Appendix Available Upon Request

We begin by providing definitions and sources for each variable used in the analysis. Subsequently we describe some checks devised to account for variations in data collection procedures. The data for Sections 2 and 3 came from two sources: The Syrquin and Chenery (SC) data set, which was kindly provided by the World Bank, and the United Nations series (UN) of yearbooks "National Accounts Statistics". Since we could not find data for the distribution sector in the UN sources for every country in the SC data set, our sample of countries was reduced to 74 countries. In what follows we describe each variable, its construction when applicable, and its source.

S_D is the share of distribution in GDP. Both numerator and denominator were compiled from the same UN sources. The numerator is value added by wholesale and retail trade in current local currency. The denominator is GDP also measured in current local currency. The main difficulty in constructing this variable was that some countries include hotels and restaurants as part of the distribution sector and others don't. Fortunately, the UN sources indicate whether or not hotels and restaurants are included and in most cases also provide separate information on this item. Hence, we subtracted this information from the aggregate whenever it was included and eliminated the country-year from the analysis if the aggregate contains hotels and restaurants and we could not disaggregate. Thus, our measure does not include hotels and restaurants as part of the distribution sector. Table A0 provides descriptive statistics on this variable and its use for every country. F is net resource flow measured as imports minus exports divided by GDP, all three in local currency. Both numerator and denominator were taken from the same UN sources.

Y was measured as the level of GNP per capita in 1980 dollars and it was taken directly from the SC data set. Similarly, N was measured as the number of millions of persons in the country and it was also taken directly from the SC data set. Both AVGY and AVGN in Section 4 are simply the average over

the available time series for each country of Y and N, respectively. The same is true, of course, of the average share of the distribution sector and of AVGF in Section 4.

The remaining variables were used only in Section 4. Three of them come from World Development Reports (WDR). The level of development in purchasing power parity terms (ICP) was measured as the ICP 1980 index of per capita income, WDR (1987). It ranges from 2.4 to 101.5 and the USA = 100. Urban was measured as the percentage of households living in urban areas in 1965, WDR (1987). It ranges from 5 to 93. Finally, ERDI was measured as the ratio of GDP in 1980 ICP $ (WDR, 1987) to GDP in 1980 $ converted at official exchange rates using the World Bank Atlas method (WDR, 1982).

Our last three variables are women, rule of law and media. Women was measured as the percentage of the female labor force in the total labor force in 1968. It ranges from 8.9 to 50.7 and it was taken from the 1994 World Tables. Rule of law was measured as an index of the extent to which the rule of law prevails in a country. It is measured on a scale of 0 to 6, which ranges from 1 to 6 in our sample. This variable is part of the IRIS data base and it was developed from the International Country Risk Guide, International Reports, March 1992, IBC USA Publications, INC. Incidentally, this is the variable used by Barro and Sala-i-Martin (1995, Ch.12) to capture institutional factors in their cross-country regressions. Finally, media was constructed as an average of indexes of the number of radios , tv sets and newspapers per 100 persons in the country. Each individual index was constructed so that the maximum value of the index in the data was unity. Media ranges from 0.008 to 0.802. All of the data to construct the indexes was taken from the Human Development Report, 1994.

Since the data used to construct the dependent variable correspond to a 34 year time series in

which there were changes in national income accounting procedures, we performed some robustness tests of the potential impact of these changes in data collection procedures. One issue is that the UN sources calculated national income aggregates using factor costs in some years and producer's prices in others. A dummy variable was constructed to indicate which method was employed. Another issue is that the UN system of national accounts was changed in the middle of this period. Another dummy variable was constructed to capture whether the data came from the former or the present system of national accounts. Finally, the UN data had to be compiled from 18 different yearbooks. Hence, we defined 17 dummy variables (one for all but one of the yearbooks) to capture any unreported changes from one yearbook to another.

We reestimated our models introducing these dummy variables to see if they would affect our substantive conclusions. The results for equations 6 and 8 of Table 1 with and without these 19 dummy variables are presented in Table A1. Our substantive conclusions are not affected by the introduction of these 'robustness' dummies. Tables A2-A4 of this Appendix correspond to the results summarized in the sensitivity analysis of Section 3 of the paper.

References

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Table A2. Balanced Panel Regressions

Years	Countries	Country Dummies	Time Dummies	ln Y	$(\ln Y)^2$	ln N	$(\ln N)^2$	F	R^2	N
50-83	12	no	no	-0.019 (1.48)	0.12E-02 (1.45)	-0.042 (7.79)	0.74E-02 (6.84)	0.130 (6.02)	.217	408
50-83	12	no	yes	-0.26E-02 (0.20)	0.29E-04 (0.03)	-0.044 (8.35)	0.77E-02 (7.28)	0.111 (5.00)	.310	408
50-83	12	yes	no	0.210 (7.40)	-0.012 (7.51)	-0.032 (2.93)	0.011 (3.99)	0.057 (3.18)	.631	408
60-78	33	no	no	-0.80E-02 (0.50)	0.22E-05 (0.00)	-0.015 (3.02)	0.23E-02 (2.42)	0.069 (2.23)	.133	627
60-78	33	no	yes	-0.68E-02 (0.41)	-0.12E-03 (0.11)	-0.015 (2.98)	0.22E-02 (2.34)	0.061 (1.92)	.146	627
60-78	33	yes	no	0.265 (8.94)	-0.016 (8.94)	-0.026 (1.87)	-0.35E-02 (1.34)	0.103 (4.67)	.809	627
58-83	27	no	no	0.013 (0.89)	-0.145 (1.45)	-0.018 (3.71)	0.30E-02 (3.23)	0.031 (1.02)	.158	702
58-83	27	no	yes	0.025 (1.68)	-0.23E-02 (2.36)	-0.017 (3.60)	0.27E-02 (2.95)	-0.025 (0.79)	.207	702
58-83	27	yes	no	0.147 (6.31)	-0.91E-02 (6.67)	-0.45E-02 (0.44)	0.39E-02 (1.75)	0.118 (5.40)	.757	702

Table A3. Alternative Functional Forms

Dependent Variable	Country Dummies	ln Y	$(\ln Y)^2$	ln N	$(\ln N)^2$	F	R^2	N
S_D	no	0.023 (2.40)	-0.20E-02 (3.08)	-0.43E-03 (0.14)	0.33E-03 (0.63)	0.087 (6.41)	.080	1609
S_D	yes	0.094 (5.81)	-0.55E-02 (5.62)	0.71E-02 (1.01)	-0.13E-02 (0.94)	0.074 (7.07)	.815	1609
		Y	Y^2	N	N^2	F	R^2	N
S_D	no	-0.52E-05 (5.02)	0.23E-09 (2.57)	0.21E-03 (5.10)	-0.41E-06 (5.94)	0.085 (6.39)	.100	1609
S_D	yes	0.87E-05 (6.06)	-0.60E-09 (6.98)	0.41E-03 (3.25)	-0.27E-06 (2.27)	0.078 (7.58)	.815	1609
		1/Y	$(1/Y)^2$	1/N	$(1/N)^2$	F	R^2	N
S_D	no	0.63E-02 (3.90)	-0.46E-03 (2.31)	0.32E-04 (0.20)	0.58E-06 (0.27)	0.094 (6.92)	.059	1609
S_D	yes	-0.015 (5.50)	0.73E-03 (3.53)	0.22E-05 (0.01)	-0.23E-05 (0.93)	0.075 (7.18)	.813	1609
		ln Y	$(\ln Y)^2$	ln N	$(\ln N)^2$	F	R^2	N
$\log_{10}(S_D/(1-S_D))$	no	0.144 (4.27)	-0.011 (4.79)	-0.23E-02 (0.21)	0.19E-02 (1.01)	0.497 (10.27)	.113	1609
$\log_{10}(S_D/(1-S_D))$	yes	0.421 (6.77)	-0.025 (6.58)	-0.39E-02 (0.14)	-0.31E-02 (0.61)	0.337 (8.40)	.795	1609
		Y	Y^2	N	N^2	F	R^2	N
$\log_{10}(S_D/(1-S_D))$	no	-0.15E-04 (4.00)	0.59E-09 (1.87)	0.84E-03 (5.76)	-0.16E-05 (6.42)	0.491 (10.23)	.128	1609
$\log_{10}(S_D/(1-S_D))$	yes	0.32E-04 (5.83)	-0.23E-08 (6.89)	0.15E-02 (3.10)	-0.89E-06 (1.97)	0.344 (8.72)	.795	1609
		1/Y	$(1/Y)^2$	1/N	$(1/N)^2$	F	R^2	N
$\log_{10}(S_D/(1-S_D))$	no	0.023 (3.93)	-0.24E-02 (3.44)	-0.54E-03 (0.95)	0.91E-05 (1.19)	0.523 (10.67)	.091	1609
$\log_{10}(S_D/(1-S_D))$	yes	-0.060 (5.79)	0.28E-02 (3.48)	0.13E-02 (1.01)	-0.15E-04 (1.59)	0.341 (8.44)	.793	1609

Table A4. The Distribution Sector and the Development Process: Revised Results[a]

Equation	ln Y	$(\ln Y)^2$	ln N	$(\ln N)^2$	F	WRLAG	T_1	T_2	T_3	T_4	R^2	N
S_D (1)	0.235	-0.18E-03	-0.11E-03	0.16E-04	0.015	0.957					.926	1502
	(0.85)	(0.98)	(0.12)	(0.10)	(3.63)	(130.96)						
S_D (2)	0.28E-02	-0.23E-03				0.960					.925	1502
	(1.03)	(1.23)				(132.16)						
S_D (3)	0.25E-02	-0.20E-03	-0.25E-03	0.27E-04		0.960					.925	1502
	(0.87)	(1.08)	(0.28)	(0.17)		(132.02						
S_D (4)	0.24E-02	-0.19E-03			0.015	0.957					.926	1502
	(0.90)	(1.04)			(3.66)	(131.13)						
S_D (5)	0.25E-02	-0.20E-03	-0.89E-04	0.95E-05	0.015	0.957	-0.548	0.647	0.141	-0.188	.926	1502
	(0.91)	(1.04)	(0.10)	(0.06)	(3.55)	(130.62)	(0.52)	(0.70)	(1.55)	(1.85)		
S_D (6)[b]	0.022	-0.13E-02	-0.25E-03	0.24E-03	0.042	0.798					.935	1502
	(2.12)	(2.07)	(0.05)	(0.27)	(5.93)	(49.72)						
S_D (7)[c]	0.24E-02	-0.18E-03	-0.14E-03	0.16E-04	0.015	0.958					.928	1502
	(0.87)	(1.07)	(0.15)	(0.10)	(3.45)	(130.90)						
S_D (8)[d]	0.026	-0.17E-02	-0.63E-02	0.29E-03	0.041	0.802					.936	1502
	(2.31)	(2.32)	(0.98)	(0.32)	(5.67)	(49.33)						
S_D (9)	0.27E-02	-0.22E-03	-0.248	0.210		0.960	-70E-03	0.69E-03	0.16E-02	-0.16E-02	.926	1502
	(0.97)	(1.18)	(0.27)	(0.13)		(131.60)	(0.65)	(0.75)	(1.74)	(1.55)		

a. S_D stands for the share of distribution in GDP as the dependent variable; constants were included in all regression but are not displayed here; t-ratios (absolute value) are in parentheses. WRLAG is the lagged value of the share of distribution.

b. This equation is (1) with country dummies (not shown here) added to the right hand side.

c. This equation is (1) with time dummies (not shown here) added to the right hand side.

d. This equation is (1) with country and time dummies (not shown here) added to the right hand side.

Table A0. The Average Share of the Distribution Sector for Individual Countries

	Average D_i	Max/Min D_i	Years	Balanced Panels [†]	Cross-Section[‡]
Argentina	14.7%	12.3/17.0	60 - 83		yes
Australia	15.2%	13.9/16.4	50 - 83	1,2	
Austria	12.4%	8.2/15.4	50 - 83 *	1,2,3	yes
Belgium	11.6%	6.7/14.1	51 - 83 *	1,2	yes
Benin	22.0%	18.0/24.7	74 - 83		
Bangladesh	9.2%	8.0/10.8	72 - 83 *		
Bolivia	15.7%	11.9/18.9	66 - 79 *		yes
Brazil	12.5%	10.1/14.3	60 - 80 *	1	yes
Burma	26.7%	23.7/31.6	50 - 83		
Canada	11.8%	9.6/14.2	50 - 83		yes
Chile	19.5%	14.1/25.2	60 - 82	1	yes
Ivory Coast	15.4%	12.9/21.1	60 - 74		yes
United Republic of Cameron	11.5%	8.9/16.0	74 - 83 *		yes
Colombia	14.2%	9.4/18.5	50 - 83	1,2	yes
Costa Rica	15.7%	11.5/19.4	60 - 77 *		
Germany, Federal Republic of	11.8%	9.2/13.7	50 - 83 *	1,2,3	yes
Denmark	13.7%	10.9/16.0	50 - 83 *	1,2,3	yes
Dominican Republic	17.4%	15.7/20.4	53 - 83	1,2	yes
Algeria	14.6%	9.2/19.8	57 - 78		
Ecuador	12.0%	10.3/13.9	50 - 83 *	1,2,3	yes
Spain	11.6%	9.2/14.3	54 - 83 *	1,2	yes
Ethiopia	8.2%	5.9/9.8	61 - 83 *		yes
Finland	9.4%	8.2/10.6	50 - 83 *	1,2,3	yes
France	11.7%	9.7/13.3	50 - 83	1,2	yes
United Kingdom	11.0%	8.6/14.9	50 - 80 *	1	yes
Ghana	14.8%	11.0/26.2	68 - 83 *		
Greece	11.1%	9.4/12.7	50 - 83 *	1,2,3	yes
Honduras	12.6%	9.7/15.1	50 - 83 *	1,2,3	yes
Upper Volta	13.3%	12.0/14.2	65 - 83		
Indonesia	16.5%	12.2/25.0	60 - 83 *	1	yes
India	10.2%	8.8/11.6	66 - 83 *		yes
Iran	7.9%	5.1/10.9	59 - 78 *	1	

Table A0. The Average Share of the Distribution Sector for Individual Countries

	Average D_i	Max/Min D_i	Years	Balanced Panels †	Cross-Section‡
Ireland	10.0%	9.2/10.9	70 - 83 *		yes
Israel	11.4%	7.7/14.0	66 - 80 *		yes
Italy	11.0%	9.0/12.9	50 - 83 *	1,2,3	yes
Jamaica	17.0%	12.1/21.2	50 - 83 *	1,2,3	
Japan	15.5%	13.3/17.1	50 - 83	1,2	yes
Kenya	8.1%	6.5/9.8	64 - 82 *		yes
Korea, Republic of	12.9%	9.0/16.2	53 - 83 *	1,2	yes
Libyan Arab Republic	4.9%	4.3/5.7	71 - 80		
SriLanka	13.1%	7.4/19.6	50 - 83 *	1,2,3	yes
Madagascar	13.1%	10.8/14.3	66 - 74 *		yes
Mexico	29.6%	27.8/31.9	65 - 77 *		
Malawi	9.6%	7.2/12.1	60 - 71 *		yes
Malaysia	14.4%	9.8/16.2	60 - 78		
Niger	13.9%	12.4/14.7	63 - 69		
Nigeria	16.0%	10.6/21.5	53 - 83		yes
Nicaragua	21.6%	19.9/24.5	63 - 78 *		
Netherlands	11.9%	10.9/13.5	50 - 83	1,2	yes
Norway	12.7%	10.0/18.5	50 - 83 *	1,2,3	yes
Pakistan	15.5%	13.5/18.6	70 - 83 *		yes
Panama (including Canal Zone)	12.7%	8.8/16.3	50 - 83	1,2	
Peru	14.0%	10.8/16.3	51 - 83		yes
Philippines	13.0%	8.0/17.2	58 - 83 *	1,2	yes
Papua New Guinea	7.7%	5.7/10.2	65 - 83		
Portugal	12.5%	7.1/19.4	52 - 83 *	1,2	yes
Saudi Arabia	4.8%	2.2/6.9	63 - 76 *		
Sudan	18.0%	13.5/21.7	66 - 83		
El Salvador	23.0%	20.6/24.8	58 - 83 *	1,2	yes
Sweden	10.1%	9.1/11.6	58 - 83 *	1,2	
Syrian Arab Republic	19.6%	17.3/25.5	66 - 77 *		
Taiwan, Province of	15.2%	12.4/17.8	51 - 67 *		
Togo	20.3%	17.0/24.0	63 - 72		
Thailand	17.9%	15.0/19.9	53 - 83 *	1,2	

Table A0. The Average Share of the Distribution Sector for Individual Countries

	Average D_i	Max/Min D_i	Years	Balanced Panels †	Cross-Section‡
Tunisia	14.0%	9.9/18.9	61 - 83		yes
Turkey	11.3%	7.4/16.8	50 - 83 *	1,2,3	
United Republic of Tanzania	10.8%	9.6/11.4	66 - 76 *		yes
Uganda	9.6%	8.0/10.7	68 - 71 *		
Uruguay	13.5%	10.7/17.2	58 - 74 *		yes
USA (including Puerto Rico)	16.5%	15.9/17.1	53 - 73		yes
Venezuela	8.7%	6.8/10.8	70 - 83 *		yes
Zaire	14.3%	11.2/22.0	68 - 77 *		
Zambia	9.7%	7.5/13.0	64 - 83 *		yes
Zimbabwe	12.6%	10.1/14.9	60 - 83 *		yes

* An asterisk indicates that the years were continuous.

† Indicates in which balanced panels the country was included: 1=1960-1978; 2=1958-1983; 3=1950-1983.

‡ Indicates whether the country was included in the cross-section regressions in Section V.

Table A1. Robustness of Results

Dependent Variable	Time Dummies	Robustness Variables	ln Y	$(\ln Y)^2$	ln N	$(\ln N)^2$	F	R^2	N
D	no	no	0.094 (5.81)	-0.55E-02 (5.62)	0.71E-02 (1.01)	-0.13E-02 (0.94)	0.074 (7.07)	.815	1609
D	yes	no	0.119 (6.82)	-0.78E-02 (6.77)	-0.019 (1.86)	-0.16E-02 (1.21)	0.070 (6.54)	.819	1609
D	no	yes	0.109 (6.60)	-0.69E-02 (6.66)	-0.012 (1.39)	-0.90E-04 (0.07)	0.071 (6.85)	.825	1609
D	yes	yes	0.119 (6.74)	-0.77E-02 (6.62)	-0.020 (1.94)	-0.22E-03 (0.16)	0.070 (6.62)	.826	1609

D represents the share of distribution in GDP; country dummies and constants were included in all regressions but are not displayed here; t-ratios (absolute value) are in parentheses.

Table A5. J-Tests of Cross-Sectional Specifications.

	Dominant Spec. at ...								
Equation	0.1%	1%	5%	lnICP	ICP	lnICP	ln(AvgY)	lnICP	1/ICP
(1)	lnICP	lnICP	—	4.28	2.19				
(1)	—	—	lnICP			2.33	0.73		
(1)	—	—	—					1.94	0.60
(2)	—	—	lnICP	2.59	1.84				
(2)	—	—	lnICP			2.54	1.07		
(2)	—	—	lnICP					2.32	0.27
(3)	—	—	—	2.19	2.17				
(3)	—	—	lnICP			2.49	1.04		
(3)	—	—	lnICP					2.27	0.24
(4)	lnICP	—	—	4.58	2.96				
(4)	—	—	lnICP			2.58	0.83		
(4)	—	—	—					1.96	0.81
(5)	—	lnICP	—	2.92	2.06				
(5)	—	—	lnICP			2.58	1.16		
(5)	—	—	lnICP					2.23	0.46
(6)	—	—	—	2.57	2.39				
(6)	—	—	lnICP			2.55	1.15		
(6)	—	—	lnICP					2.22	0.38
(7)	lnICP	lnICP	lnICP	4.47	1.90				
(7)	—	lnICP	lnICP			2.82	0.68		
(7)	lnICP	lnICP	lnICP					3.94	0.29
(8)	—	—	—	2.48	2.20				
(8)	—	lnICP	lnICP			2.73	0.62		
(8)	—	lnICP	lnICP					3.27	0.24
(9)	—	—	—	2.03	2.65				
(9)	—	lnICP	lnICP			2.78	0.70		
(9)	—	lnICP	lnICP					3.18	0.17

Double border indicates t statistic significant at the 0.1% level; Single border indicates t-statistic significant at the 1% level;

Dashed border indicates t-statistics significant at the 5% level. In the results columns, a " — " indicates that the test is inconclusive.