009). However, a good number of countries possess data also for the 1970s and 1980s.

Table 1 contains description and summary statistics of all the different variables of labour share. The measures have quite large variability, their coefficients of variation being between 16.3% and 32.0%.

The unadjusted labour share (LS1) is the measure with the highest variation, with a standard deviation equal to 0.16 and a coefficient of variation equal to 32.04. Given that in this measure the labour share is not corrected for self-employment income, its actual value is usually underestimated, especially for developing countries where income from self-employment is a relevant part of income from labour (Gollin, 2002; Krueger, 1999). Its values are in some countries very small (at times, unrealistically smaller than 0.1<sup>21</sup>) and its mean and median, the smallest among the six measures, are only slightly bigger than 0.5 (0.51 and 0.53, respectively).

**Table 1. Central tendency, variation and description of the labour share measures**

Variable	Obs	Mean	Median	St. Dev.	Coefficient of variation	Min	Max
LS1	2860	0.507975	0.5277	0.162738	32.03657	0.035	0.900
LS2	931	0.678794	0.6994	0.116195	17.11784	0.199	0.885
LS3	931	0.742601	0.7664	0.120789	16.26567	0.210	0.975
LS4	931	0.679328	0.7107	0.143650	21.14589	0.183	0.947
LS5	2139	0.721157	0.7357	0.144725	20.06839	0.179	1.071
LS6	1918	0.678506	0.6860	0.143657	21.17261	0.178	0.997

*Source:* Author's calculations.

LS2, LS3 and LS4 need data on mixed income for their computation. The panel of countries is therefore considerably reduced, because of the absence of information on self-employment income. The total number of country-year pair observations is reduced to 931 (from the original 2860 observations in the case of LS1), and the total number of countries is now only 60 (instead of 141). Among these 60 countries, 8 are in Africa, 16 in the Americas, 9 in Asia,

<sup>20</sup> See Appendix C for the complete list of countries and a summary of data availability. Data on the composition of the workforce were be always available for every year. When absent, they have been assumed to be the same as in the previous year (Gollin, 2002). Though this is a quite strong assumption (Askenazy, 2003), it is realistic, being the composition of the workforce relatively constant over time.

<sup>21</sup> In the cases of Iraq, Nigeria and the United Republic of Tanzania.

24 in Europe and 3 in Oceania. As a result, not only is the dataset significantly smaller, but it is also biased towards the developed regions of the world, for which we possess more accurate data and longer time-series. Nonetheless, the dataset is of great importance because all the three new measures are more realistic than LS1. Among them, LS4 is the best one, and LS2 seems to be in most of the cases a good approximation of it (nevertheless, it represents an arbitrary measurement (Krueger, 1999)<sup>22</sup>). LS3, instead, generally overstates the actual value of the labour share because it attributes all of self-employed income to labour (Gollin, 2002). Its mean and median are the largest among all the six measures (0.74 and 0.77, respectively), its standard deviation is the second smallest, 0.12, and its coefficient of variation is the smallest, 16.3: thus, the observations have high and quite concentrated values. LS5 and LS6 are computed using ILO's data on the structure of the workforce. Both the overall number of observations (2139 for LS5 and 1918 for LS6) and the overall number of countries (97 for LS5 and 89 for LS6) are reduced, but the sample still remains high. Compared to the three previous measures, they better represent the whole world, given that the observations are more evenly distributed among the different geographical regions. For LS5, 10 countries are in Africa, 25 in the Americas, 24 in Asia, 34 in Europe and 4 in Oceania. For LS6, 10 countries are in Africa, 21 in the Americas, 24 in Asia, 30 in Europe and 4 in Oceania. Only the African continent is not as well represented as in LS1, and LDCs are now not any more in the sample: they are taken out because of poor information on the workforce. In fact, we possess information for 19 LDCs on LS1, while only 2 on LS6<sup>23</sup>. As previously mentioned, LS5 overstates the labour share. Its mean and median are the second highest among the six measures (0.72 and 0.74, respectively) and the values of the observations are for some countries greater than 1<sup>24</sup>.

In conclusion, LS4 and LS6 appear to be the best approximations. Their means (0.679 and 0.678) and medians (0.711 and 0.686) are very similar. Their standard deviations (0.144 and 0.144) and coefficients of variation (21.15 and 21.17) are not only similar, but also relatively large, providing good variation of the data, even after the adjustments. Moreover, the values of the observations are never greater than 1. Given that the dataset for LS4 is notably reduced and mainly considers developed economies, LS6 represents a more accurate measurement among the six computed here.

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<sup>22</sup> The ratio 2/3 is probably a good approximation of what actually happens in the majority of the developed countries, but it is not rigorous enough to be applied to every single country in the world.

<sup>23</sup> Appendix D shows how representative the sample is of the overall world.

<sup>24</sup> In the cases of Croatia, Netherlands Antilles and Sri Lanka.

Table2 shows the variance decomposition of LS6, and explains how the variable changes both over time and across individuals.

**Table2. LS6 panel summary statistics: within and between variations**

Variable		Mean	Std. Dev.	Min	Max	Observations
LS6	Overall	0.6785058	0.1436574	0.178	0.997	N = 1918
	Between		0.1403241	0.2914875	0.9236824	n = 89
	Within		0.0700107	0.3746468	0.9482321	T-bar = 21.5506

Source: Author's calculations.

There seems to be a considerable discrepancy between cross-country and within-country observations, with the former variation being much bigger than the latter. For some countries, in fact, labour shares do not change much over time: inequality and income distribution are to be considered long-run phenomena. This may explain why labour shares have been perceived in the neoclassical literature as constant over time (Goldfarb & Leonard, 2005) and not many studies have addressed the issue of defining their determinants.

#### 4. Results

This study uses descriptive statistics to provide an account of the performance of the labour share over time and across countries. In particular, it raises an argument against two main hypotheses which have been introduced in the literature on factor shares.

First, contrary to the neoclassical consensus in favour of stability of factor shares and Gollin's (2002) belief that differences in labour shares are mainly determined statistically at the measurement level, the data present medium- and long- term evidence of considerable variability. Not only have factor shares varied over time, but there also seems to be a general declining trend over the last few decades, in particular from the mid-1980s onwards.

Second, it is not straightforward to declare that factor shares are directly related to the stages of economic development, as suggested by previous literature (Ortega & Rodriguez, 2006). Our analysis shows that, as soon as we properly take self-employment into consideration, it is not entirely true that poorer countries have lower labour shares.

##### 4.1 Are factor shares relatively constant?

Figure1 plots yearly averages of the six measures in the period 1970-2008<sup>25</sup>.

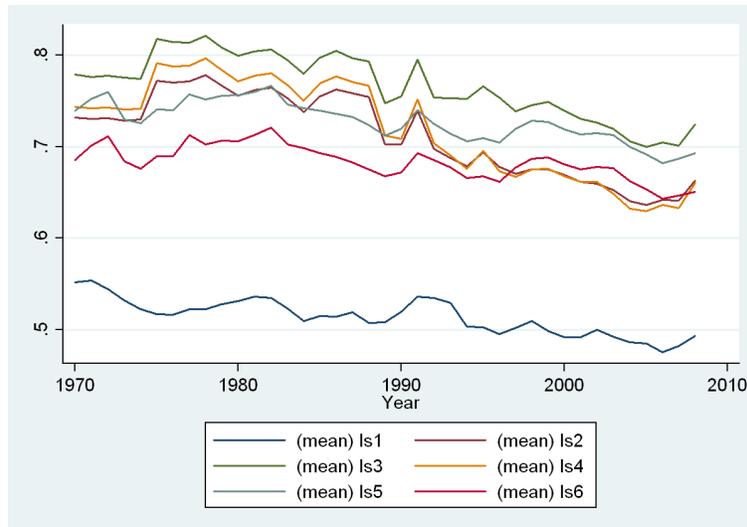
LS1 is the lowest line on the diagram given it is an underestimation of the labour share. LS3 and LS5, instead, overestimate the actual value of the share giving too much weight to the labour component of self-employment income. Especially in the last two decades, their average values have been considerably higher than the other measures. Once again, the

<sup>25</sup> See Appendix I for detailed data on the averages of labour share by year.

figures for LS4 and LS6 seem to be more reasonable, and especially in recent years the measures tend to evolve in a very similar way.

In general, the six different variables seem to behave similarly over time, increasing and decreasing together. Nonetheless, in some cases the lines overlap and show different trends. Considering how the measures have been constructed, this may be due to variations in the amount of income from self-employment or in the composition of the workforce.

**Figure1. Labour share averages, by year.**



Source: Author's calculations.

Pair-wise correlation coefficients between the six measures have been computed, both for the complete period (Table3) and year-by-year (table not shown). Correlation between the measures is positive, high, and significant. Because of the way they have been built, LS2, LS3 and LS4, as well as LS5 and LS6, are highly correlated. LS6, my preferred measure of labour share, is correlated but not redundant: it must retain some information not held by the others.

**Table3. Labour shares measures. Correlation matrix**

	LS1	LS2	LS3	LS4	LS5	LS6
LS1	1					
LS2	0.7979*	1				
LS3	0.4955*	0.9183*	1			
LS4	0.7779*	0.9852*	0.9092*	1		
LS5	0.6680*	0.8002*	0.7633*	0.7895*	1	
LS6	0.6199*	0.7664*	0.7376*	0.7600*	0.9818*	1

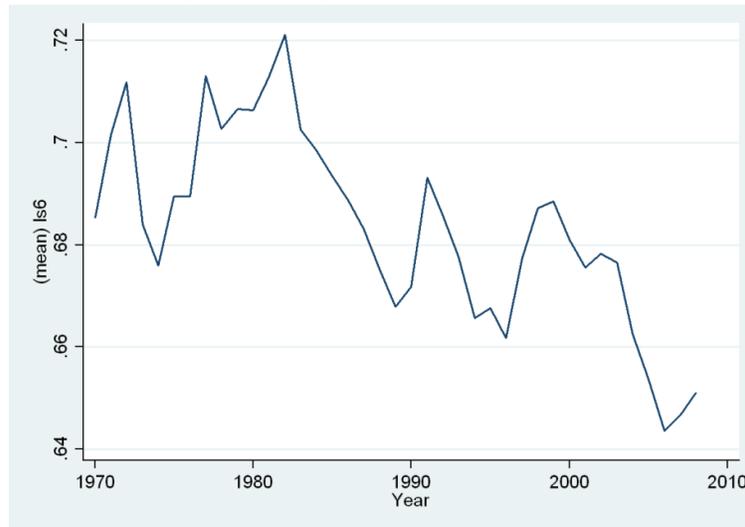
Source: Author's calculations. Please note: \* p < 0.05.

Focussing back on the behaviour of factor shares over time, there seems to be a general reduction in the labour share over the last few decades<sup>26</sup>. An overall moderate increase in the labour share in the mid-1970s has been followed by a stationary pattern in the late 1970s and

<sup>26</sup> The same can be seen if we analyse median levels instead of average levels, see Appendix K.

early 1980s. Subsequently, labour shares fall considerably. The relative stability of factor shares is contradicted, in accordance with recent country-case and cross-country studies (EC, 2007; Glyn, 2009; ILO, 2008; IMF, 2007; Ryan, 1996; Wolff, 2009).

**Figure2. Average values of LS6 over time**



Source: Author's calculations.

Figure2 plots the trend of LS6's averages over time. The well-established belief of long-run constancy is proven inaccurate and the overall trend in the last four decades seems to be decreasing. The share appears to increase in the 1970s and early 1980s (with the only exceptions of 1973-1974 and 1978, when it dropped noticeably) and then decrease considerably from the mid-1980s onwards (with the exceptions of 1990-1991 and 1997-1998, when it significantly increased), in the period of increased liberalisation and integration of the markets around the world (Harrison, 2002; IMF, 2007). All the sudden inversions in the trend seem to occur during years of financial crises and periods of instability (Diwan, 2001).

What happens to the world as a whole does not necessarily happen to a single country considered alone. Appendix E shows a summary of alternative measures of labour share. Previous studies' calculations of labour shares (Bentolila & Saint-Paul, 2003; Bernanke & Gürkaynak, 2001; EC, 2007; Gollin, 2002) are compared with the results obtained here. In all the four previous studies, a measure similar to LS5 had been computed. The author's computations seem to generate slightly higher values. However, the comparison among the five different studies is very difficult, if not impossible. Firstly, the measures have not been constructed in the same way, from the same source of data<sup>27</sup>. Secondly, not all the studies

<sup>27</sup> Only Bernanke and Gürkaynak (2001) and Gollin (2002) use the UN National Accounts Statistics, generating samples that, even if smaller than mine, include both developed and developing countries. Bentolila and Saint-Paul (2003), instead,

have generated a panel dataset<sup>28</sup>. Thirdly, the time-series in the panel datasets are different<sup>29</sup>. Finally, the measure computed as the denominator of the share is also different for all the studies. Therefore, the discussion is now concentrated only on the author's calculations.

Appendix F shows the evolution over time of all the measures of labour share in each of the countries in the dataset. Appendix G, instead, considers only my preferred measure of labour share, LS6, and summarises the main characteristics of the patterns<sup>30</sup>. It is evident that labour shares vary substantially over time and across countries.

As previously mentioned, even if the different measures tend to behave in a similar way over time, they do not always do so. Moreover, all the five adjustments substantially pull up the value of the unadjusted labour share. They are in a few cases – for example, in Thailand – considerable (average LS6 is equal to 0.82, while average LS1 is 0.27).

Labour share appears to be very low in oil-producing countries, their incomes being mainly dependent on the endowments of natural resources. For example, in both United Arab Emirates and Qatar the labour share oscillates around its very low average value of 0.29-0.30. Moreover, in the case of Qatar, the labour share is declining, as also in a great number of countries (in Botswana, for example, LS6 has decreased from its maximum value of 0.69 in 1982 to its minimum value of 0.32 in 2001). Appendix H summarises labour share averages in each country by decades, and it shows the trends of the variation. In the 1970s and 1980s, hardly any country experienced very high variations in their labour shares. However, the overall trend has considerably changed over time, and in particular in the decade 2000-2009, the share of labour has consistently declined in the majority of the countries.

#### *4.2 Are factor shares related to economic development?*

Recent literature on factor shares show evidence of a positive relationship between labour share and development (Ortega & Rodriguez, 2006). Labour share is substantially larger in industrialised countries than in developing countries (Maarek, 2010).

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drawing on the OECD International Sectoral Data Base (ISDB) 1996, concentrate their attention only on 15 developed countries, and EC (2007), employing the Commission's AMECO database, examines only the EU-27, the United States of America and Japan.

<sup>28</sup> Bernanke and Gürkaynak (2001) and EC (2007) constructed an unbalanced panel dataset, and then computed the averages of the measures over the entire period of time. Gollin (2002) and Bentolila and Saint-Paul (2003), instead, considered only the cross-country dimension, analysing the data at a particular point in time.

<sup>29</sup> Bernanke and Gürkaynak (2001) consider the period 1980-1995, EC (2007) the period 1960-2006 and I consider the period 1970-2009.

<sup>30</sup> The dataset is very heterogeneous. United Arab Emirates (0.29) and Qatar (0.30) hold the lowest mean values of LS6, while Armenia (0.92) and Marshall Islands (0.92) the highest ones. Data on Czech Republic show very little variation, with standard deviation equal to 0.015 and coefficient of variation equal to 2.16. Data on Morocco, instead, vary a lot, with standard deviation equal to 0.19 and coefficient of variation equal to 24.33.

This seems to be true also for our regional statistics. Table4 summarises the average values for the six measures over the entire period of time among the different macro-regions in the world. Labour share tends to be lower in countries in Africa and Asia than in Europe and Oceania.

**Table4. Labour share averages, by region.**

Region	LS1	LS2	LS3	LS4	LS5	LS6
Africa	0.378189	0.581569	0.721578	0.566072	0.648177	0.584565
Americas	0.493182	0.628709	0.686564	0.617823	0.713061	0.674511
Asia	0.422957	0.610271	0.703465	0.594399	0.65856	0.635606
Europe	0.632325	0.734238	0.781994	0.746332	0.766167	0.719109
Oceania	0.572295	0.739243	0.784612	0.755000	0.799227	0.764610

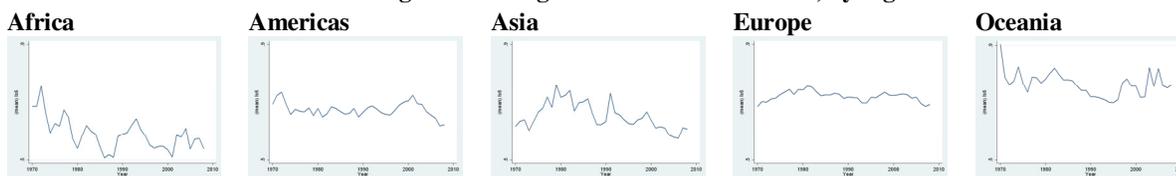
Source: Author's calculations.

If, for example, we compare the averages in Africa with the averages in Europe, it is clear that the former are smaller than the latter in all the six different measurements: in particular, the difference tends to be considerably large for the unadjusted labour share (LS1), which is 0.38 in Africa compared to 0.63 in Europe. However, once we adjust for self-employment income, the gap is notably reduced (the average values of LS3, for example, are 0.72 and 0.78 respectively). Therefore, one possible reason for this is the greater presence of the self-employed in the developing world (Gollin, 2002): once we properly account for their income in the computation of the labour share, its value will considerably increase. The greater the weight we assign to it, the greater will be the value of the share in developing countries.

Moreover, it also seems that industrialised countries show less variation, while developing countries have more scattered values (Daudey & Garcia-Penalosa, 2007; Gollin, 2002): the standard deviation of LS6 is equal to 0.20 for Asian observations, while it is only 0.09 in Europe.

Figure3 shows the behaviour of LS6 over time and in different regions. The share of labour appears to fall in the majority of the regions. However, in Oceania and in Europe it is always higher than in Africa, where it is also noticeably declining over time, producing very large fluctuations from one year to the other. In Europe and in Asia the pattern is similar: first increasing and then decreasing. However, fluctuations in Asia are quite large, whereas in Europe they are very small. One explanation for this phenomenon may be a more accurate measurement of the aggregate variables.

**Figure3. Average values of LS6 over time, by region.**



Source: Author's calculations.

However, if we consider a classification based on per-capita income, the relationship between economic development and labour share seems not to be straightforward. The World Bank income classification divides the world into four different groups of economies, according to their 2009 GNI per capita, calculated using the World Bank Atlas method:

1. Low-income economies (\$995 or less);
2. Lower-middle-income economies (\$996 - \$3,945);
3. Upper-middle-income economies (\$3,946 - \$12,195);
4. High-income economies (\$12,196 or more).

Two main aggregate categories have been constructed out of the World Bank classification: ‘developing’ countries (which are represented by all the low- and middle-income economies) and ‘developed’ countries (which are all the high income economies). The dataset seems to possess quite balanced information: 1529 observations (53.46% of the total) on developing countries and 1331 (46.54%) on developed ones. For all six measurements (see Table5), the labour share is higher in high-income economies compared to low- and middle- income economies. However, while in the case of LS1 the difference is considerable, it seems to be much less significant for LS5 and LS6.

**Table5. Labour share averages, by level of development.**

Level of development	LS1	LS2	LS3	LS4	LS5	LS6
Developing country	.4197800	.5897059	.6810547	.5721987	.7014829	.6672419
Developed country	.6092898	.7433011	.7871657	.7568974	.7362629	.6883191

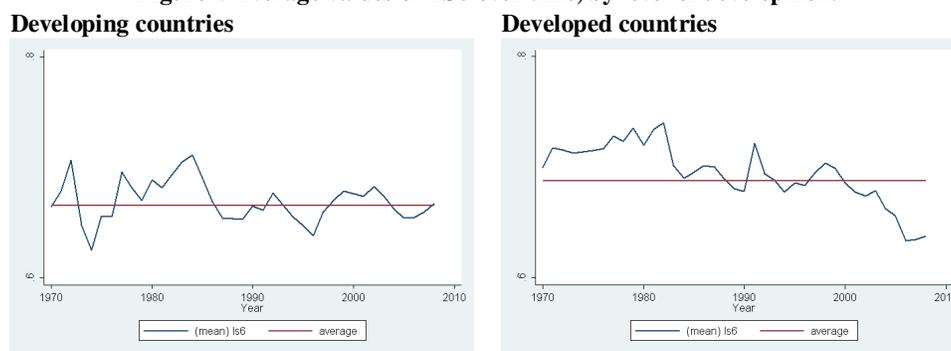
*Source:* Author’s calculations.

Furthermore, the coefficients of correlation between the six variables of labour share and the dummy variable ‘development’, coded as 1 in the case of a developed country and 0 otherwise, although positive and significant for all the measures, are very high for LS1-LS4 (varying from 0.43 to 0.65) and very low for LS5 (0.11) and LS6 (0.07)<sup>31</sup>. In particular, with yearly data, the correlation between LS6 and ‘development’ is hardly ever significant, very low, especially in recent years, and sometimes even negative.

Figure4 describes the trend of LS6’s average values over time and shows how the share has been evolving in developing and developed countries. In the former, it is oscillating significantly around the average value of 0.67, but remaining constant overall. In the latter, instead, it is reducing significantly over the last four decades, being greatly above the average in the 1970s-early 1980s and considerably below the average in the 2000s.

<sup>31</sup> See Appendix J for year-by-year values.

**Figure4. Average values of LS6 over time, by level of development**



Source: Author's calculations.

The situation becomes even more complicated when analysing the relationship between the labour shares and each of the four income groups (see Table7). Low-income economies exhibit the lowest average level of LS1 (0.31), but they have the highest average levels of LS3 (0.86) and LS6 (0.75). Excluding LS1, for the other 5 measurements, upper-middle-income economies are those with the lowest average levels of labour share. Once again, as soon as we adjust the measurements for self-employment, the relationship between per capita income and labour share is not any more straightforward.

**Table7. Labour share averages, by income levels.**

Income classification	LS1	LS2	LS3	LS4	LS5	LS6
Low-income	.3145655	.6594176	.8584000	.6743451	.7634600	.7529100
Lower-middle-income	.4114438	.6194493	.7148451	.5967563	.7751935	.7465508
Upper-middle-income	.4517763	.5497143	.6100832	.5275776	.6683812	.6331325
High-income	.6092898	.7433011	.7871657	.7568974	.7362629	.6883191

Source: Author's calculations.

These results, in contradiction with the aforementioned recent literature, seem puzzling. However, it is necessary to remember that previous studies (Daudey & Garcia-Penalosa, 2007; Maarek, 2010) have analysed only the manufacturing sector and have not used any adjustment to the measurement. Our analysis shows that the unadjusted measure underestimates the labour share, especially in developing countries where self-employment is predominant; therefore, adjusting for self-employment income may help us understand the actual behaviour of factor shares.

Another possible explanation may be given by the fact that we hardly possess any information on LDCs in the case of LS6, while in the case of LS1 there are data on 19 LDCs: their elimination from the dataset may have biased the results.

Moreover, because the averages have been computed over the entire time-series and being the panel strongly unbalanced, it may be possible that one (or more) extremely long country time-series has biased the results. However, having also tried averaging out LS1-LS6 for

shorter time-series and having obtained very similar results (data not shown), I have concluded that this cannot be a possible motivation.

Finally, it is also plausible that the data are particularly skewed and the averages are very different from the medians. Appendix K shows the values of labour shares medians, by levels of development. The results are considerably similar, so this further possible explanation needs to be ruled out.

Ultimately, in order to capture more evidence on the relationship between labour shares and the levels of economic development, a continuous variable on per capita income has been used: real GDP per capita at constant prices<sup>32</sup>, collected from the Penn World Tables 7.0<sup>33</sup>. Appendix L presents year-by-year bivariate scatters which plot together labour share (only LS1 and LS6) and the natural logarithm of real GDP per capita, and overlay on the plot the linear prediction line.

If we consider LS6, no particular pattern can be derived. Moreover, the relationship appears to exhibit one reversal in its trend over time: it is positive until 1982, and then it becomes negative. Also the correlation coefficients (see Table8) are significant, but very low and negative.

**Table8. Labour share and real GDP pro capita. Correlations**

	GDP per capita	Ln(GDP per capita)
<b>LS1</b>	0.4689*	0.5803*
<b>LS2</b>	0.3873*	0.3981*
<b>LS3</b>	0.1610*	0.0905*
<b>LS4</b>	0.3834*	0.3856*
<b>LS5</b>	-0.0698*	-0.0056
<b>LS6</b>	-0.1236*	-0.0675*

*Source:* Author's calculations. Please note: \* p < 0.05.

The situation is instead very different for the unadjusted labour share, LS1, which seems to be positively related to real GDP per capita, its correlation coefficient being equal to 0.47. This positive relationship is clearly influenced by the fact that the labour share in developing and low-income countries is badly understated because of a higher proliferation of self-employment (Gollin, 2002). A wrong estimation of the labour share may be as well the reason why previous studies found a positive linear relationship between income and labour

<sup>32</sup> I use the real GDP derived using the Laspeyres index, which measures the change of price in identical 'baskets' of goods and services. The weights are related to the relative importance of the data in the index and determined in the base year.

<sup>33</sup> Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 7.0, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, March 2011. Available to download at <http://pwt.econ.upenn.edu/> (last accessed on 5 April 2011).

share. In conclusion, it is not straightforward to declare that factor shares are directly related to the stages of economic development.

## **5. Conclusions and further developments**

The study of functional income distribution is severely hampered by measurement problems. In particular, many issues arise from the treatment of self-employment income. By suggesting an improvement to the usual approaches of measurement, this study provides an argument on the importance of the quality of the measure and shows that the unadjusted measure of labour share is flawed.

An extensive dataset of the labour share across 89 countries - both developing and developed - has been compiled, for all or part of the period 1970-2009. Compared to other five measurements previously used in the literature, the measure suggested in this study is not redundant and seems to retain very important information.

In accordance with recent literature on factor shares, this analysis shows that there is a considerable variation. In the last couple of decades, the labour share has been oscillating considerably across countries and generally declining over time, especially in industrialised countries.

Moreover, this study helps understand the relationship between levels of economic development and the labour share. As soon as we adjust the measurement for self-employment income, the relationship between per capita income and labour share is not any more straightforward.

In conclusion, the dataset provides very useful information for further research. The primary purpose of this paper is purely descriptive. However, it also aims at shedding some light on a topic which has been put aside from the agenda of economic research for a long time. Although there is no agreed theoretical framework on functional distribution of income, a few possible explanations can be used to describe its determinants. Preliminary regressions suggest that the labour share is significantly influenced by: international trade and globalisation, technological change, level of economic development and structural change, education and human capital, and also the strength of the regulations in the labour market. A more robust investigation is under process.

## References

- Askenazy, P. (2003). Partage de la valeur ajoutée et rentabilité du capital en France et aux États-Unis: une réévaluation. *Economie et Statistique*, 363-364-365, 167-189.
- Atkinson, A. B. (1983). *The Economics of Inequality*. Oxford: Clarendon Press.
- Atkinson, A. B. (2009). Factor shares: the principal problem of political economy? *Oxford Review of Economic Policy*, 25, 3-16.
- Azmat, G., Manning, A., & Reenen, J. V. (2007). Privatization, Entry Regulation and the Decline of Labor's Share of GDP: A Cross-Country Analysis of the Network Industries. *CEP Discussion Paper*, 806: Centre for Economic Performance.
- Bentolila, S., & Saint-Paul, G. (2003). Explaining Movements in the Labor Share. *Contributions to Macroeconomics*, 3.
- Bernanke, B. S., & Gürkaynak, R. S. (2001). Is Growth Exogenous? Taking Mankiw, Romer, and Weil Seriously. *NBER Macroeconomics Annual*, 16.
- Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour Economics*, 7, 471-505.
- Bond, S., & Harding, R. (2011). \$740bn pay gap threat to US recovery. *Financial Times*, 15 Dec 2011, 1.
- Checchi, D., & Garcia-Penalosa, C. (2009). Labour Market Institutions and the Personal Distribution of Income in the OECD. *Economica*, 1-38.
- Daudey, E., & Garcia-Penalosa, C. (2007). The Personal and the Factor Distributions of Income in a Cross-Section of Countries. *Journal of Development Studies*, 43, 812-829.
- Diwan, I. (2001). Debt as Sweat: Labor, financial crises, and the globalization of capital, Washington DC: The World Bank.
- EC. (2007). The Labour Income Share in the European Union. *Employment in Europe 2007, Directorate-General for Employment Social Affairs and Equal Opportunities, Brussels*.
- Ellis, L., & Smith, K. (2007). The global upward trend in the profit share. *BIS Working Papers*, n. 231.
- Feinstein, C. H. (1968). Changes in the Distribution of National Income in the United Kingdom Since 1860. In J. Marchal & B. Ducros (Eds.), *The Distribution of National Income*. London: Macmillan.
- Freeman, R. A. (2011). Accounting for the Self-Employed in Labour Share Estimates: The Case of the United States. *OECD Science, Technology and Industry Working Papers*, 2011/04, OECD Publishing.
- García-Verdú, R. (2005). Factor Shares from Household Survey Data. *Working Paper*, 2005-05: Banco de México.
- Glyn, A. (2009). Functional Distribution and Inequality. In W. Salverda, B. Nolan & T. M. Smeeding (Eds.), *Economic Inequality*. Oxford: Oxford University Press.
- Goldfarb, R. S., & Leonard, T. C. (2005). Inequality of What Among Whom?: Rival Conceptions of Distribution in the 20th Century. *Research in the History of Economic Thought and Methodology*, 23-A, 75-118.
- Gollin, D. (2002). Getting Income Shares Right. *The Journal of Political Economy*, 110, 458-474.
- Gomme, P., & Rupert, P. (2004). Measuring labor's share in income. *Policy Discussion Paper*: Federal Reserve Bank of Cleveland.
- Gottschalk, P., & Smeeding, T. M. (1997). Cross-National Comparisons of Earnings and Income Inequality. *Journal of Economic Literature*, 35, 633-687.
- Guscina, A. (2006). Effects of Globalization on Labor's Share in National Income. *IMF Working Paper*, 06/294: IMF.
- Harrison, A. E. (2002). Has Globalization Eroded Labor's Share? Some Cross-Country Evidence. *UC Berkeley and NBER*.
- Hartwig, J. (2006). On spurious differences in growth performance and on the misuse of National Accounts data for governance purposes. *Review of International Political Economy*, 13, 535-558.
- Heston, A., Summers, R., & Aten, B. Penn World Table Version 7.0. Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, March 2011. Available to download at: <http://pwt.econ.upenn.edu/>.

- Hurst, E., Li, G., & Pugsley, B. (2010). Are Household Surveys Like Tax Forms: Evidence from Income Underreporting of the Self Employed. *NBER Working Paper No. 16527*.
- ILO. (1993). Fifteenth International Conference of Labour Statisticians, Report of the Conference, ICLS/15/D.6 (Rev. 1). Geneva: International Labour Office.
- ILO. (2002). Women and men in the informal economy: A statistical picture. Geneva: International Labour Office, Employment Sector.
- ILO. (2008). Income Inequalities in the Age of Financial Globalization. In *World of Work Report 2008*. Geneva: International Institute for Labour Studies.
- ILO LABORSTA Internet. Available to download at: <http://laborsta.ilo.org/>.
- IMF. (2007). The Globalization of Labor. In W. E. a. F. Surveys (Ed.), *World Economic Outlook. Spillovers and Cycles in the Global Economy*. Washington D.C.
- Jayadev, A. (2007). Capital account openness and the labour share of income. *Cambridge Journal of Economics*, 31, 423-443.
- Johnson, D. G. (1954). The Functional Distribution of Income in the United States, 1850-1952. *The Review of Economics and Statistics*, 36, 175-182.
- Kaldor, N. (1961). Capital Accumulation and Economic Growth. In Lutz (Ed.), *Theory of Capital*, London: Macmillan.
- Keynes, J. M. (1939). Relative Movements in Real Wages and Output. *Economic Journal*, 49, 917-49.
- Kravis, I. B. (1959). Relative Income Shares in Fact and Theory. *The American Economic Review*, 49, 917-949.
- Krueger, A. B. (1999). Measuring Labor's Share. *The American Economic Review*, 89, 45-51.
- Kuznets, S. (1959). Quantitative Aspects of the Economic Growth of Nations: IV. Distribution of National Income by Factor Shares. *Economic Development and Cultural Change*, 7, 1-100.
- Lübker, M. (2007). Labour Shares, *Technical Brief No. 1*. Geneva: ILO, P. I. Department.
- Maarek, P. (2010). Labor share, Informal sector and Development. *GREQAM Working Paper*.
- OECD. (2000). *System of National Accounts, 1993. Glossary*. Paris: OECD.
- Ortega, D., & Rodriguez, F. (2006). Are Capital Shares Higher in Poor Countries? *Working Paper*, 2006-023: Wesleyan Economics.
- Ricardo, D. (1821). *On the Principles of Political Economy and Taxation*. London: John Murray.
- Rodrik, D. (1997). *Has Globalization Gone Too Far?* Washington D.C.: Institute for International Economics.
- Ryan, P. (1996). Factor Shares and Inequality in the UK. *Oxford Review of Economic Policy*, 12, 106-126.
- Smeeding, T. M., & Thompson, J. (2010). Inequality in the Distribution of Income from Labour and Income from Capital over the Recession. *31st General Conference of The International Association for Research in Income and Wealth*, St. Gallen, Switzerland, August 22-28, 2010.
- Solow, R. M. (1958). A Skeptical Note on the Constancy of Relative Shares. *American Economic Review*, 48, 618-631.
- UN, National Accounts Statistics. Available to download at: <http://data.un.org/>.
- Wolff, E. N. (2009). *Poverty and Income Distribution*: Wiley-Blackwell.
- Wolff, E. N., & Zacharias, A. (2007). Class Structure and Economic Inequality. *Working Paper 487*: Levy Economics Institute.
- Young, A. (1995). The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience. *The Quarterly Journal of Economics*, 110, 641-680.

## Appendix A

### Content of Table 2.3 (SNA 93) - United Nations National Accounts Statistics

#### Output, gross value added, and fixed assets by industries at current prices (income approach)

Item	SNA 93 Item Code
Output (at basic prices)	P.1
Less: Intermediate Consumption (at purchaser's prices)	P.2
Equals: Gross Value Added (at basic prices)	B.1g
Compensation of Employees	D.1
Taxes on Production and Imports, less Subsidies	D.2-D.3
Gross Operating Surplus	B.2g
Gross Mixed Income	B.3g
Less: Consumption of Fixed Capital	K.1
Net Operating Surplus	B.2n
Net Mixed Income	B.3n
Adjustment for FISIM (if FISIM is not distributed to uses)	P.119
Gross Capital Formation	P.5
Gross Fixed Capital Formation	P.51
Changes in Inventories	P.52
Acquisitions less Disposal of Valuables	P.53
Closing Stocks of Fixed Assets (produced assets)	AN.11
Employment (average, in 1000 persons)	

### Content of Table 4.1 (SNA 93), extracts - United Nations National Accounts Statistics

#### Total Economy (S.1, production approach)

Item	SNA 93 Item Code
Output (at basic prices)	P.1
Less: Financial Intermediation Services indirectly measured	P.119
Plus: Taxes less Subsidies on Products	D.21-D.31
Intermediate Consumption (at purchaser's prices)	P.2
Gross Domestic Product	B.1*g
Less: Consumption of Fixed Capital	K.1
Net Domestic Product	B.1*n
Compensation of employees	D.1
Taxes on Production and Imports, less Subsidies	D.2-D.3
Gross Operating Surplus	B.2g
Gross Mixed Income	B.3g
Property Income	D.4

*Source:* UN National Accounts Statistics tables. Available to download at: <http://data.un.org/>.  
Last accessed on 7 February 2011.

### Definitions

**Compensation of employees:** *“the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period”.*

**Mixed income:** *“the surplus or deficit accruing from production by unincorporated enterprises owned by households; it implicitly contains element of remuneration for work done by the owner, or other members of the household, that cannot be separately identified from the return to the owner as entrepreneur but it excludes the operating surplus coming from owned-occupied dwellings”.*

**Gross value added:** “the value of output less the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry or sector; gross value added is the source from which the primary incomes of the SNA are generated and is therefore carried forward into the primary distribution of income account”.

**Gross Domestic Product:** “Output-based gross domestic product is the sum of the gross values added of all resident producers at basic prices, plus all taxes less subsidies on products. Income-based gross domestic product is compensation of employees, plus taxes less subsidies on production and imports, plus gross mixed income, plus gross operating surplus”.

**Taxes on production and imports:** “consist of indirect taxes payable on goods and services when they are produced, delivered, sold, transferred or otherwise disposed of by their producers plus taxes and duties on imports that become payable when goods enter the economic territory by crossing the frontier or when services are delivered to resident units by non-resident units; they also include other taxes on production, which consist mainly of indirect taxes on the ownership or use of land, buildings or other assets used in production or on the labour employed, or compensation of employees paid”.

**Consumption of fixed capital:** “represents the reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage”.

Source: United Nations System of National Accounts 1993 Glossary (OECD, 2000). Available online at: <http://unstats.un.org/unsd/nationalaccount/glossary.asp>. Last accessed on 3 April 2011.

## Appendix B

### Content of Table 2.D –ILO Yearbooks of Labour Statistics on Total Employment by status in employment

International Classification of Status in Employment ICSE-1993<sup>34</sup>:

1. Employees;
2. Employers;
3. Own-account workers;
4. Members of producers' cooperatives;
5. Contributing family workers;
6. Workers not classifiable by status.

The groups are defined with reference to the distinction between *paid employment jobs*<sup>35</sup> and *self-employment jobs*<sup>36</sup>. The first two categories (employees and employers) are so identified: “Employees are all those workers who hold the type of job defined as “paid employment jobs”. Employers are those workers who, working on their own account or with one or a few partners, hold the type of job defined as a “self-employment job”, and, in this capacity, on a continuous basis have engaged one or more persons to work for them in their business as “employee(s)”” (ILO, 1993).

Source: LABORSTA Internet. Available to download at: <http://laborsta.ilo.org/>. Last accessed on 7 February 2011.

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<sup>34</sup> As defined by the resolution adopted in January 1993 at the 15<sup>th</sup> International Conference of Labour Statisticians (ILO, 1993).

<sup>35</sup> Defined as “those jobs where the incumbents hold explicit or implicit employment contracts which give them a basic remuneration which is not directly dependent upon the revenue of the unit for which they work” (ILO 1993).

<sup>36</sup> Defined as “those jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced” (ILO, 1993).

**Appendix C**  
**Availability of data for the computation of labour shares**

Country	Time series	Adjustments to the denominator of the share	Adjustments to the numerator of the share	
		Data on value added	Data on mixed income	Data on composition of the workforce
<b>Algeria</b>	1970-1978 and 1989-2003	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Argentina</b>	1993-2007	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Armenia</b>	1992-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Aruba</b>	1994-2002	Value added (unadjusted)	Gross mixed income	Total workforce, employees and employers
<b>Australia</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Austria</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Azerbaijan</b>	1994-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Bahamas</b>	1989-2006	Value added net of indirect taxes and consumption of fixed K	No	Total workforce and employees
<b>Bahrain</b>	1992-2009	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Barbados</b>	1974-1975	Value added net of consumption of fixed K	No	Total workforce, employees and employers
<b>Belarus</b>	1990-2009	Value added net of indirect taxes	Gross mixed income	No
<b>Belgium</b>	1975-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Benin</b>	1974-1978 and 1982-1999	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	No
<b>Bermuda</b>	1996-2008	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Bolivia (Plurinational State of)</b>	1970-2008	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Botswana</b>	1974-2001	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Brazil</b>	1992-2007	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>British Virgin Islands</b>	1970-1977, 1984-1987 and 1995-2007	Gross value added (unadjusted), Value added net of consumption of fixed K and Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Bulgaria</b>	1994-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Burkina Faso</b>	1979-1984 and 1999-2001	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Burundi</b>	1984-1988 and 2005-2006	Value added net of indirect taxes and consumption of fixed K and Value added net of indirect taxes	No	No

<b>Cameroon</b>	1974-2008	Value added net of indirect taxes	Gross mixed income	No
<b>Canada</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce and employees
<b>Cayman Islands</b>	1983-1991	Gross value added (unadjusted) and Value added net of consumption of fixed K	No	Total workforce, employees and employers
<b>Chad</b>	1975 and 1995-2001	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Chile</b>	1974-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>China</b>	1992-2007	Value added net of indirect taxes	No	No
<b>China Hong Kong Special Administrative Region</b>	1980-2007	Value added (unadjusted)	No	Total workforce, employees and employers
<b>China Macao Special Administrative Region</b>	1992-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Colombia</b>	1970-2007	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Cook Islands</b>	1995-2007	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Costa Rica</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Cote d'Ivoire</b>	1974-1979 and 1989-2000	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	No
<b>Croatia</b>	1997-2005	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Cuba</b>	1990-2008	Value added net of indirect taxes	No	Total workforce and employees
<b>Cyprus</b>	1996-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Czech Republic</b>	1992-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Denmark</b>	1970-2009	Value added net of indirect taxes and consumption of fixed K	No	Total workforce and employees
<b>Djibouti</b>	1990-1998	Value added net of indirect taxes	No	No
<b>Dominican Republic</b>	1991-2005	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Ecuador</b>	1970-1991	Value added net of indirect taxes	No	No
<b>Egypt</b>	1996-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Estonia</b>	1992-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Fiji</b>	1977-1989 and 1996-2001	Value added net of consumption of fixed K	No	Total workforce, employees and employers
<b>Finland</b>	1970-2009	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>France</b>	1970-2009	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Gabon</b>	1972-1978	Value added net of consumption of fixed K	No	Total workforce, employees and employers

<b>Georgia</b>	1998-2009	Value added net of indirect taxes and consumption of fixed K	Net mixed income	No
<b>Germany (before 1991, Federal Republic of Germany)</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Greece</b>	1995-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Guatemala</b>	2001-2007	Value added net of indirect taxes	Gross mixed income	No
<b>Honduras</b>	1992-2006	Value added net of indirect taxes and consumption of fixed K	Net mixed income	No
<b>Hungary</b>	1980-1989 and 1995-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Iceland</b>	1973-2005	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>India</b>	1970-2008	Value added net of consumption of fixed K	No	No
<b>Iran (Islamic Republic of)</b>	1994-2007	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Iraq</b>	1997-2007	Value added (unadjusted)	No	No
<b>Ireland</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Israel</b>	1995-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Italy</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Jamaica</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Japan</b>	1970-2007	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Jordan</b>	1970-207	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Kazakhstan</b>	1994-2009	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Kenya</b>	1970-2009	Value added (unadjusted) and Value added net of indirect taxes and consumption of fixed K	No	No
<b>Kuwait</b>	1992-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Kyrgyzstan</b>	1990-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Latvia</b>	1994-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Lebanon</b>	1997	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Lesotho</b>	1996-2008	Value added net of indirect taxes	Gross mixed income	No
<b>Libyan Arab Jamahiriya</b>	1971-1979	Value added net of consumption of fixed K	No	No
<b>Liechtenstein</b>	1998-2007	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Lithuania</b>	1995-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Luxembourg</b>	1970-2008	Value added (unadjusted) and Value added net of indirect taxes and consumption of fixed K	No	No

<b>Malaysia</b>	1970-1973, 1978 and 1983	Value added net of consumption of fixed K	No	Total workforce, employees and employers
<b>Malta</b>	1973-2008	Value added net of consumption of fixed K	No	Total workforce, employees and employers
<b>Marshall Islands</b>	1997-2008	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Mauritania</b>	2001 and 2005-2006	Value added net of indirect taxes	No	No
<b>Mauritius</b>	1971-2007	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Mexico</b>	1980-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Micronesia (Federated States of)</b>	1995-2008	Value added net of indirect taxes	Gross mixed income	No
<b>Monaco</b>	2005-2007	Value added net of indirect taxes	No	No
<b>Mongolia</b>	1995-2008	Value added net of consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Morocco</b>	1998-2007	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Mozambique</b>	1996-2008	Value added net of indirect taxes	Net mixed income	No
<b>Namibia</b>	1989-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Netherlands</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Netherlands Antilles</b>	1992-2006	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>New Zealand</b>	1971-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Nicaragua</b>	1994-2005	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Niger</b>	1975-1977 and 1995-2009	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	No
<b>Nigeria</b>	1981-2008	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Norway</b>	1974-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Oman</b>	1988-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Panama</b>	1990-2008	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Papua New Guinea</b>	1970-1991 and 1997-2008	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Paraguay</b>	1994-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Peru</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Philippines</b>	1992-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Poland</b>	1991-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Portugal</b>	1977-2009	Value added net of indirect taxes and Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers

<b>Qatar</b>	1995-2006	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Republic of Korea</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Republic of Moldova</b>	1989-2008	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Romania</b>	1989-2007	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Russian Federation</b>	1989-2008	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Rwanda</b>	1975-1989	Value added net of indirect taxes and consumption of fixed K	No	No
<b>San Marino</b>	1997-2006	Value added net of indirect taxes	No	Total workforce and employees
<b>Sao Tome and Principe</b>	1974	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Saudi Arabia</b>	1995-2004	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Senegal</b>	1996-2008	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Seychelles</b>	1976-1996	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Sierra Leone</b>	1984-1990	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Singapore</b>	1996-2009	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Slovakia</b>	1993-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Slovenia</b>	1995-2009	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Solomon Islands</b>	1984-1986	Value added net of consumption of fixed K	No	No
<b>South Africa</b>	1970-2009	Value added net of indirect taxes	No	Total workforce, employees and employers
<b>Spain</b>	1980-2008	Value added (unadjusted) and Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Sri Lanka</b>	1983-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Sudan</b>	1972, 1978-1983 and 2004-2006	Value added net of indirect taxes and consumption of fixed K	No	No
<b>Swaziland</b>	1980-1987	Value added net of consumption of fixed K	No	No
<b>Sweden</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce, employees and employers
<b>Switzerland</b>	1997-2007	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Tajikistan</b>	2000-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	No
<b>Thailand</b>	1970-2008	Value added (unadjusted)	No	Total workforce, employees and employers
<b>The former Yugoslav Republic of Macedonia</b>	1997-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>Togo</b>	1971	Value added (unadjusted)	No	No
<b>Trinidad and Tobago</b>	1970-2009	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers

<b>Tunisia</b>	1992-2008	Value added net of consumption of fixed K	No	Total workforce, employees and employers
<b>Turkey</b>	1987-2006	Value added (unadjusted)	No	Total workforce, employees and employers
<b>Ukraine</b>	1989-2009	Value added net of indirect taxes and consumption of fixed K	No	Total workforce and employees
<b>United Arab Emirates</b>	1983-1990 and 2001-2008	Value added net of indirect taxes and consumption of fixed K	No	Total workforce, employees and employers
<b>United Kingdom of Great Britain and Northern Ireland</b>	1970-2008	Value added net of consumption of fixed K and Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce and employees
<b>United Republic of Tanzania</b>	1994-2007	Value added (unadjusted) and Value added net of consumption of fixed K	No	No
<b>United States of America</b>	1970-2008	Value added net of indirect taxes and consumption of fixed K	Gross mixed income	Total workforce and employees
<b>Uruguay</b>	1997-2005	Value added net of indirect taxes	Gross mixed income	Total workforce, employees and employers
<b>Vanuatu</b>	2001-2007	Value added net of indirect taxes	No	No
<b>Venezuela (Bolivarian Republic of)</b>	1973-2006	Value added net of indirect taxes and consumption of fixed K	Net mixed income	Total workforce, employees and employers
<b>Yemen</b>	1972-1982	Value added (unadjusted)	No	Total workforce, employees and employers
<b>Zimbabwe</b>	1970-1990	Value added (unadjusted)	No	No

Source: UN National Accounts Statistics tables. Available to download at: <http://data.un.org/>. Last accessed on 7 February 2011.  
LABORSTA Internet. Available to download at: <http://laborsta.ilo.org/>. Last accessed on 7 February 2011.

## Appendix D

### LS1. Representativeness of the sample

Sample/ world	All	Africa	Asia	Americas	Europe	Oceania
<b>Number of countries in the sample/number of countries in the world</b>	141/240	33/57	32/50	29/55	38/53	9/25
<b>Percent of countries</b>	58.75%	57.89%	64%	52.72%	71.70%	36%
<b>Percent of total 2010 population</b>	81.69%	67.36%	78.71%	97.49%	96.28%	96.52%

### LS6. Representativeness of the sample

Sample/ world	All	Africa	Asia	Americas	Europe	Oceania
<b>Number of countries in the sample/number of countries in the world</b>	89/240	10/57	24/50	21/55	30/53	4/25
<b>Percent of countries</b>	37.08%	17.54%	48%	38.18%	56.60%	16%
<b>Percent of total 2010 population</b>	28.91%	21.17%	15.22%	55.49%	80.89%	75.29%

Source: Author's calculations

**Appendix E**  
Alternative measures of labour share

Country	Gollin <sup>12</sup> (cross-country)				Bernanke and Gürkaynak <sup>3</sup> (1980-1995)				EC <sup>4</sup> (1960- 2006)	Bentolila and Saint-Paul <sup>5</sup> (cross-country)			Author's calculations <sup>6</sup>					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	LS1	LS2	LS3	LS4	LS5	LS6
Algeria					.47		.61	.63					.41				.67	.62
Argentina													.37	.48	.53	.44	.52	.49
Armenia													.54				.93	.92
Aruba													.64	.70	.71	.70	.69	.65
Australia	.50	.72	.67	.68 <sup>^</sup>	.57	.68	.66	.68		.65	.66	.63	.68	.76	.80	.77	.81	.77
Austria					.61		.70	.71	.66				.70	.78	.83	.80	.82	.77
Azerbaijan													.25				.48	.45
Bahamas													.54				.63	
Bahrain													.40					
Barbados													.71				.82	.81
Belarus	.42	.55	.51										.54	.62	.65	.61		
Belgium	.55	.79	.74	.74 <sup>o</sup>	.60	.74	.71	.73	.61	.62	.72	.64	.63	.78	.82	.78	.74	.71
Benin													.23	.67	.91	.68		
Bermuda													.65					
Bolivia (Plurinational State of)	.26	.83	.63	.48 <sup>†</sup>	.37			.67					.40				.77	.75
Botswana	.30	.37	.34	.48 <sup>†</sup>	.39	.45							.40	.34	.35	.34	.55	.49
Brazil													.52	.60	.64	.60	.80	.77
British Virgin Islands													.51				.59	.55
Bulgaria									.51 <sup>-</sup>				.46	.57	.63	.56	.55	.52
Burkina Faso													.27					
Burundi	.20	.91	.73		.22	.75							.26					
Cameroon													.27	.63	.80	.59		
Canada					.62		.68	.69		.67	.62	.65	.66	.71	.74	.71	.77	
Cayman Islands													.62				.69	.62
Chad													.21					
Chile					.42		.59	.62					.48	.55	.58	.54	.68	.66
China													.62					
China Hong Kong Special Administrative Region					.51			.57					.50				.57	.54
China Macao Special Administrative Region													.36				.40	.39
Colombia					.45			.65					.41	.58	.68	.55	.64	.62
Cook Islands													.70					







<sup>2</sup>Gollin's (2002) calculations:

- (1) Unadjusted labour share (comparable to LS1):  $\text{employee compensation} / \text{GDP} - \text{indirect taxes}$
- (2) OSPUE entirely incorporated into labour income (comparable to LS3):  $\text{employee compensation} + \text{mixed income} / \text{GDP} - \text{indirect taxes}$
- (3) Gollin's adjustment for OSPUE (comparable to LS4):  $\text{employee compensation} / \text{GDP} - \text{indirect taxes} - \text{mixed income}$
- (4) Gollin's labour force correction (comparable to LS5):  $[(\text{employee compensation} - \text{number of employees}) * \text{total workforce} / \text{GDP}]$

<sup>3</sup>Bernanke and Gürkaynak's (2001) calculations:

- (5) Unadjusted labour share (comparable to LS1):  $\text{employee compensation} / \text{GDP} - \text{indirect taxes}$
- (6) Gollin's adjustment for OSPUE (comparable to LS4):  $\text{corporate employee compensation} / \text{GDP} - \text{indirect taxes} - \text{OSPUE}$
- (7) Bernanke's adjustment for OSPUE
- (8) Labour force correction (comparable to LS5):  $\text{corporate employee compensation} / \text{corporate share of labour force} * (\text{GDP} - \text{indirect taxes})$

<sup>4</sup>EC's (2007) calculations:

- (9) Labour force adjustment (comparable to LS5):  $[(\text{compensation of employees} / \text{number of employees}) * \text{total employment}] / \text{gross domestic employment at market price}$

<sup>5</sup>Bentolila and Saint-Paul's (2003) calculations:

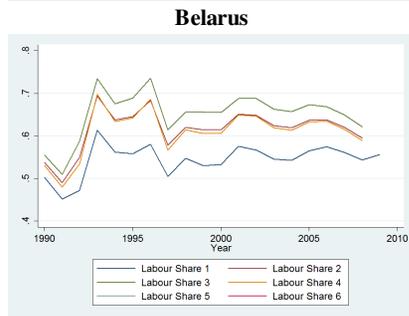
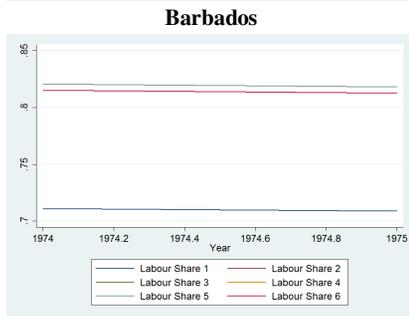
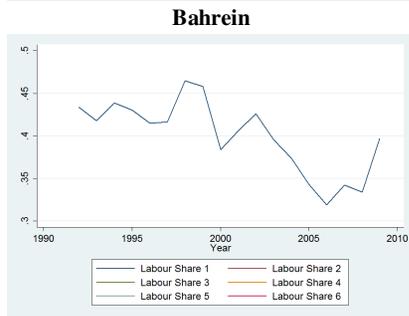
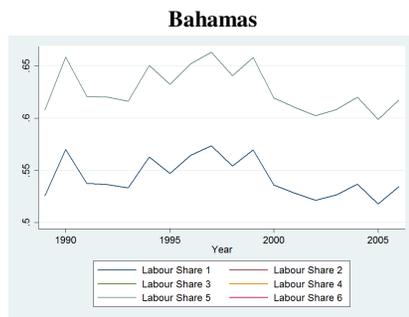
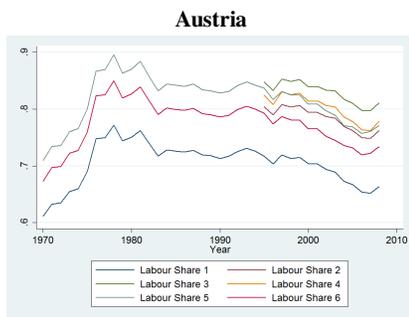
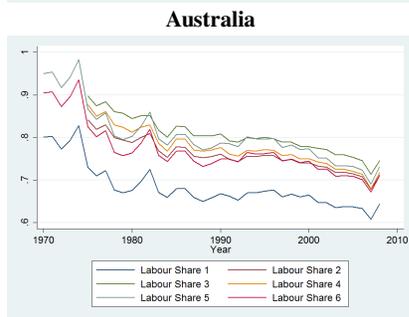
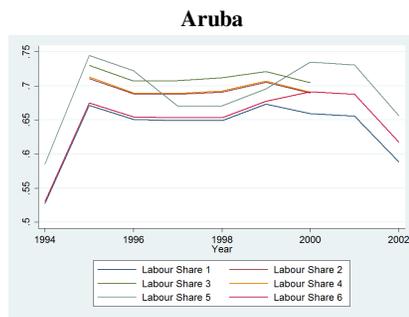
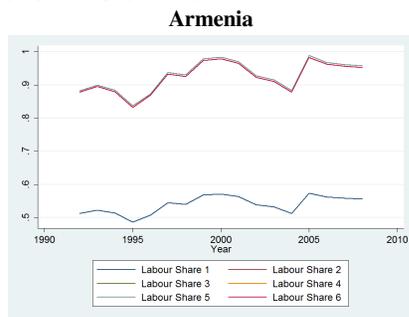
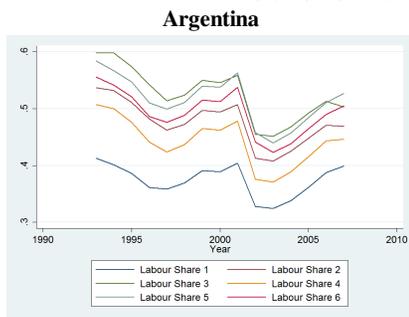
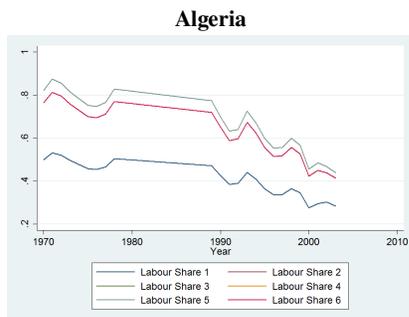
- (10) Labour force adjustment (comparable to LS5):  $\text{compensation of employees} * (\text{total employment} / \text{number of employees}) / \text{GDP} - \text{net indirect taxes, year 1970}$
- (11) Labour force adjustment (comparable to LS5), year 1980
- (12) Labour force adjustment (comparable to LS5), year 1990

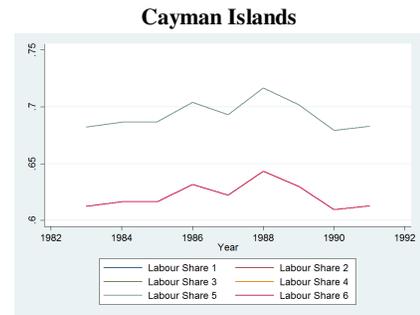
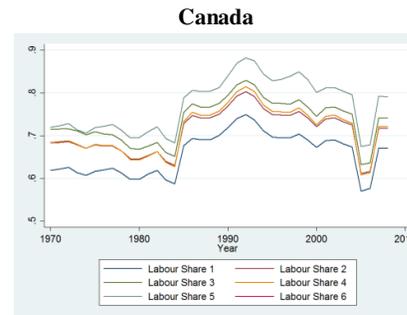
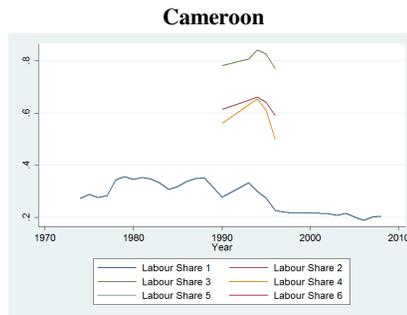
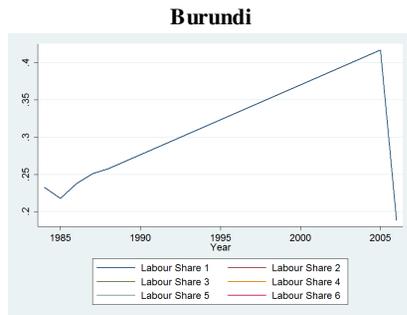
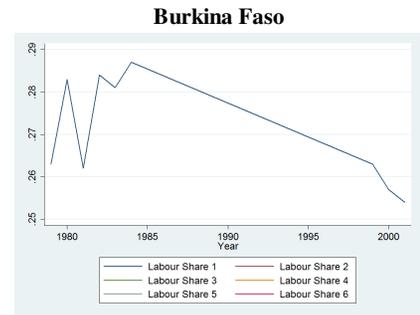
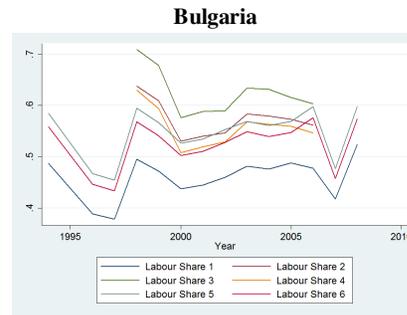
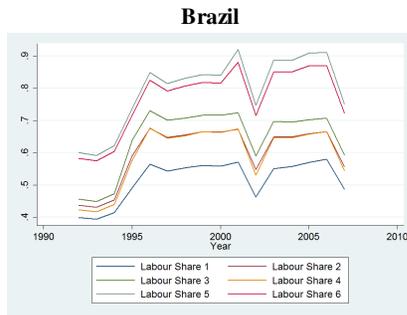
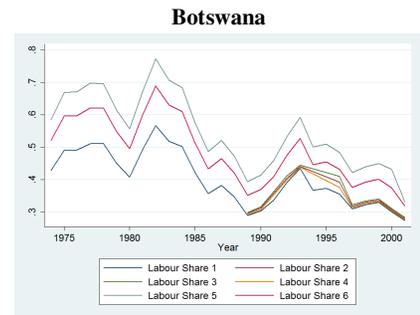
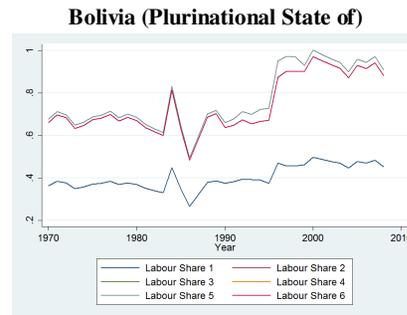
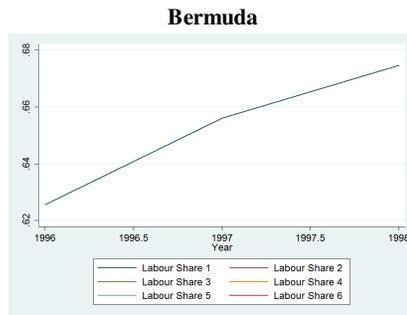
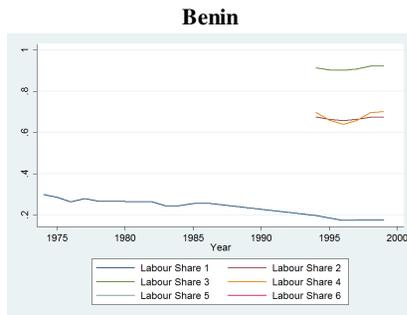
<sup>6</sup>The data presented here are averages of labour share.

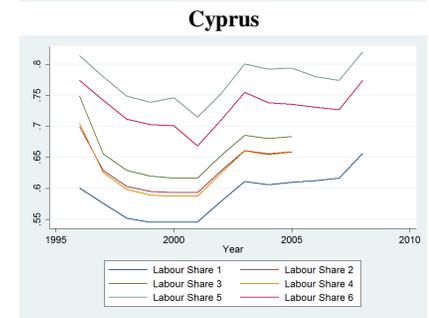
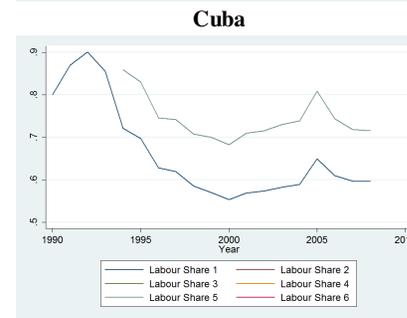
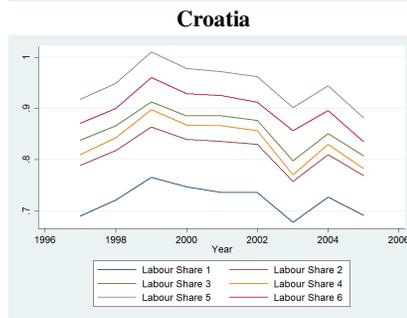
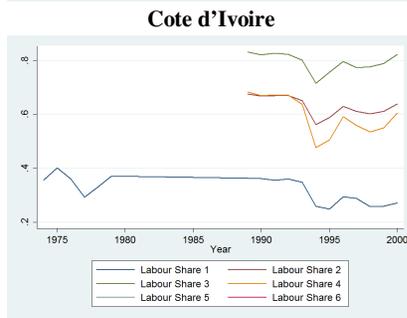
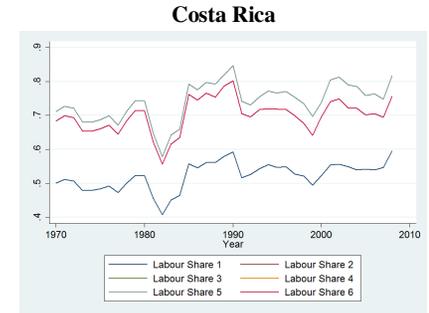
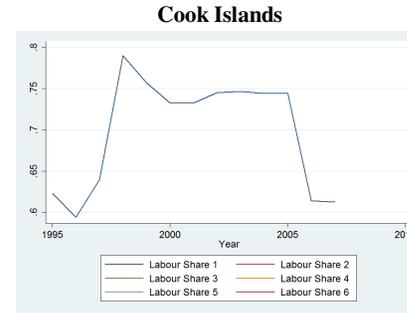
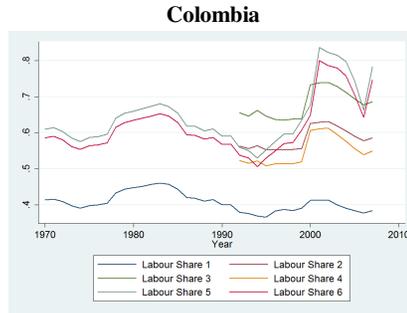
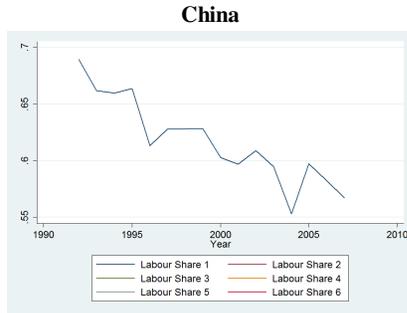
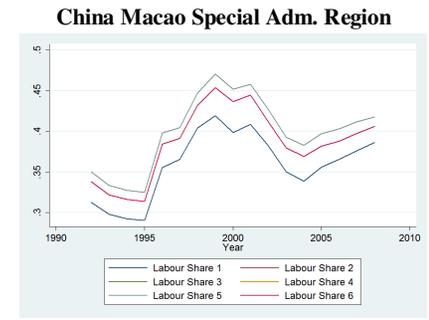
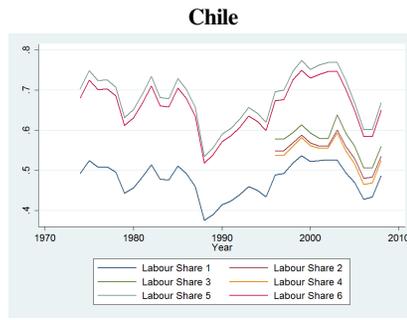
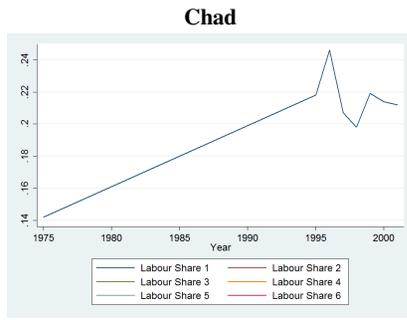
<sup>o</sup> Data on employee/workforce ratio pertain to 1990. <sup>†</sup> Data on employee/workforce ratio pertain to 1991. <sup>^</sup> Data on employee/workforce ratio pertain to 1992.

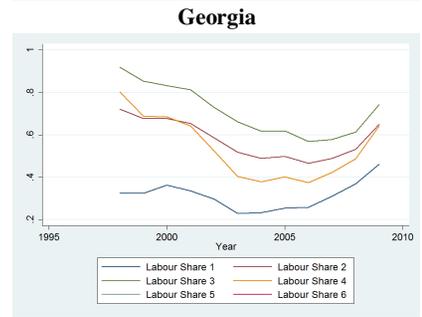
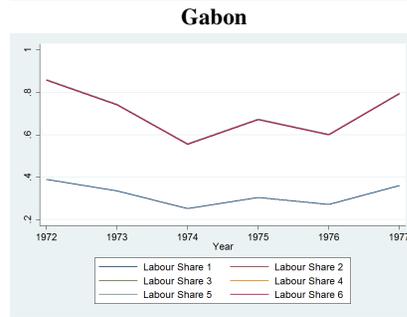
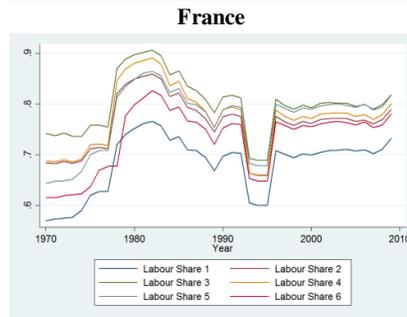
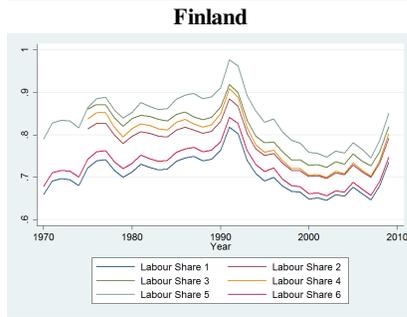
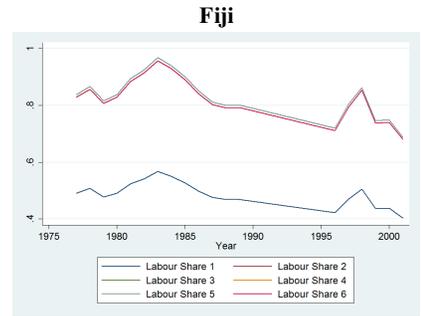
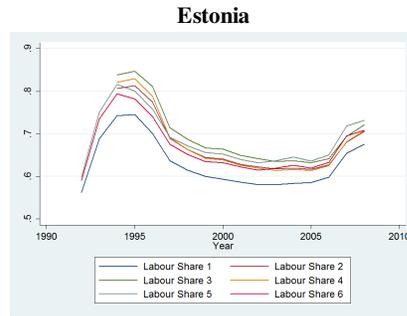
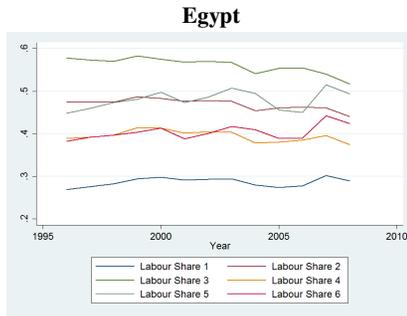
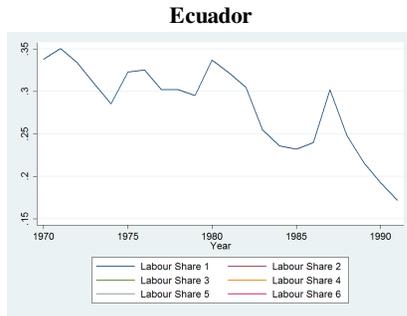
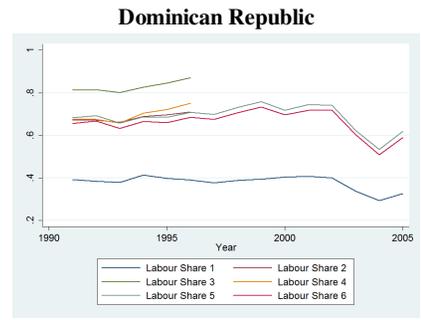
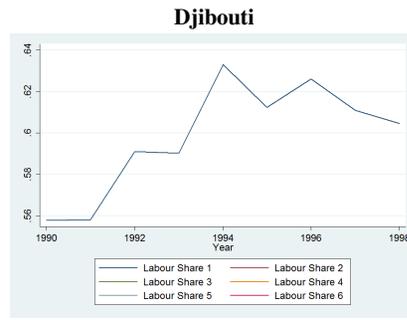
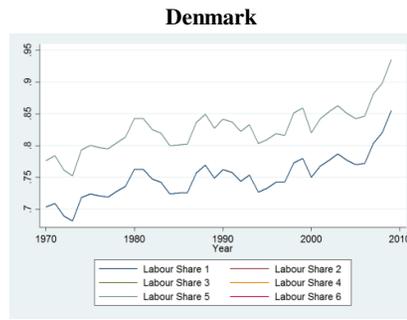
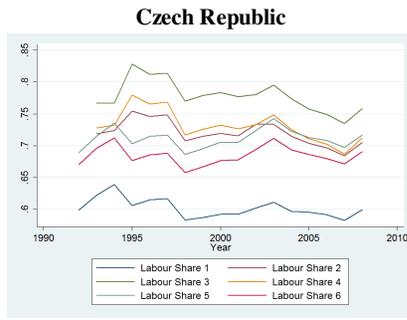
\* Data pertain to 1990-2006. \* Data pertain to 1992-2006. \* Data pertain to 1993-2006. + Data pertain to 1994-2006. - Data pertain to 1995-2006.

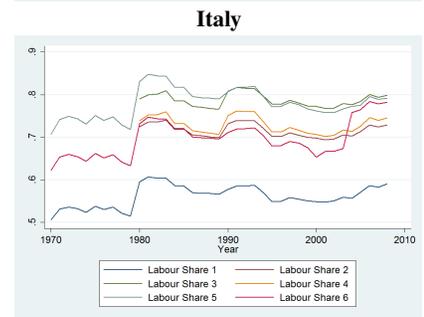
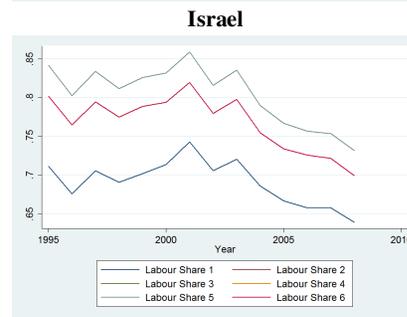
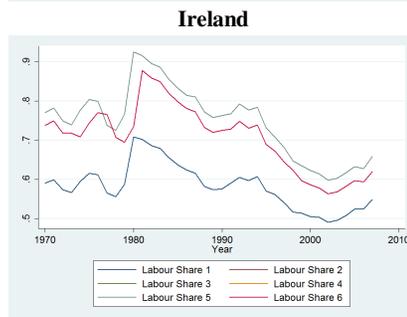
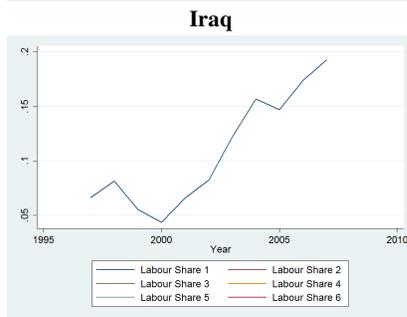
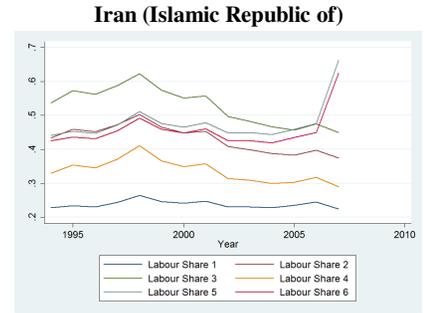
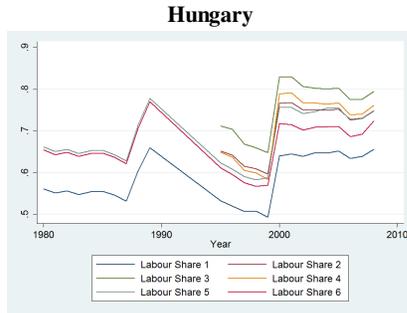
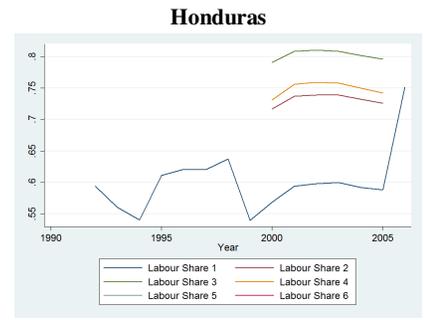
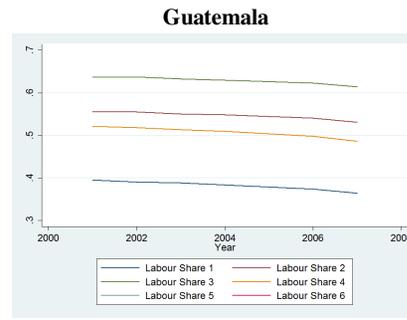
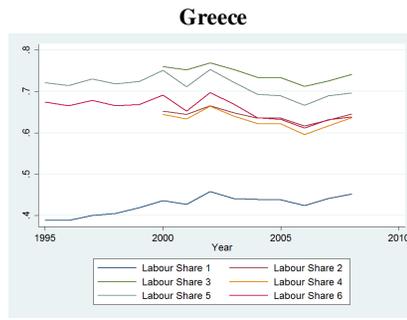
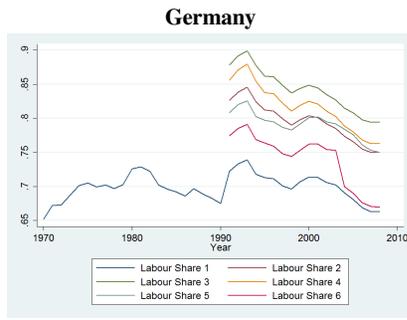
## Appendix F Evolution of the labour share over time

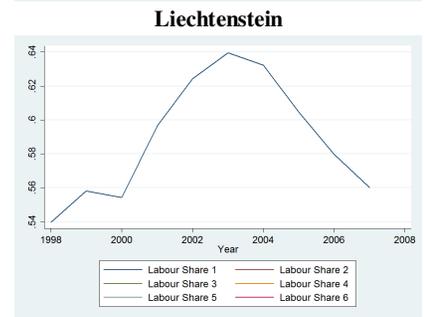
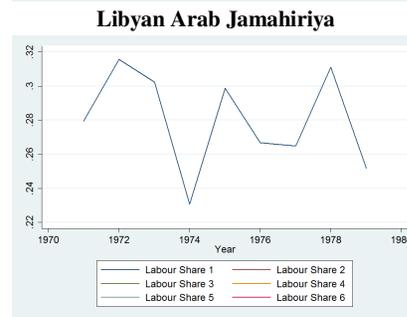
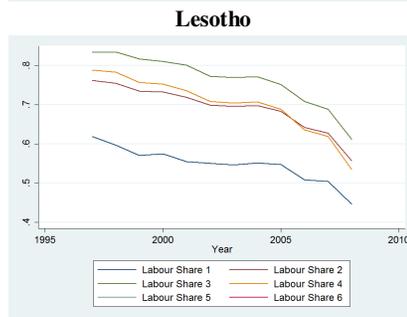
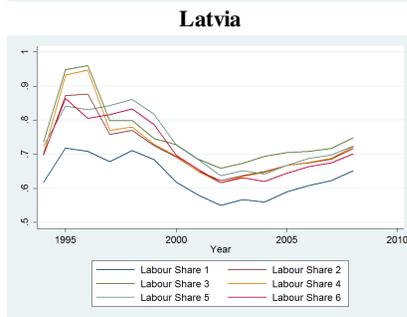
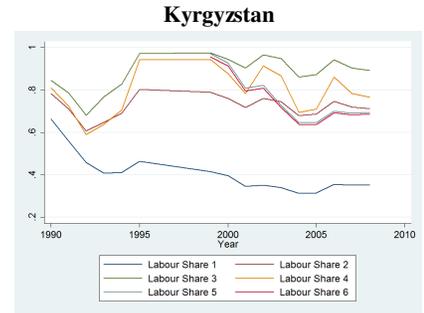
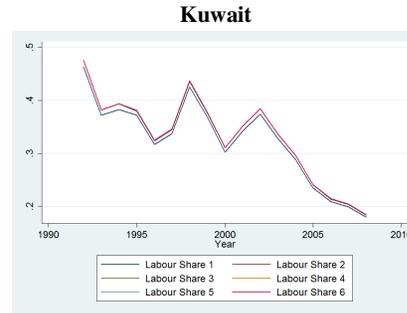
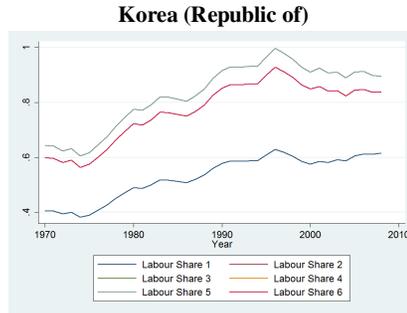
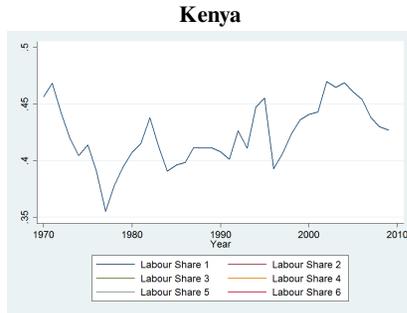
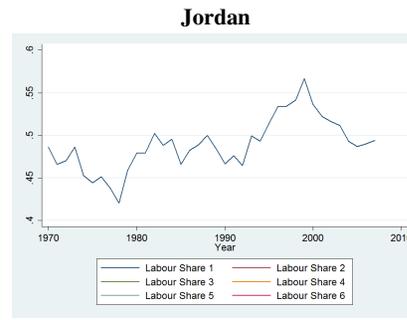
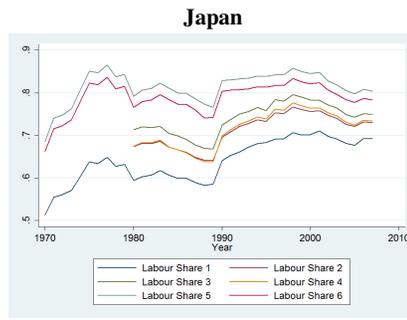
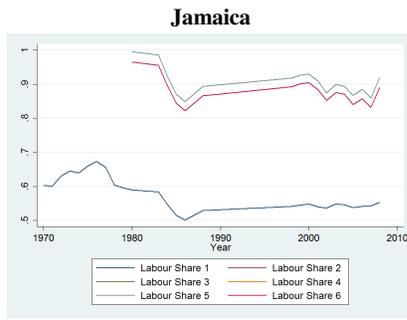




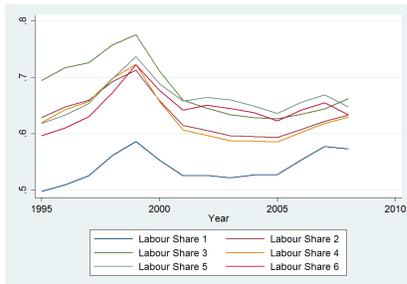




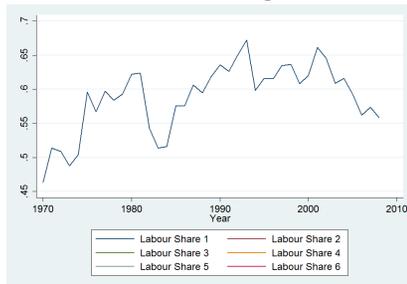




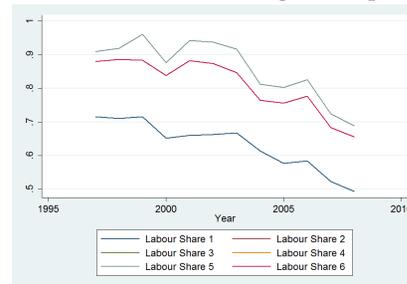
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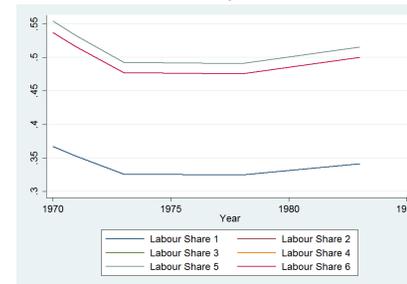
**Luxembourg**



**Macedonia (The former Yugoslav Rep. of)**



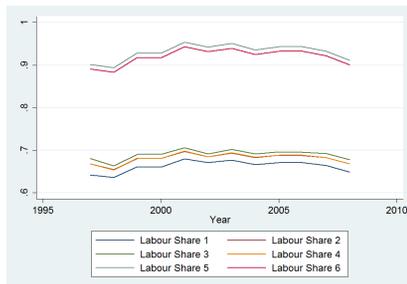
**Malaysia**



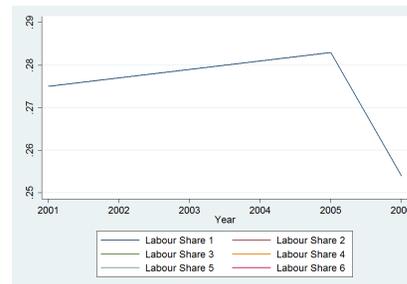
**Malta**



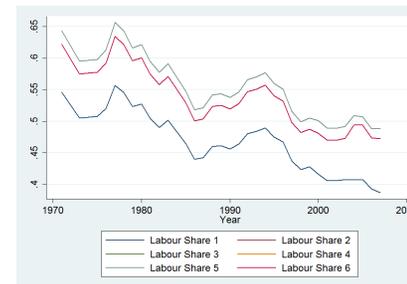
**Marshall Islands**



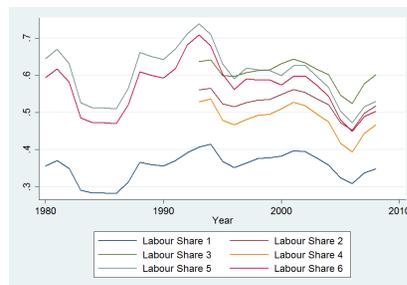
**Mauritania**



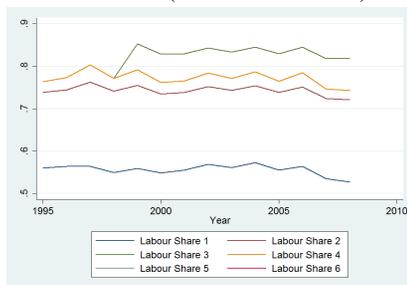
**Mauritius**



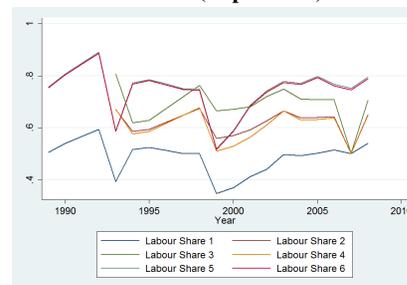
**Mexico**



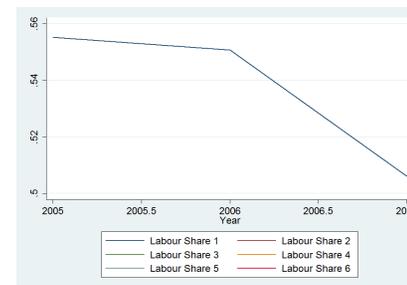
**Micronesia (Federated States of)**

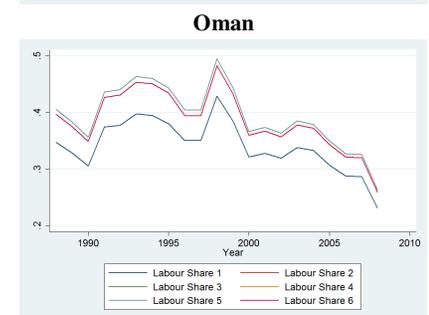
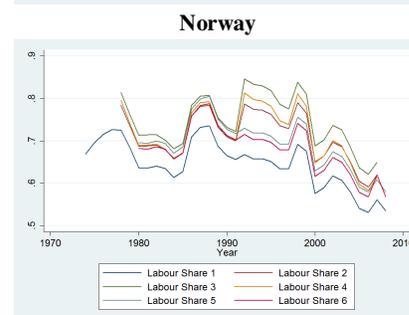
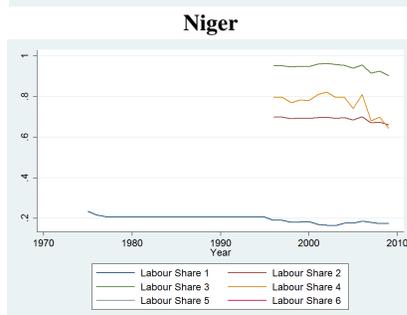
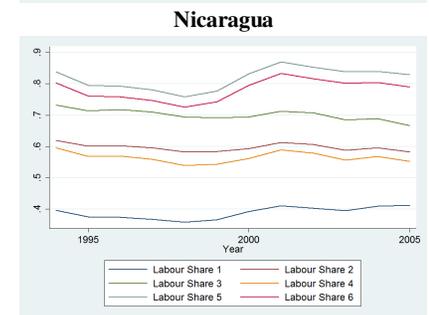
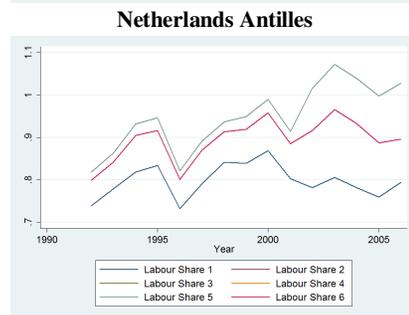
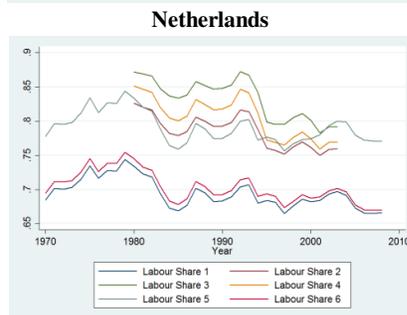
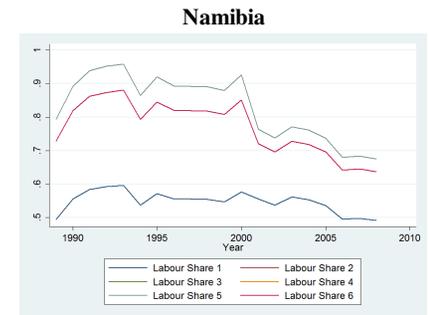
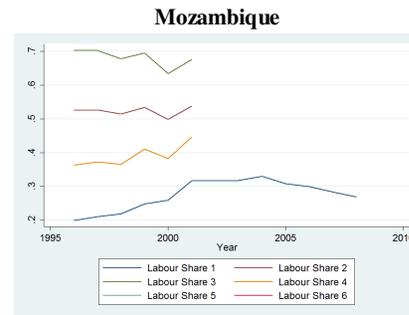
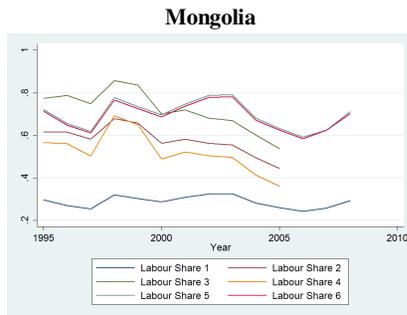


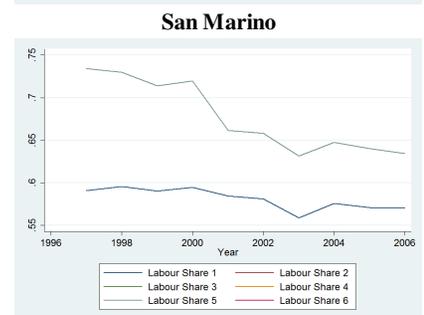
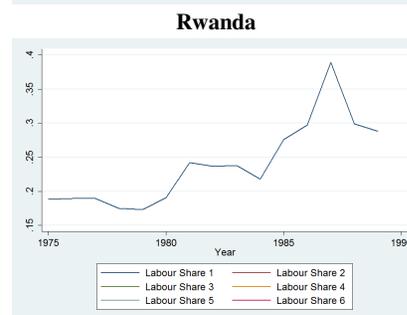
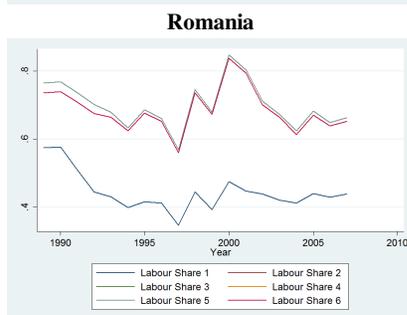
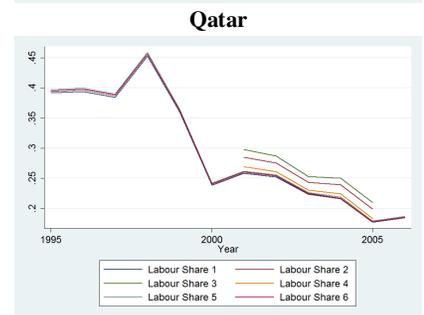
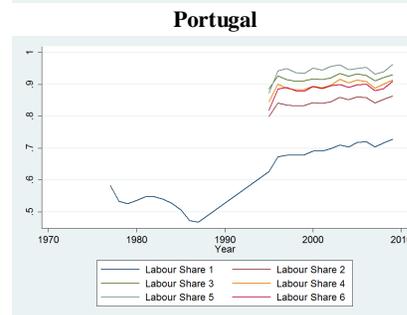
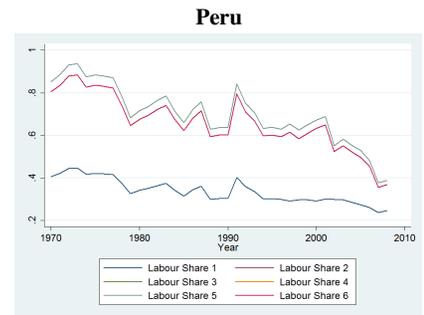
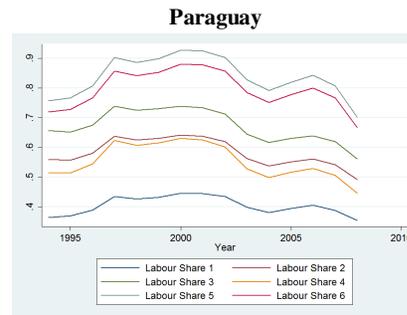
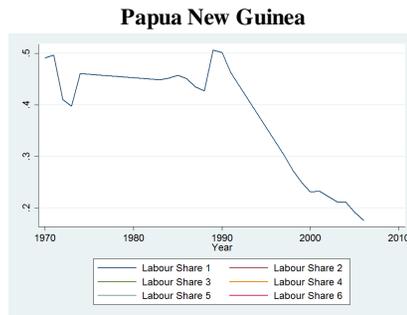
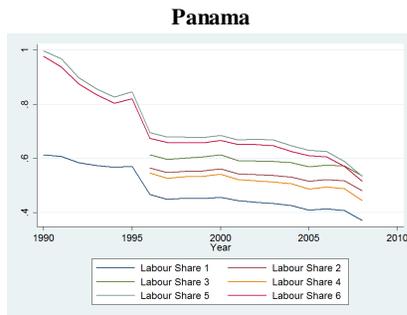
**Moldova (Republic of)**



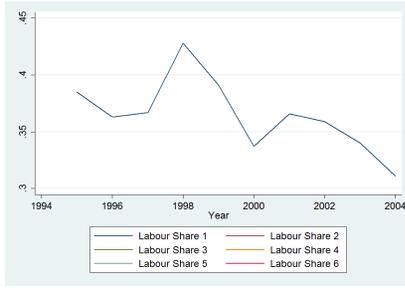
**Monaco**



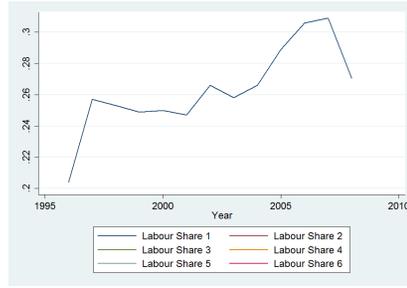




**Saudi Arabia**



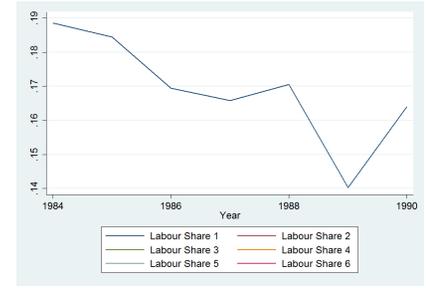
**Senegal**



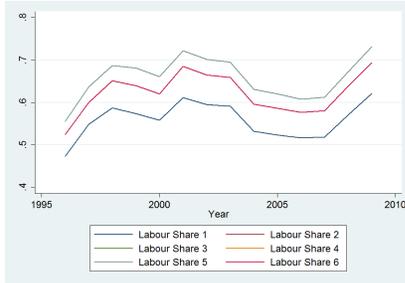
**Seychelles**



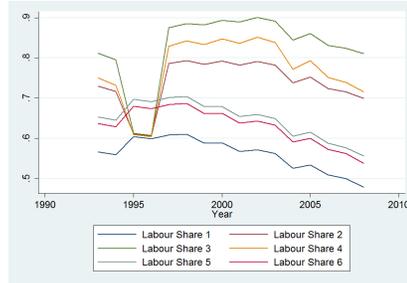
**Sierra Leone**



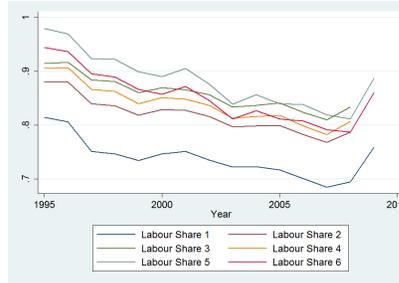
**Singapore**



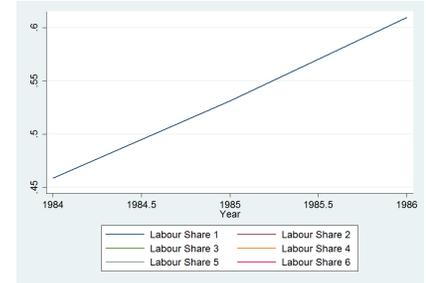
**Slovakia**



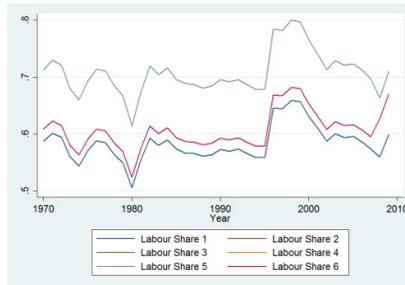
**Slovenia**



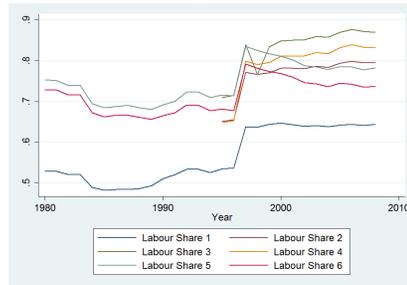
**Solomon Islands**



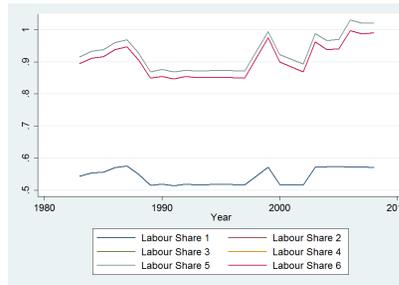
**South Africa**



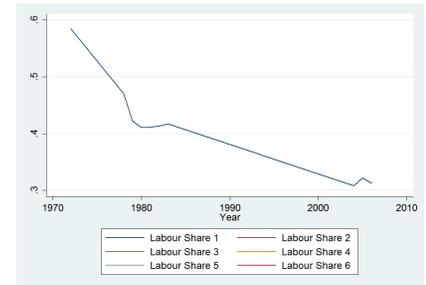
**Spain**

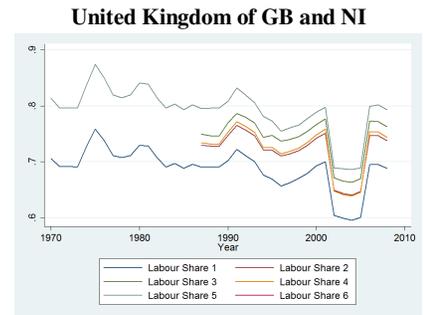
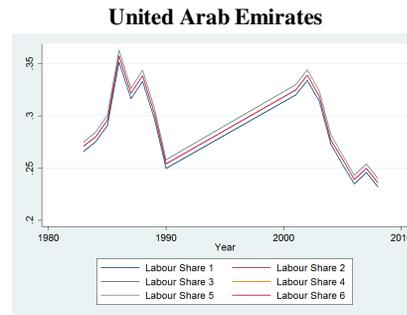
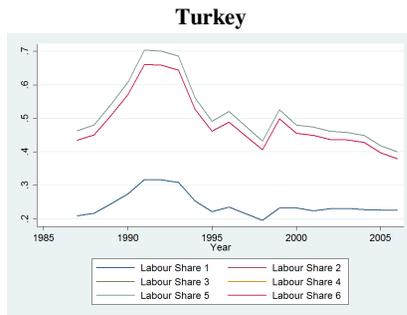
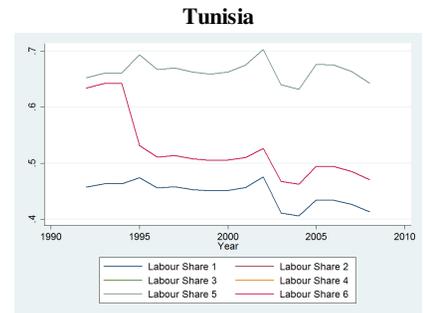
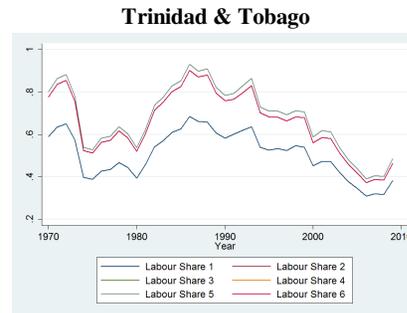
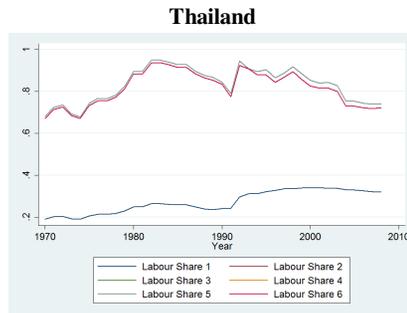
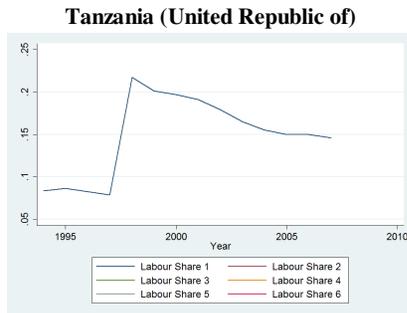
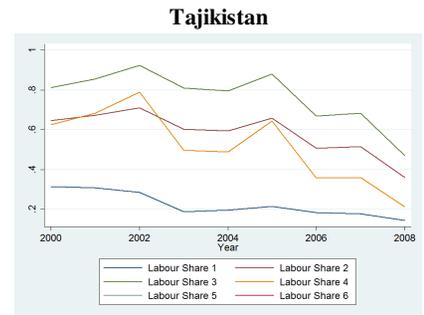
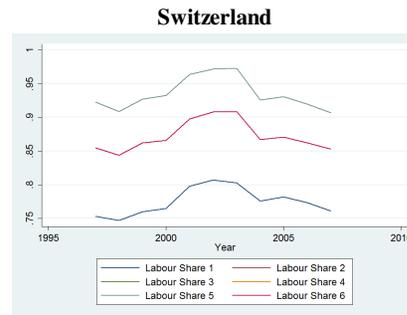
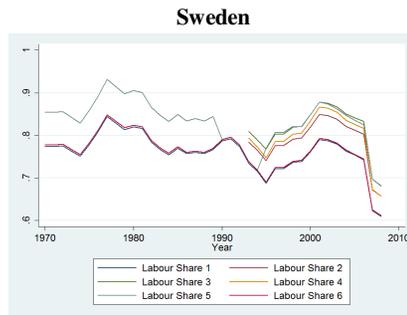
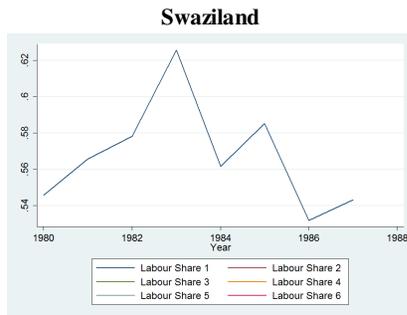


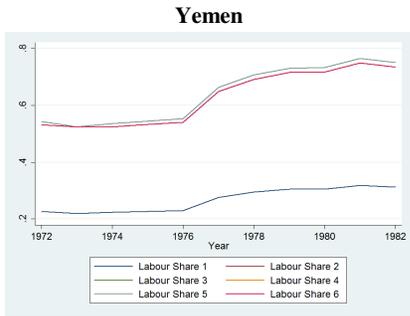
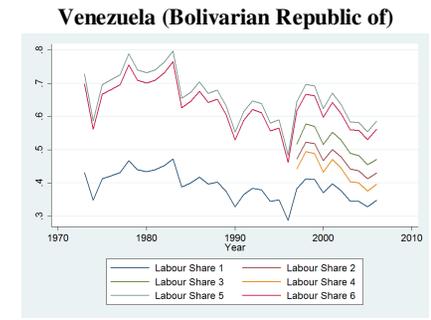
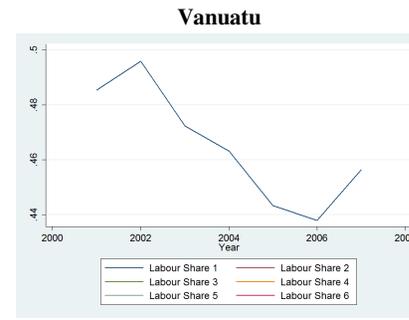
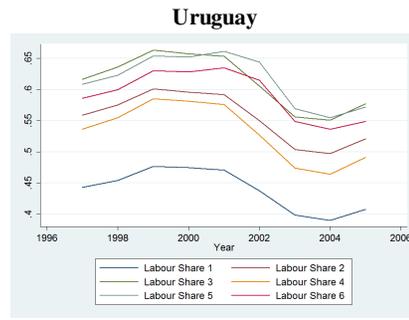
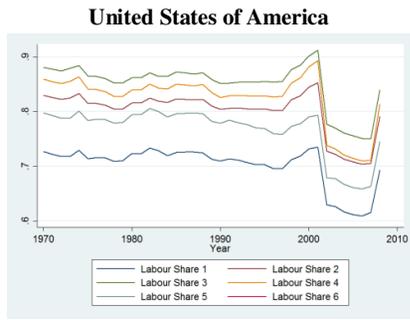
**Sri Lanka**



**Sudan**







Source: Author's calculations.

**Appendix G**  
**Mean, median and variation of LS6**

Country	Obs	Mean	Median	Std. Dev.	Coefficient of variation	Min (Year)	Max (Year)
Algeria	23	.6199	.6240	.1255	20.2476	.4130 (2003)	.8131 (1971)
Argentina	15	.4929	.4900	.0396	8.0260	.4230 (2003)	.5560 (1993)
Armenia	17	.9237	.9260	.0452	4.8945	.8320 (1995)	.9830 (2005)
Aruba	9	.6490	.6544	.0500	7.6970	.5304 (1994)	.6917 (2000)
Australia	39	.7703	.7570	.0608	7.8962	.6720 (2007)	.9354 (1974)
Austria	39	.7747	.7870	.0421	5.4336	.6730 (1970)	.8503 (1978)
Azerbaijan	15	.4538	.4501	.4553	10.0318	.3745 (2008)	.5390 (1994)
Barbados	2	.8139	.8139	.0018	0.2259	.8126 (1975)	.8152 (1974)
Belgium	34	.7093	.7025	.0699	9.8540	.5970 (1989)	.8080 (2001)
Bolivia (Plurinational State of)	38	.7472	.6834	.1306	17.4844	.4838 (1986)	.9707 (2000)
Botswana	28	.4894	.4704	.1015	20.7396	.3195 (2001)	.6893 (1983)
Brazil	16	.7685	.8115	.1044	13.5875	.5745 (1993)	.8810 (2001)
British Virgin Islands	25	.5527	.5721	.1012	18.3102	.3994 (1972)	.7130 (1994)
Bulgaria	14	.5237	.5404	.0475	9.0760	.4337 (1997)	.5760 (2006)
Cayman Islands	9	.6217	.6166	.1115	1.7929	.6097 (1990)	.6432 (1988)
Chile	35	.6601	.6680	.0611	9.2617	.5180 (1988)	.7500 (1999)
China Hong Kong Special Administrative Region	27	.5384	.5359	.0358	6.6407	.4776 (1994)	.5967 (2002)
China Macao Special Administrative Region	17	.3863	.3880	.0438	11.3396	.3139 (1995)	.4537 (1999)
Colombia	38	.6162	.5910	.0749	12.1556	.5050 (1994)	.8000 (2001)
Costa Rica	39	.6999	.7020	.0496	7.0809	.5560 (1982)	.8020 (1990)
Croatia	9	.8983	.9000	.0389	4.3321	.8350 (2005)	.9600 (1999)
Cyprus	13	.7285	.7308	.0301	4.1337	.6682 (2001)	.7744 (2008)
Czech Republic	17	.6844	.6857	.0148	2.1593	.6575 (1998)	.7123 (1994)
Dominican Republic	15	.6608	.6680	.0588	8.8961	.5080 (2004)	.7330 (1999)
Egypt	13	.4037	.4010	.0171	4.2371	.3820 (1996)	.4425 (2007)
Estonia	17	.6689	.6346	.0624	9.3292	.5903 (1992)	.7941 (1994)
Fiji	19	.8233	.8285	.0740	8.9897	.6806 (2001)	.9574 (1983)
Finland	40	.7244	.7257	.0452	6.2343	.6560 (2002)	.8412 (1991)
France	51	.7313	.7583	.0635	8.6866	.6150 (1970)	.8270 (1982)
Gabon	6	.7028	.7060	.1155	16.4283	.5550 (1974)	.8570 (1972)
Germany	18	.7403	.7535	.0399	5.3861	.6698 (2008)	.7910 (1993)
Greece	14	.6584	.6655	.0247	3.7516	.6120 (2006)	.6970 (2002)
Hungary	24	.6625	.6520	.0547	8.2622	.5670 (1998)	.7700 (1989)
Iceland	33	.8569	.8600	.0422	4.9239	.7650 (1994)	.9450 (2005)
Iran (Islamic Republic of)	14	.4563	.4430	.0522	11.4493	.4200 (2004)	.6249 (2007)
Ireland	38	.7063	.7228	.0846	11.9806	.5630 (2002)	.8781 (1981)
Israel	14	.7682	.7775	.0359	4.6684	.6994 (2001)	.8200 (2008)
Italy	39	.6973	.6960	.0433	6.2156	.6226 (1970)	.7840 (2006)
Jamaica	17	.8796	.8755	.0393	4.4714	.8223 (1986)	.9654 (1980)
Japan	38	.7878	.7960	.0371	4.7065	.6620 (1970)	.8360 (1977)
Kazakhstan	16	.7449	.7475	.1116	14.9825	.5960 (2006)	.9460 (1994)
Kuwait	17	.3318	.3450	.0820	24.7214	.1840 (2008)	.4762 (1992)
Kyrgyzstan	10	.7529	.7054	.1115	14.8158	.6367 (2005)	.9551 (1999)
Latvia	15	.7141	.6966	.0840	11.7584	.6168 (2002)	.8638 (1995)
Lithuania	14	.6456	.6417	.0308	4.7730	.5966 (1995)	.7223 (1999)
Lebanon	1	.6060	.6060			.6060 (1997)	.6060 (1997)
Malaysia	5	.5011	.4999	.0260	5.1910	.4757 (1978)	.5371 (1970)
Malta	35	.6381	.6340	.0394	6.1717	.5750 (1989)	.7175 (2001)
Marshall Islands	12	.9196	.9233	.0190	2.0647	.8835 (1998)	.9433 (2001)
Mauritius	35	.5351	.5292	.0483	9.0328	.4700 (2002)	.6343 (1977)
Mexico	29	.5672	.5880	.0679	11.9643	.4490 (2006)	.7090 (1993)
Mongolia	14	.6896	.6945	.0645	9.3457	.5850 (2006)	.7810 (2003)
Morocco	9	.7512	.8092	.1876	24.3271	.5390 (1998)	.9640 (2002)
Namibia	20	.7701	.8006	.0809	10.5044	.6370 (2008)	.8805 (1993)
Netherlands	39	.7033	.6979	.0227	3.2309	.6695 (2007)	.7543 (1979)
Netherlands Antilles	15	.8938	.9042	.0493	5.5108	.7988 (1992)	.9659 (2003)
New Zealand	36	.6759	.6767	.0537	7.9452	.5048 (2002)	.7608 (1980)
Nicaragua	12	.7818	.7928	.0333	4.2568	.7263 (1998)	.8330 (2001)
Norway	29	.6789	.6800	.0546	8.4637	.5680 (2006)	.7880 (1988)
Oman	21	.3859	.3785	.0533	13.8137	.2589 (2008)	.4831 (1998)

<b>Panama</b>	19	.7076	.6572	.1280	18.0858	.5162 (2008)	.9773 (1990)
<b>Paraguay</b>	15	.7950	.7850	.0643	8.0931	.6666 (2008)	.8800 (2000)
<b>Peru</b>	39	.6602	.6490	.1295	19.6106	.3563 (2007)	.8844 (1973)
<b>Philippines</b>	17	.6115	.6090	.0334	5.4610	.5540 (2003)	.6600 (2008)
<b>Poland</b>	18	.6996	.7132	.0595	8.5015	.5905 (2007)	.7675 (1992)
<b>Portugal</b>	15	.8864	.8902	.0208	2.3479	.8180 (1995)	.9097 (2009)
<b>Qatar</b>	12	.2966	.2573	.0964	32.4835	.1780 (2005)	.4562 (1998)
<b>Republic of Korea</b>	39	.7715	.8240	.1100	14.2622	.5640 (1974)	.9280 (1996)
<b>Republic of Moldova</b>	19	.7364	.7613	.0869	11.7970	.5170 (1999)	.8859 (1992)
<b>Romania</b>	19	.6852	.6724	.0641	9.3505	.5607 (1997)	.8375 (2000)
<b>Russian Federation</b>	20	.6017	.5940	.0845	14.0471	.4120 (1992)	.7187 (2008)
<b>Sao Tome and Principe</b>	1	.7428	.7428			.7428 (1974)	.7428 (1974)
<b>Singapore</b>	14	.6225	.6293	.0477	7.6692	.5240 (1996)	.6940 (2009)
<b>Slovakia</b>	16	.6306	.6373	.0460	7.2945	.5377 (2008)	.6866 (1998)
<b>Slovenia</b>	15	.8537	.8576	.0488	5.7122	.7873 (2008)	.9444 (1995)
<b>South Africa</b>	40	.6067	.6034	.0336	5.5445	.5239 (1980)	.6820 (1998)
<b>Spain</b>	29	.7134	.7155	.0417	5.8486	.6564 (1989)	.7914 (1997)
<b>Sri Lanka</b>	24	.9054	.9030	.0526	5.8080	.8470 (1991)	.9970 (2006)
<b>Sweden</b>	38	.7626	.7683	.0465	6.0967	.6117 (2008)	.8484 (1977)
<b>Switzerland</b>	11	.8723	.8660	.0224	2.5728	.8440 (1998)	.9090 (2003)
<b>Thailand</b>	39	.8162	.8250	.0822	10.0774	.6700 (1974)	.9370 (1983)
<b>The former Yugoslav Republic of Macedonia</b>	12	.8107	.8425	.0818	10.0929	.6550 (2008)	.8860 (1998)
<b>Trinidad and Tobago</b>	40	.6555	.6794	.1513	23.0790	.3730 (2006)	.9020 (1986)
<b>Tunisia</b>	17	.5238	.5078	.0586	11.1786	.4622 (2004)	.6428 (1994)
<b>Turkey</b>	19	.4892	.4550	.0866	17.7110	.3790 (2006)	.6612 (1991)
<b>United Arab Emirates</b>	16	.2914875	.2880	.0388205	13.318075	.2360 (2008)	.3576 (1986)
<b>Uruguay</b>	9	.5920000	.6000	.0388136	6.5563596	.5360 (2004)	.6350 (2001)
<b>Venezuela (Bolivarian Republic of)</b>	34	.6316500	.6345	.0699781	11.078626	.4630 (1996)	.7650 (1983)
<b>Yemen</b>	11	.6285000	.6498	.0968199	15.404922	.5241 (1974)	.7489 (1981)

Source: Author's calculations.

**Appendix H**  
**LS6 averages and trends, by decade.**

Countries	Labour share averages				Labour share trends*			
	1970s	1980s	1990s	2000s	1970s	1980s	1990s	2000s
Algeria	0.75085	0.71900	0.58050	0.43175	=	=	-	--
Argentina			0.51186	0.47637			-	=
Armenia			0.89861	0.94597			+	=
Aruba			0.64070	0.66557			++	-
Australia	0.84795	0.76230	0.75290	0.71208	-	=	=	=
Austria	0.75969	0.80527	0.78940	0.74113	+	=	=	=
Azerbaijan			0.45628	0.45218			--	-
Barbados	0.81390				=			
Belgium	0.69720	0.65480	0.70050	0.78648	=	-	++	=
Bolivia	0.67238	0.64869	0.75258	0.92282	=	+	+	=
Botswana	0.58480	0.52137	0.42871	0.34745	+	--	+	-
Brazil			0.715062	0.82201			++	=
British Virgin Islands	0.66287	0.59752	0.42348	0.50082	=	-	-	+
Bulgaria			0.50964	0.53156			=	+
Cayman Islands		0.62466	0.61130			=	-	
Chile	0.68503	0.64080	0.64500	0.68163	-	=	++	-
China Hong Kong		0.51701	0.528022	0.57679		+	=	=
China Macao			0.368975	0.40173			++	-
Colombia	0.58150	0.62030	0.55330	0.73321	=	=	=	++
Costa Rica	0.67597	0.69556	0.70940	0.72063	=	+	-	+
Croatia			0.91033	0.89233			++	-
Cyprus			0.73267	0.72663			--	+
Czech Republic			0.68161	0.68680			=	=
Dominican Republic			0.67556	0.63867			+	-
Egypt			0.39375	0.40814			+	=
Estonia			0.70027	0.64109			+	+
Fiji	0.83073	0.86326	0.77437	0.71050	-	=	=	--
Finland	0.72449	0.75275	0.74350	0.67686	=	=	-	+
France	0.65300	0.78410	0.72560	0.76262	+	=	=	=
Gabon	0.70283				=			
Germany			0.76522	0.71531			=	-
Greece			0.67064	0.65154			=	=
Hungary		0.66120	0.58420	0.70743		+	-	+
Iceland	0.86934	0.86428	0.81930	0.89250	+	=	=	=
Iran			0.44967	0.46136			+	++
Ireland	0.73124	0.79440	0.68976	0.58590	=	=	-	=
Israel			0.78520	0.75871			=	-
Italy	0.64811	0.71980	0.69870	0.72533	=	+	=	+
Jamaica		0.89165	0.89685	0.86768		-	+	=
Japan	0.77180	0.76950	0.81450	0.79725	+	=	+	=
Kazakhstan			0.85317	0.67998			--	-
Kuwait			0.38931	0.28062			-	--
Kyrgyzstan			0.95510	0.73044				--
Latvia			0.80118	0.65606			+	-

<b>Lithuania</b>			0.64654	0.64508			++	-
<b>Macedonia</b>			0.88333	0.78656			=	--
<b>Malaysia</b>	0.50145	0.49990			-	=		
<b>Malta</b>	0.62166	0.60912	0.64032	0.68097	=	=	+	=
<b>Marshall Islands</b>			0.89740	0.92698			+	=
<b>Mauritius</b>	0.60260	0.54376	0.52435	0.47856	=	-	=	=
<b>Mexico</b>		0.54251	0.62140	0.53433		=	=	-
<b>Mongolia</b>			0.69280	0.68789			+	=
<b>Morocco</b>			0.55050	0.80860			++	++
<b>Namibia</b>		0.72840	0.83393	0.70381			+	-
<b>Netherlands</b>	0.72570	0.70662	0.69453	0.68452	+	=	=	=
<b>Netherlands Antilles</b>			0.87066	0.92014			+	=
<b>New Zealand</b>	0.70104	0.71246	0.66074	0.61269	+	=	=	+
<b>Nicaragua</b>			0.75655	0.80697			-	+
<b>Norway</b>		0.71230	0.70540	0.61234		=	=	-
<b>Oman</b>		0.38640	0.42522	0.34211		--	+	--
<b>Panama</b>			0.78994	0.61606			--	-
<b>Paraguay</b>			0.79383	0.79573			++	-
<b>Peru</b>	0.81001	0.67184	0.63733	0.50604	-	=	=	--
<b>Philippines</b>			0.61287	0.61033			+	=
<b>Poland</b>			0.74119	0.65801			=	-
<b>Portugal</b>			0.87060	0.89431			+	=
<b>Qatar</b>			0.39978	0.22294			-	--
<b>Republic of Korea</b>	0.60960	0.75960	0.88100	0.84280	+	+	=	=
<b>Republic of Moldova</b>		0.75320	0.73351	0.73747			-	++
<b>Romania</b>		0.73600	0.67098	0.69655			=	=
<b>Russian Federation</b>	0.74280	0.58100	0.55240	0.65886			=	++
<b>Singapore</b>			0.60350	0.63006			++	+
<b>Slovakia</b>			0.66439	0.60427			=	-
<b>Slovenia</b>			0.90648	0.82734			-	=
<b>South Africa</b>	0.59493	0.58562	0.62190	0.62454	=	=	+	=
<b>Spain</b>		0.68732	0.71018	0.74611		-	+	=
<b>Sri Lanka</b>		0.90871	0.86511	0.94776		=	+	=
<b>Sweden</b>	0.79078	0.77885	0.74412	0.73669	=	=	=	-
<b>Switzerland</b>			0.85367	0.87925			=	=
<b>Thailand</b>	0.72930	0.90020	0.86570	0.76428	+	=	=	-
<b>Trinidad and Tobago</b>	0.65952	0.76637	0.72388	0.47240	-	++	-	--
<b>Tunisia</b>			0.56110	0.49071			-	=
<b>Turkey</b>		0.46490	0.54638	0.42600		++	=	--
<b>United Arab</b>		0.30954	0.25400	0.28037		+	=	-
<b>Uruguay</b>			0.60533	0.58533			++	-
<b>Venezuela</b>	0.68144	0.67580	0.58870	0.58014	+	-	+	-
<b>Yemen</b>	0.58892	0.73403			++	=		

Source: Author's calculations.

\* Please note:

- ++ Average annual variation greater than +3%;
- + Average annual variation between +1% and +3%;
- = Average annual variation between -1% and +1%;
- Average annual variation between -3% and -1%;
- Average annual variation less than -3%.

**Appendix I**  
**Labour share averages by year**

<b>Year</b>	<b>LS1</b>	<b>LS2</b>	<b>LS3</b>	<b>LS4</b>	<b>LS5</b>	<b>LS6</b>
1970	.5515636	.7322000	.7791333	.7438667	.7394333	.6852850
1971	.5537378	.7307333	.7766333	.7421333	.7528423	.7014727
1972	.5445811	.7315333	.7775667	.7431333	.7597769	.7118500
1973	.5321390	.7289667	.7755666	.7406000	.7301226	.6839592
1974	.5221587	.7301333	.7740334	.7415667	.7261719	.6758857
1975	.5173020	.7723200	.8182600	.7911400	.7408000	.6895334
1976	.5165939	.7704400	.8145800	.7882000	.7399909	.6894379
1977	.5221608	.7714400	.8141400	.7889200	.7575853	.7130967
1978	.5221673	.7786167	.8213500	.7969834	.7518344	.7026214
1979	.5280500	.7669667	.8085333	.7839833	.7556613	.7066259
1980	.5312784	.7562667	.7998444	.7716889	.7566351	.7063970
1981	.5359176	.7619111	.8044667	.7778111	.7598167	.7128219
1982	.5348808	.7647556	.8062333	.7805889	.7667417	.7211125
1983	.5228772	.7529778	.7950000	.7676667	.7464375	.7025583
1984	.5093322	.7379667	.7795222	.7502889	.7419750	.6984806
1985	.5147000	.7555000	.7978556	.7697222	.7397950	.6934389
1986	.5142845	.7629556	.8049889	.7771889	.7359375	.6887417
1987	.5193073	.7584500	.7969900	.7708800	.7329462	.6830800
1988	.5072218	.7545300	.7931600	.7665700	.7239561	.6750378
1989	.5083500	.7024833	.7476750	.7120917	.7123383	.6677878
1990	.5197444	.7024000	.7555867	.7088133	.7197565	.6718100
1991	.5358339	.7396200	.7952867	.7519067	.7399978	.6931850
1992	.5350743	.6976333	.7539167	.7041778	.7249554	.6856740
1993	.5291671	.6879120	.7529360	.6904520	.7142483	.6775808
1994	.5031012	.6784613	.7524258	.6760710	.7060030	.6656458
1995	.5026177	.6936561	.7664951	.6957732	.7094240	.6676309
1996	.4953262	.6778326	.7540457	.6735891	.7049462	.6617068
1997	.5021532	.6703408	.7391388	.6671959	.7194081	.6774090
1998	.5094105	.6754692	.7455135	.6755519	.7286644	.6871747
1999	.4984939	.6750642	.7493434	.6761453	.7272225	.6885037
2000	.4919409	.6689800	.7397345	.6681782	.7190809	.6809346
2001	.4917436	.6619727	.7308527	.6618618	.7133315	.6755025
2002	.4997295	.6595925	.7266830	.6616321	.7147989	.6782750
2003	.4927360	.6527585	.7196736	.6488906	.7127547	.6764949
2004	.4864875	.6405981	.7058923	.6323961	.6997454	.6624667
2005	.4848495	.6365039	.7000706	.6297980	.6914393	.6538434
2006	.4755872	.6422600	.7049533	.6364489	.6822062	.6434562
2007	.4819990	.6412070	.7016047	.6328349	.6868813	.6465362
2008	.4929234	.6633250	.7248000	.6601139	.6934000	.6509667

*Source:* Author's calculations.

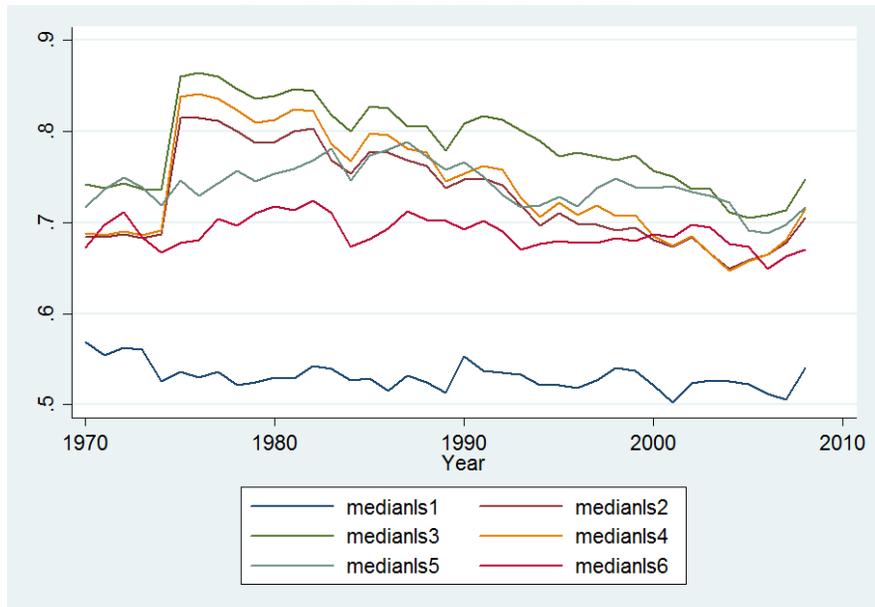
**Appendix J**  
**Coefficients of correlation. Labour share / development**

	LS1	LS2	LS3	LS4	LS5	LS6
1970	0.5428*				0.3039	0.2028
1971	0.5887*				0.2958	0.2102
1972	0.6035*				0.1486	0.0476
1973	0.6347*				0.4092*	0.3297
1974	0.6736*				0.4978*	0.4031*
1975	0.6925*				0.4042*	0.3149
1976	0.6916*				0.4257*	0.3471
1977	0.6877*				0.2766	0.1901
1978	0.6821*				0.3635*	0.2406
1979	0.7079*				0.4738*	0.3615
1980	0.7390*				0.2448	0.1394
1981	0.7538*				0.3220	0.2569
1982	0.7384*				0.2804	0.2256
1983	0.6549*				0.0501	-0.0120
1984	0.6701*				-0.0176	-0.0791
1985	0.6909*				0.0964	0.0173
1986	0.7072*				0.1934	0.1156
1987	0.7153*				0.2349	0.1650
1988	0.7239*				0.2058	0.1266
1989	0.6542*	0.7354*	0.5650	0.7262*	0.1708	0.1057
1990	0.5353*	0.6574*	0.4690	0.6757*	0.1032	0.0458
1991	0.6289*	0.7103*	0.4104	0.7037*	0.2801	0.2541
1992	0.5318*	0.8509*	0.6988*	0.8649*	0.1199	0.0655
1993	0.5490*	0.7871*	0.5562*	0.8086*	0.1622	0.0865
1994	0.5779*	0.7375*	0.4180*	0.6998*	0.1281	0.0843
1995	0.5427*	0.6524*	0.3214*	0.5960*	0.1453	0.1404
1996	0.5499*	0.6921*	0.3943*	0.6599*	0.1558	0.1529
1997	0.5441*	0.7007*	0.4740*	0.6754*	0.1237	0.1181
1998	0.5654*	0.6702*	0.3961*	0.6324*	0.1246	0.1164
1999	0.5758*	0.6462*	0.3526*	0.5933*	0.0993	0.0672
2000	0.5438*	0.6518*	0.4227*	0.6217*	0.0710	0.0295
2001	0.5477*	0.5280*	0.3310*	0.5304*	0.0470	0.0120
2002	0.5140*	0.5217*	0.3086*	0.4863*	-0.0048	-0.0258
2003	0.5174*	0.5251*	0.3258*	0.5237*	0.0331	0.0150
2004	0.5062*	0.5367*	0.3612*	0.5507*	0.0213	0.0019
2005	0.4810*	0.4961*	0.3226*	0.5165*	-0.0019	-0.0001
2006	0.4622*	0.6744*	0.5045*	0.6185*	-0.0395	-0.0613
2007	0.4873*	0.7456*	0.5682*	0.7139*	-0.0389	-0.0764

*Source: Author's calculations.*

## Appendix K Labour share median levels

**Labour share median levels over time**



**Labour share medians, by region**

Region	LS1	LS2	LS3	LS4	LS5	LS6
Africa	.39080	.63400	.77310	.60750	.66280	.58055
Americas	.46900	.60600	.68970	.58880	.70630	.66395
Asia	.40500	.64920	.72020	.64240	.68300	.65855
Europe	.63890	.74950	.79590	.76300	.77555	.71290
Oceania	.58210	.74350	.79720	.76460	.79075	.74520

**Labour share medians, by levels of development**

Level of development	LS1	LS2	LS3	LS4	LS5	LS6
Developing country	.41800	.59200	.67300	.56200	.69200	.65300
Developed country	.62310	.75235	.79670	.76590	.77200	.70440

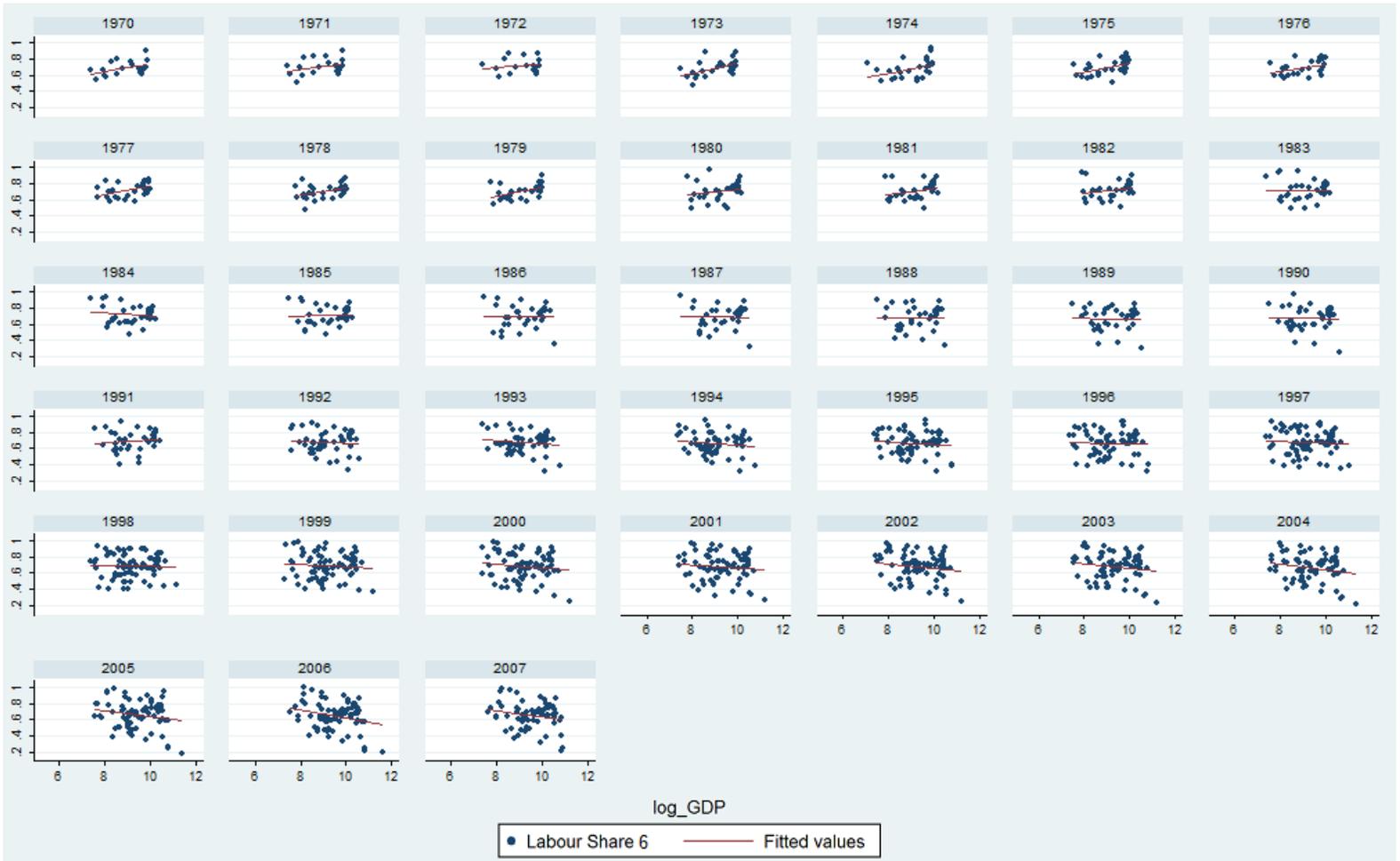
Income classification	LS1	LS2	LS3	LS4	LS5	LS6
Low-income	.28300	.67910	.90400	.70200	.71435	.70545
Lower-middle-income	.39530	.62615	.71180	.60300	.77140	.76125
Upper-middle-income	.45260	.55205	.61020	.52730	.67100	.62260
High-income	.62310	.75235	.79670	.76590	.77200	.70440

*Source: Author's calculations.*

## Appendix L

Bivariate scatters. Labour share (LS1 and LS6) and economic development





Source: Author's calculations.