Chapter 18

Disaggregating labor payments by skill level

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18.1 Introduction

This chapter describes the disaggregating of labor payments by skill level. Readers interested in detailed step-by-step procedure can refer to Global Trade Analysis Project (GTAP) Technical Paper No 11.

The GTAP version 3 formulation has three primary factors: capital, agricultural land and labor. This formulation can offer insights into the determinants of shifts in wage-rental ratios. However, it can have little to say about actual wage dispersion (McDougall and Tyers 1995). By splitting labor into two types on the basis of skill level, production (unskilled) and professional (skilled), additional insight may be obtained. Motivated by the convenience of the ready-to-use ILO occupational classification, these two types of labors are distinguished by their occupation. The occupational split we use is summarized in table 18.1, in terms of the ILO one-digit occupations.

No complete global data set has been available to disaggregate employment by type of worker in each industry. We begin with source data from labor force surveys and national censuses of several countries. This was initiated in the context of the 37 GTAP sectors used in versions 1-3 of the data base. As for version 4, our target is to obtain 45 regions by 50 sectors payment shares (see figure 18.1 for a flowchart of procedures).

In working with individual region, the steps involved are as follows. The first is to construct an *n* by *k* matrix of payments to *k* categories of labor force across *n* industries from the original data. In the second step, this *n* by *k* matrix is transferred into an *n* by *2* matrix with the 2 columns referring to payments to skilled and unskilled labor. Next, the SALTER-GTAP country-industry concordance is used to transfer the *n* by *2* matrix to the required *50* by *2* matrix. Finally, we analyze the results and make certain adjustments if necessary.

Since we could not access the original survey data for all GTAP regions, we developed a statistical model to predict labor payment shares in the unobserved regions. The estimations are model solutions based on observed macro variables, including GDP/outputs, and the average number of years of tertiary education in the population. Table 18.2 lists the available 14 samples of labor payment shares.

The remainder of this chapter is as follow. The next section outlines the basic statistical model that we developed for the purpose of estimating labor shares by individual sector. Section 18.3 deals with the results and the predictions of labor splits in the unobserved regions. Section 18.4 shows how the results were integrated into the GTAP framework. This permits us to estimate economy-wide payment shares of skilled and unskilled labor and the ratios of skilled/unskilled wage differentials for each region. Finally, section 18.5 gives a brief summary of the limitations of the work to date.

18.2 Model

The primary labor split data in their original forms are not complete for all regions. To fill in the gaps, a simple and straightforward way is to map all 30 regions of GTAP version 3 into certain categories of sample regions based on the stage of development. Then the mapped sample region's labor split data can be used to estimate the missing information for other regions in the rest of the category. While such method has the advantage of simplicity, the mapping itself is a rather subjective exercise. Besides, it produces results with little variation across regions. An improved approach is to first explore the linkage between labor payment shares and other region-specific characteristics that are observable, and then based on the established linkages, subsequently making predictions for other regions . Such an approach is more objective and it may offer some insight into the interdependency among certain economic and social factors for each region.

An easy way to explore the linkage between skilled labor payment shares and other region-specific factors is to postulate a mathematical relationship between them. To do this, we need to make two selections: which variables, both dependent and independent, are to be included and which functional form is to be used. One potential model can be expressed as follows:

$$S = F(\textit{stage of development, educational attainment, others}) \qquad (1)$$

Where, S is a measure of the difference between skilled and unskilled labor. Two candidates are the ratio of average payment of skilled to unskilled and the payment share of skilled (or unskilled) labor. The first one is preferred since payment share of skilled labor can be derived from it if the body count data are available for both skilled and unskilled labor. However, since we do not have access to wage ratio data at the industry level, we are forced to use the skilled labor payment share. *The stage of development* variable can be measured by GDP per capita. The average years of tertiary education and the average years of secondary education for the whole work force can be used to represent the *educational attainment*. After inspecting the regression results, however, it is found that the variable of secondary education is not significant for the model. Consequently, only the tertiary education variable is retained. This yields the following equation:

$$MHP = F(GDPC, TER) \quad (2)$$

Where MHP ("more highly paid") is the payment share of skilled labor, GDPC is the per capita GDP, TER is average years of tertiary education of the entire work force.

As far as functional form is concerned, we explore three alternatives for equation (2), namely: linear non-transformed, semilog-transformed, and double log-transformed:

$$MHP=a_0+a_1SEC+a_2TER, \quad (3)$$
$$\ln(MHP) = a_0+a_1SEC+a_2TER, \text{ and} \quad (4)$$
$$\ln(MHP) = a_0+a_1 \ln(SEC)+a_2 \ln (TER). \quad (5)$$

The variables are defined the same as above. The natural log transformation aims to smooth out the effects of explanatory variables, especially GDPC, which differ widely across regions. The Ordinary Least Squares (OLS) regression technique is used for each available sector. A careful analysis of the regression results suggests that the non-transformed linear regression model is preferred to others. The criteria for the selection of the functional form are based on 1) the overall fit measured by the average R-squared values, 2) the robustness of the prediction, and 3) the degree of simplicity (for details, see the GTAP Technical Paper No 11).

As listed in table 18.2, the payment share data of sample regions are from various sources. Since the sample regions have different base year, we should use the independent variables based on the corresponding year. However, they are not directly available and estimations are necessary. The average lengths of per capita tertiary education for some countries from 1980 - 1987 are available from the World Bank. Since these time series data display a very stable time trend pattern, we extrapolated backward to 1970 and forward to 1992 to obtain data for the required year. Extrapolation is done using simple OLS regression technique. In the cases of Hong Kong and Taiwan, education data are unavailable. Consequently, education data from Singapore and Korea are taken as proxies for Hong Kong and Taiwan, respectively. GDP per capita data are readily available from the World Bank's data base. We use the constant real GDP measured at the 1987

prices. Table 18.3 lists the actual payment share and table 18.6 lists the data used for regression and prediction.

During regression, we identified a problem with the definition of skilled labor for the Philippines and Thailand. Overestimation of these two regions' high skilled labor payment shares has left a significant impact on the overall fitting of the results for the manufactures and service sectors. As a consequence, we removed these two regions from our sample.

18.3 Results

The average R-squared values for all three models are about 0.50 which we deem quite acceptable for a cross-section model of this type. Table 18.4 lists the regression coefficients and the R-square values. Some coefficients of tertiary education data and GDP per capita are negative due to the collinearity between them. Nevertheless, such problems may not affect the accuracy of prediction.

To test the accuracy of prediction, we graph the relationship between the actual values from the sample and the predicted values based on the regression for all of the sampled countries (not shown here). These scatter plots look acceptable. Table 18.5 reports on these correlation coefficients between actual and predicted data. We find the results quite acceptable in the sense that on average the differences between the predicted and observed values are less than 20% for most regions in the sample. However, it is found that for some sample countries, there is a tendency towards overestimation (notably Japan 70, Canada 86, and Brazil 92) and others, a tendency towards systematic underestimation (EU 88, Australia 91, and Taiwan 90, for instance). It is likely that we have omitted some important explanatory variables in these cases.

18.4 Integration of predicted values into GTAP version 4

Having obtained the satisfactory regression results, we are now in a position to make predictions about labor splits for all 45 sectors in all 50 regions for the version 4 data base. The corresponding values of the explanatory variables for all GTAP regions in 1992 are (not shown here) similar to table 18.6. By plugging these values into the regression model, we obtain the 50x45 GTAP high skill labor payment share matrix. From there, the predicted value was overridden by the actual data for 7 sample regions, namely USA, Canada, Australia, EU, Japan, Taiwan, and South Korea. Since the actual data for the Philippines and Thailand were rather poor, the predicted values were retained

instead. We also use predicted values for Indonesia and Brazil since their actual data suffer from excessive over-aggregation. Table 18.7 shows the final results.

To evaluate this approach in obtaining labor splits at the industry level, we check what these labor splits imply about relative wages when they are imbedded into the GTAP data base and combined with the ILO "body count" data. The 50x45 high skilled labor payment matrix is obtained by multiplying the 50x45 skilled labor payment share (table 18.7) by the corresponding GTAP labor payment data (also a 50x45 matrix, not shown here). We sum across the rows in the resulting matrix to obtain a prediction of the economy-wide total skilled labor payments for the 45 GTAP regions. We also sum across the rows of the GTAP labor payment matrix to obtain the total labor payment. The economy-wide skilled labor payment ratio for all 45 regions can then be obtained as the ratio of these two payment vectors. The results of some regions are listed in table 18.8, column 4, which reports the share of skilled labor to total labor payments. Note that we only list the results for 25 regions where the body count data are available.

It is noticeable that the share-weighted ratios of MHP for most regions are much higher than their corresponding mean MHP.[1] The reason is that services sectors are the most heavily weighted among the 50 sectors, for all regions, in terms of the total labor payments, and these sectors happen to have the highest MHP values. Also noticeable is the fact that developed economies have generally higher skilled labor payment shares than developing economies. Such results are in line with our earlier hypothesis.

Next, we combine the economy-wide skilled labor body count data from the ILO with relevant payment share data to derive the implied economy-wide wage ratios for these regions. These data are available as an industry by occupation basis (original matrix not shown). We aggregate these matrices by occupations (according to skilled and unskilled labor dichotomy) then sum up over all industries to get the skilled labor body share data (table 18.8, column 4). Finally, table 18.8 column 5 gives the implied economy-wide wage ratios of skilled labor to unskilled labor for these 25 GTAP regions.

The results for the implied wage ratio are interesting. In general, the results confirm our earlier hypotheses. The developed regions show lower wage ratios of skilled to unskilled labor while the low-income regions have higher ratio. The case of Japan is a little odd: its ratio is much higher than other economies at the same stage of development such as USA and Canada. This may relate to the definition of skilled labor in that region. Japan has taken as skilled labor only the male professionals, who on average have much higher income than their female counterparts. While such adjustment may not seriously affect the labor payment share, it significantly reduces the skilled labor body count. The wage ratio for Canada turns out to be less than one. While the usage of actual 1986 Canadian payment share data may underestimate the 1992 figures, we believe the main reason lies in the omission of much of the government service sector in the Canadian Input-Output table. Note

[1]Not shown here but details given in Technical Paper No. 11.

that this sector is not only one of the highly skilled labor sectors but also one of the largest. China has the lowest ratio among all low-income regions.

In summary, the implied wage ratios are not wildly out of line – despite the rather eclectic mix of the data set. Therefore we believe the proposed methodology represents a good starting point for further work in this area in the future.

18.5 Limitations of the work to date

Although these labor payment share data represent the best which are available from current sources, they suffer from some significant limitations. Caution is therefore advised when using them for cross-region comparisons. The first limitation rests with the diversity of the data sources. For instance, Taiwan's data were derived from two different sources (collected by different agencies) which might have adopted different criteria in constructing these data. Therefore there is considerable scope for differences to be introduced.

A second limitation has to do with the definition of skilled labor. While most of the developed economies distinguish skilled labor from unskilled labor according to their occupations, some developing regions, notably Thailand and Philippines, classify labor types based on level of education or length of employment. Under their code of labor classifications, high school graduates are denoted as skilled labor. This differs from the more industrialized economies, where skilled labor generally has some kind of post-secondary education. As a result, Thailand and Philippines have very high skilled payment shares relative to other regions in all sectors except agriculture. This leads us to omit these observations in our final data set.

The cases of the EU and Japan are a little more complicated. The EU uses a manual and non-manual labor split but the results were adjusted to match the professional vs. production labor division following the observed pattern in Australia. Since both MHP-LHP and Manual-Nonmanual dichotomies at the industry level are available for Australia, proportional difference at the industry level is derived. The proportional correction is then applied to the EU case for each industry to obtain the approximate professional and production payment split.

In the case of Japan, the payment bill and employment body count is available for both sexes in each industry. Based on previous wage survey data and some added assumptions, the average wages of male production workers and professional workers were set, and they are the same across all industries. Given the above information, the number of male and female production and professional workers were derived, but only the male professional workers are considered in the skilled labor category. There may be three potential problems for such an approach. Firstly, it treats the female professionals as equivalent to male production workers. Secondly, it ignores the wage difference across industries. Finally, the wage setting of male production and professional workers could be subjective.

Figure 18.1 Flowchart of processing procedure

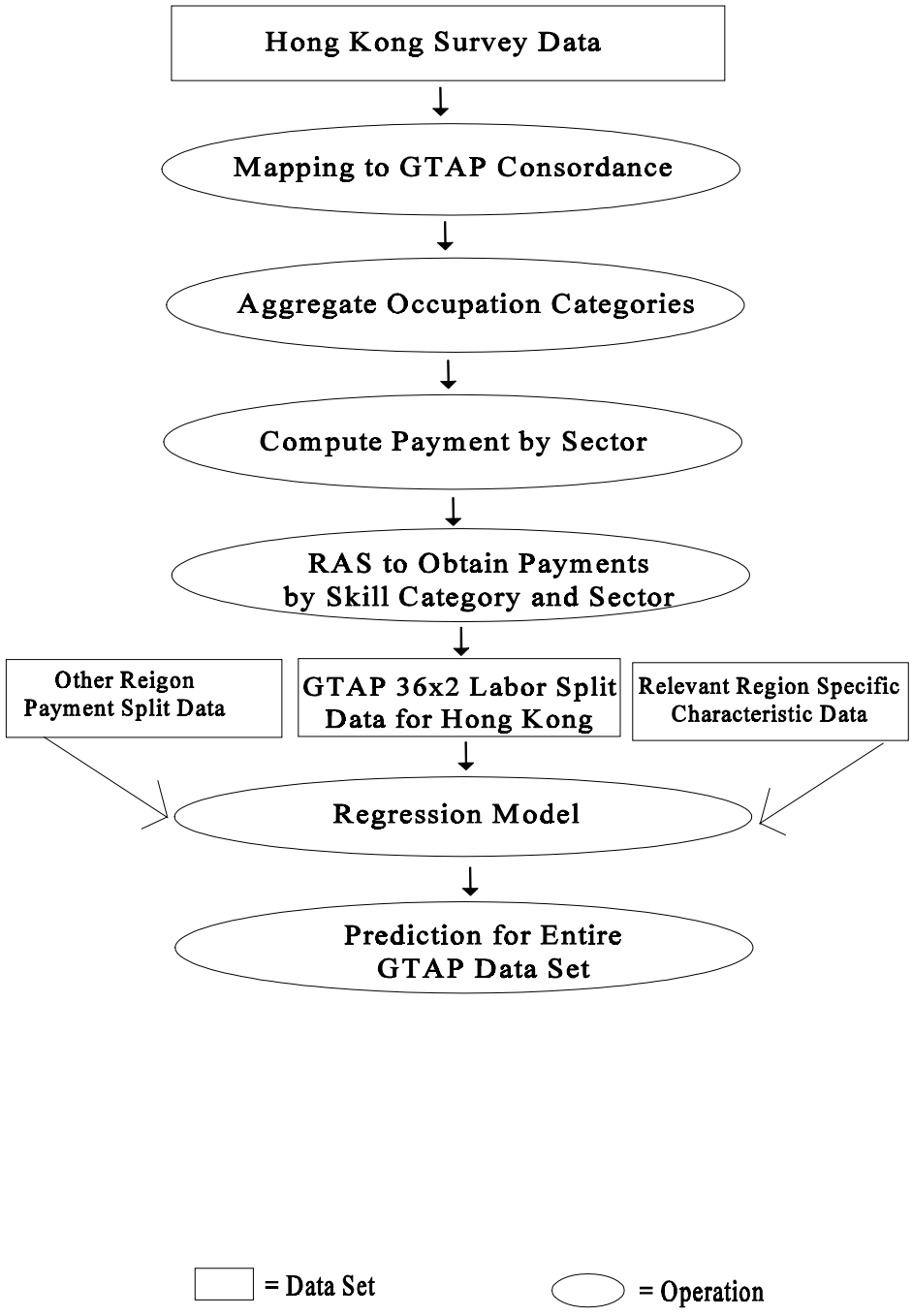

Table 18.1 The classification of workers by occupation

Professional workers (Skilled Labor)

1. managers and administrators (including farm managers)
2. professionals
3. para-professionals

Production workers (Unskilled Labor)

4. tradespersons
5. clerks
6. salespersons and personal service workers
7. plant and machine operators, and drivers
8. laborers and related workers
9. farm workers

Table 18.2 Summary of 14 samples of labor payment split by Tri Thanh and Rod Tyers

Region	Year	Reference	Skilled Labor definition basis	Sector disaggregation	Special adjustment
USA	1992	92 CPS	Occupation	Quite Detailed	/
CAN	1986	86 Census	Occupation	Not Available	Impose USA Pattern
AUS	1991	ORANI	Occupation	Quite Detailed	/
EU	1988	Eurostat	Manual / non-manual but adjusted	Detailed	Impose Australia pattern
Japan	1970 & 1992	Japan Wage Survey	Male professional workers	No Agriculture sector data	/
Taiwan	1979 & 1990	DG-budget & Dept. of Agriculture & Forestry	Occupation	Quite Detailed	/
South Korea	1991	Korea National Statistical	Office workers	No Agricultural sector data	Impose Taiwan 1992 pattern
Brazil	1992	ILO	Occupation	Very rough	/
Indonesia	1992	Sakarnas Survey	Wage & education Level	Rough	/
Philippines	1986	APEX model	Workers finishing high School education	Rough for manufacture & agriculture sectors	/
Thailand	1985	PARA CGE Model	Employee based on Term of length	Rough for manufacture & agriculture sectors	/
Hong Kong	1991	1991 CPS	Occupation	Rough for Agriculture	RAS
India	1981	1981 census	Occupation	Rough for all sectors	RAS

Notes: (1) Canadian case assume Similarity between USA & Canada for payment distribution across occupation & industry, (2) ILO and Bank of Switzerland data are used for adjustment, (3) Taiwan data used different sources for agriculture & other sectors, (4) overestimation of skill labor payment share.

18.3 The skilled labor payment shares: Actual data

YEAR	1970	1979	1985	1986	1986	1988	1990	1991	1991	1991	1992	1992	1992	1992
Sector\region	JPN	TWN	THA	PHL	CAN	EU	TWN	AUS	KOR	HKG	USA	JPN	IDN	BRA
1	.	0.132	0.011	0.08	.	0.368	0.213	0.348	0.213	0.114	0.371	.	0.028	0.224
2	.	0.132	0.011	0.081	0.195	0.364	0.213	0.348	0.213	0.114	0.371	.	.	0.224
3	.	0.132	0.022	0.08	0.195	0.367	0.213	0.348	0.213	0.114	0.371	.	0.028	0.224
4	.	0.132	0.011	0.08	0.195	0.316	0.213	0.348	0.213	0.114	0.371	.	0.047	0.224
5	.	0.132	0.011	0.172	.	0.394	0.213	0.348	0.213	0.114	0.465	.	.	0.224
6	.	0.132	0.022	0.101	0.208	0.402	0.213	0.348	0.213	0.114	0.465	.	0.033	0.224
7	.	0.132	0.356	0.121	0.193	0.209	0.213	0.305	0.213	0.114	0.397	.	0.047	0.224
8	.	0.132	0.504	0.081	0.204	0.397	0.213	0.191	0.213	0.076	0.446	.	0.033	0.224
9	0.14	0.085	0.399	0.461	0.268	0.295	0.087	0.192	0.145	0.221	0.141	0.41	0.261	.
10	0.14	0.202	0.399	0.461	0.268	0.665	0.244	0.398	.	0.221	0.431	0.41	0.261	.
11	0.14	0.202	.	0.461	0.268	0.665	0.244	0.398	.	0.221	0.431	0.41	.	.
12	0.14	0.125	0.399	0.461	0.268	0.323	0.218	0.239	0.152	0.221	0.283	0.41	0.261	.
13	0.221	0.276	0.675	0.468	0.18	0.279	0.234	0.253	0.268	0.327	0.239	0.31	0.115	0.141
14	0.221	0.229	0.675	0.468	0.18	0.263	0.245	0.253	0.243	0.327	0.141	0.31	0.115	0.141
15	0.221	0.233	0.675	0.468	0.18	0.248	0.212	0.253	0.202	0.327	0.141	0.31	0.115	0.141
16	0.221	0.323	0.675	0.468	0.18	0.239	0.343	0.253	0.254	0.327	0.271	0.31	0.115	0.141
17	0.224	0.209	0.675	0.468	0.182	0.269	0.187	0.253	0.213	0.327	0.324	0.39	0.115	0.141
18	0.129	0.154	0.55	0.415	0.119	0.211	0.242	0.273	0.163	0.304	0.178	0.272	0.155	0.141
19	0.175	0.105	0.55	0.415	0.161	0.178	0.144	0.274	0.162	0.26	0.216	0.153	.	0.141
20	0.175	0.092	0.55	0.415	0.145	0.195	0.179	0.274	0.124	0.4	0.2	0.153	0.155	0.141
21	0.2	0.138	0.356	0.448	0.151	0.194	0.214	0.194	0.174	0.263	0.226	0.351	0.117	0.141
22	0.206	0.195	0.586	0.448	0.3	0.301	0.199	0.295	0.296	0.419	0.355	0.415	0.239	0.141
23	0.248	0.23	0.675	0.55	0.271	0.548	0.204	0.454	0.201	0.575	0.356	0.376	0.239	0.141
24	0.231	0.235	0.675	0.55	0.352	0.37	0.262	0.397	0.281	0.393	0.439	0.37	0.239	0.141
25	0.141	0.17	0.675	0.487	0.19	0.25	0.212	0.248	0.21	0.352	0.252	0.378	0.239	0.141
26	0.177	0.172	0.399	0.464	0.165	0.269	0.172	0.289	0.206	0.315	0.206	0.368	0.239	0.141
27	0.155	0.209	0.675	0.464	0.165	0.248	0.23	0.289	0.224	0.315	0.244	0.378	0.239	0.141
28	0.178	0.173	0.399	0.505	0.208	0.248	0.221	0.258	0.221	0.315	0.278	0.361	0.239	0.141
29	0.128	0.217	0.687	0.505	0.302	0.283	0.268	0.245	0.231	0.451	0.387	0.4	0.239	0.141
30	0.199	0.247	0.489	0.505	0.37	0.38	0.322	0.39	0.269	0.451	0.478	0.382	0.239	0.141
31	0.227	0.147	0.518	0.433	0.207	0.237	0.226	0.263	0.185	0.352	0.285	0.345	0.065	0.141
32	0.263	0.381	0.897	0.554	0.257	0.574	0.391	0.365	0.152	0.472	0.332	0.417	0.493	0.239
33	0.292	0.117	0.81	0.427	0.193	0.242	0.216	0.254	0.167	0.27	0.251	0.421	0.154	0.176
34	0.255	0.294	0.576	0.457	0.195	0.27	0.335	0.281	0.206	0.428	0.207	0.387	0.084	0.159
35	0.331	0.365	0.56	0.682	0.381	0.536	0.369	0.483	0.352	0.451	0.628	0.407	0.32	0.529
36	0.303	0.659	0.914	0.82	0.641	0.563	0.775	0.654	0.473	0.682	0.494	0.365	0.553	0.529

Source: see appendix of GTAP Technical Paper No. 11. Note . = missing value.

Table 18.4 The regression coefficients of non-transformed model (MHP = f(TER, GDPC)) for version 4 GTAP data base.

Sec	Constant	Tertiary(1)	GDPC(2)	R^2	Sec	Constant	Tertiary(1)	GDPC(2)	R^2
1	0.0100	0.0255	0.0008	0.43	26	0.1207	-0.0142	0.0089**	0.76
2	0.0100	0.0255	0.0008	0.43	27	0.1415	-0.0523	0.0057**	0.35
3	0.0100	0.0255	0.0008	0.43	28	0.1212	0.0101	0.0032	0.3
4	0.0100	0.0255	0.0008	0.43	29	0.1360	-0.0401	0.0050	0.19
5	0.0100	0.0255	0.0008	0.43	30	0.1144	-0.0363	0.0074**	0.7
6	0.0100	0.0255	0.0008	0.43	31	0.1554	-0.0050	0.0090**	0.64
7	0.0100	0.0255	0.0008	0.43	32	0.1771	-0.1113	0.0147**	0.51
8	0.0100	0.0255	0.0008	0.43	33	0.1648	0.0511	0.0080**	0.71
9	0.0100	0.0255	0.0008	0.43	34	0.1484	-0.0429	0.0075**	0.49
10	0.0100	0.0255	0.0008	0.43	35	0.1535	-0.0825	0.0084**	0.56
11	0.0100	0.0255	0.0008	0.43	36	0.1606	-0.0449	0.0070**	0.45
12	0.0100	0.0255	0.0008	0.43	37	0.1502	-0.0169	0.0067**	0.58
13	0.0100	0.0255	0.0008	0.43	38	0.1497	0.0305	0.0075*	0.52
14	0.0100	0.0255	0.0008	0.43	39	0.1497	0.0305	0.0075*	0.52
15	0.1115	-0.1171*	0.0110**	0.57	40	0.1665	0.0704	0.0081**	0.67
16	0.1507	0.0273	0.0098	0.38	41	0.1665	0.0704	0.0081**	0.67
17	0.1089	0.0239	0.0121	0.43	42	0.1097	-0.0244	0.0092**	0.76
18	0.1235	-0.0152	0.0084**	0.6	43	0.3449	-0.1285	0.0065	0.17
19	0.1666	-0.1092**	0.0081**	0.54	44	0.3449	-0.1285	0.0065	0.17
20	0.1666	-0.1092**	0.0081**	0.54	45	0.3449	-0.1285	0.0065	0.49
21	0.1778	-0.0113	0.0050	0.26	46	0.1556	-0.0699	0.0088**	0.71
22	0.1580	-0.1158**	0.0086**	0.64	47	0.1882	-0.1184	0.0099**	0.49
23	0.1643	-0.0446	0.0067**	0.44	48	0.4014	0.1272	-0.0022	0.22
24	0.1778	-0.0113	0.0050	0.26	49	0.6021	0.0309	-0.0048	0.08
25	0.1778	-0.0113	0.0050	0.26	50	N/A	N/A	N/A	N/A

Notes: (1) Tertiary data are measured as the years of tertiary education of average people
(2) The unit of GDPC data is thousands of US dollar.

Table 18.5 Pearson correlation coefficients of the predicted data and actual data

YEAR	1970	1979	1986	1988	1990	1991
Region	JPN	TWN	CAN	EU	TWN	AUS
Correlation Coef.	0.601	0.944	0.891	0.755	0.901	0.877
YEAR	1991	1991	1992	1992	1992	1992
Region	KOR	HKG	USA	JPN	IDN	BRA
Correlation Coef.	0.837	0.815	0.987	0.719	0.803	0.786

Table 18.6 The values of explanatory variables for 30 GTAP regions at 1992

Region/Var.	TER	SEC	GDPC	Region/Var.	TER	SEC	GDPC
AUS	0.628	2.399	17087	USA	1.82	3.108	23268
NZL	0.628	2.399	11869	MEX	0.366	0.979	3797
JPN	0.713	3.801	29498	CAM	0.262	0.848	1619
KOR	0.576	1.926	7045	ARG	0.722	0.474	6869
IDN	0.103	0.595	695	BRA	0.291	0.333	2663
MYS	0.107	1.735	3123	CHL	0.405	0.836	3146
PHL	0.845	1.693	835	RSM	0.479	1.032	1689
SGP	0.333	1.863	17581	E_U	0.566	2.104	20377
THA	0.297	0.616	1953	EU3	0.698	2.743	25134
CHN	0.035	0.921	359	EFT	0.537	2.382	31335
HKG	0.333	1.863	16694	CEA	0.537	2.382	2124
WN	0.576	1.926	9932	FSU	0.537	2.382	2142
IDI	0.14	1.102	275	MEA	0.301	0.925	2273
RAS	0.13	0.878	319	SSA	0.031	0.345	563
CAN	1.12	3.046	19815	ROW	0.136	1.344	1204

Note: For education data, NZL uses AUS data; HKG uses SGP data; TWN uses Korea data; CEA and FSU use EFT data.

Table 18.7 The results of skill labor payment shares for GTAP version 4

Reg\sector	pdr	wht	gro	v_f	osd	c_b	pfb	ocr	ctl	oap
AUS	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052
NZL	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
JPN	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
KOR	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
IDN	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
MYS	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
PHL	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
SGP	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039
THA	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
VNM	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
CHN	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
HKG	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
TWN	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
IND	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
LKA	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
RAS	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
CAN	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
USA	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071
MEX	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
CAM	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
VEN	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
COL	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
RAP	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
ARG	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
BRA	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
CHL	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
URY	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
RSM	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
GBR	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042
DEU	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054
DNK	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059
SWE	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063
FIN	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
REU	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047

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Table 18.7 The results of skill labor payment shares for GTAP version 4 (continued)

Reg\sector	pdr	wht	gro	v_f	osd	c_b	pfb	ocr	ctl	oap
EFT	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
CEA	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
FSU	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
TUR	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
RME	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
MAR	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
RNF	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
SAF	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
RSA	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
RSS	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
ROW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	rmk	wol	for	fsh	col	oil	gas	omn	cmt	omt
AUS	0.052	0.052	0.052	0.052	0.192	0.398	0.398	0.239	0.253	0.253
NZL	0.034	0.034	0.034	0.034	0.165	0.285	0.267	0.212	0.192	0.192
JPN	0.015	0.015	0.015	0.015	0.41	0.41	0.41	0.41	0.31	0.31
KOR	0.005	0.005	0.005	0.005	0.145	0.236	0.208	0.152	0.243	0.243
IDN	0.001	0.001	0.001	0.001	0.261	0.261	0.12	0.261	0.115	0.115
MYS	0.013	0.013	0.013	0.013	0.13	0.184	0.149	0.146	0.177	0.177
PHL	0.009	0.009	0.009	0.009	0.015	0.182	0.139	0.115	0.073	0.073
SGP	0.039	0.039	0.039	0.039	0.266	0.333	0.329	0.265	0.275	0.275
THA	0.001	0.001	0.001	0.001	0.094	0.178	0.14	0.133	0.145	0.145
VNM	0.007	0.007	0.007	0.007	0.105	0.153	0.111	0.122	0.16	0.16
CHN	0.008	0.008	0.008	0.008	0.107	0.155	0.114	0.124	0.162	0.162
HKG	0.058	0.058	0.058	0.058	0.221	0.221	0.221	0.221	0.327	0.327
TWN	0.03	0.03	0.03	0.03	0.087	0.244	0.244	0.218	0.245	0.245
IND	0.009	0.009	0.009	0.009	0.094	0.157	0.116	0.122	0.149	0.149
LKA	0.008	0.008	0.008	0.008	0.104	0.158	0.117	0.125	0.159	0.159
RAS	0.009	0.009	0.009	0.009	0.092	0.158	0.116	0.122	0.148	0.148
CAN	0.078	0.078	0.078	0.078	0.268	0.268	0.268	0.268	0.18	0.18
USA	0.071	0.071	0.071	0.071	0.141	0.431	0.431	0.283	0.141	0.141
MEX	0.017	0.017	0.017	0.017	0.106	0.198	0.163	0.148	0.153	0.153
CAM	0.013	0.013	0.013	0.013	0.094	0.174	0.135	0.131	0.147	0.147
VEN	0.018	0.018	0.018	0.018	0.074	0.195	0.158	0.138	0.125	0.125

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Table 18.7 The results of skill labor payment shares for GTAP version 4 (continued)

Reg\sector	rmk	wol	for	fsh	col	oil	gas	omn	cmt	omt
COL	0.013	0.013	0.013	0.013	0.083	0.173	0.134	0.128	0.137	0.137
RAP	0.016	0.016	0.016	0.016	0.055	0.178	0.136	0.123	0.11	0.11
ARG	0.027	0.027	0.027	0.027	0.098	0.238	0.209	0.168	0.139	0.139
BRA	0.034	0.034	0.034	0.034	0.102	0.185	0.148	0.139	0.141	0.141
CHL	0.017	0.017	0.017	0.017	0.094	0.193	0.156	0.142	0.143	0.143
URY	0.02	0.02	0.02	0.02	0.077	0.204	0.168	0.143	0.126	0.126
RSM	0.011	0.011	0.011	0.011	0.095	0.169	0.129	0.129	0.148	0.148
GBR	0.042	0.042	0.042	0.042	0.256	0.341	0.338	0.267	0.265	0.265
DEU	0.054	0.054	0.054	0.054	0.313	0.408	0.419	0.32	0.305	0.305
DNK	0.059	0.059	0.059	0.059	0.343	0.438	0.455	0.344	0.327	0.327
SWE	0.063	0.063	0.063	0.063	0.341	0.452	0.472	0.352	0.323	0.323
FIN	0.05	0.05	0.05	0.05	0.257	0.379	0.381	0.289	0.259	0.259
REU	0.047	0.047	0.047	0.047	0.295	0.665	0.665	0.323	0.263	0.263
EFT	0.065	0.065	0.065	0.065	0.396	0.473	0.5	0.379	0.37	0.37
CEA	0.017	0.017	0.017	0.017	0.066	0.186	0.147	0.131	0.119	0.119
FSU	0.017	0.017	0.017	0.017	0.067	0.186	0.148	0.131	0.119	0.119
TUR	0.014	0.014	0.014	0.014	0.112	0.183	0.147	0.141	0.162	0.162
RME	0.015	0.015	0.015	0.015	0.088	0.183	0.145	0.135	0.14	0.14
MAR	0.01	0.01	0.01	0.01	0.103	0.165	0.126	0.129	0.156	0.156
RNF	0.014	0.014	0.014	0.014	0.102	0.18	0.142	0.137	0.153	0.153
SAF	0.013	0.013	0.013	0.013	0.123	0.182	0.146	0.143	0.171	0.171
RSA	0.008	0.008	0.008	0.008	0.111	0.157	0.116	0.126	0.165	0.165
RSS	0.008	0.008	0.008	0.008	0.11	0.157	0.116	0.126	0.164	0.164
ROW	0.01	0.01	0.01	0.01	0.109	0.165	0.126	0.13	0.162	0.162
Reg\sector	vol	mil	pcr	sgr	ofd	b_t	tex	wap	lea	lum
AUS	0.253	0.253	0.253	0.253	0.253	0.253	0.273	0.274	0.274	0.194
NZL	0.229	0.185	0.214	0.229	0.229	0.215	0.176	0.165	0.169	0.178
JPN	0.31	0.31	0.31	0.31	0.31	0.39	0.272	0.153	0.153	0.351
KOR	0.254	0.202	0.268	0.254	0.254	0.213	0.163	0.162	0.124	0.174
IDN	0.115	0.115	0.115	0.115	0.115	0.115	0.155	0.123	0.155	0.117
MYS	0.191	0.17	0.178	0.191	0.191	0.144	0.152	0.131	0.147	0.132
PHL	0.167	0.061	0.124	0.167	0.167	0.11	0.099	0.13	0.105	0.085
SGP	0.264	0.272	0.269	0.264	0.264	0.273	0.225	0.182	0.21	0.233

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Table 18.7 The results of skill labor payment shares for GTAP version 4 (continued)

Reg\sector	vol	mil	pcr	sgr	ofd	b_t	tex	wap	lea	lum
THA	0.182	0.137	0.16	0.182	0.182	0.13	0.135	0.129	0.133	0.115
VNM	0.176	0.152	0.16	0.176	0.176	0.118	0.139	0.121	0.135	0.112
CHN	0.177	0.154	0.162	0.177	0.177	0.12	0.14	0.121	0.136	0.113
HKG	0.327	0.327	0.327	0.327	0.327	0.327	0.304	0.26	0.4	0.263
TWN	0.343	0.212	0.234	0.343	0.343	0.187	0.242	0.144	0.179	0.214
IND	0.175	0.141	0.156	0.175	0.175	0.118	0.134	0.122	0.131	0.109
LKA	0.177	0.15	0.161	0.177	0.177	0.121	0.139	0.122	0.135	0.113
RAS	0.175	0.139	0.156	0.175	0.175	0.118	0.133	0.122	0.131	0.108
CAN	0.18	0.18	0.18	0.18	0.18	0.182	0.119	0.161	0.145	0.151
USA	0.271	0.141	0.239	0.271	0.271	0.324	0.178	0.216	0.2	0.226
MEX	0.19	0.145	0.17	0.19	0.19	0.146	0.142	0.136	0.14	0.127
CAM	0.18	0.138	0.159	0.18	0.18	0.128	0.135	0.128	0.133	0.114
VEN	0.183	0.115	0.154	0.183	0.183	0.135	0.127	0.135	0.128	0.113
COL	0.178	0.128	0.154	0.178	0.178	0.125	0.13	0.127	0.129	0.11
RAP	0.174	0.1	0.142	0.174	0.174	0.119	0.117	0.129	0.119	0.099
ARG	0.201	0.129	0.174	0.201	0.201	0.168	0.141	0.149	0.141	0.136
BRA	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141
CHL	0.186	0.134	0.163	0.186	0.186	0.139	0.136	0.134	0.135	0.12
URY	0.186	0.116	0.157	0.186	0.186	0.141	0.129	0.138	0.13	0.117
RSM	0.179	0.139	0.159	0.179	0.179	0.125	0.135	0.126	0.133	0.113
GBR	0.265	0.261	0.267	0.265	0.265	0.276	0.222	0.184	0.208	0.232
DEU	0.297	0.302	0.306	0.297	0.297	0.332	0.252	0.207	0.234	0.276
DNK	0.312	0.325	0.325	0.312	0.312	0.359	0.268	0.217	0.248	0.297
SWE	0.316	0.32	0.327	0.316	0.316	0.367	0.268	0.222	0.249	0.301
FIN	0.277	0.255	0.274	0.277	0.277	0.298	0.224	0.197	0.212	0.244
REU	0.239	0.248	0.279	0.239	0.239	0.269	0.211	0.178	0.195	0.194
EFT	0.334	0.369	0.357	0.334	0.334	0.396	0.295	0.229	0.271	0.33
CEA	0.179	0.109	0.149	0.179	0.179	0.127	0.123	0.132	0.124	0.107
FSU	0.179	0.109	0.149	0.179	0.179	0.128	0.123	0.132	0.124	0.107
TUR	0.187	0.153	0.17	0.187	0.187	0.139	0.144	0.131	0.14	0.124
RME	0.182	0.13	0.158	0.182	0.182	0.132	0.133	0.131	0.132	0.115
MAR	0.18	0.148	0.162	0.18	0.18	0.125	0.139	0.125	0.135	0.115
RNF	0.184	0.144	0.164	0.184	0.184	0.134	0.139	0.13	0.136	0.119

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Table 18.7 The results of skill labor payment shares for GTAP version 4 (continued)

Reg\sector	vol	mil	pcr	sgr	ofd	b_t	tex	wap	lea	lum
SAF	0.189	0.163	0.174	0.189	0.189	0.141	0.149	0.131	0.144	0.128
RSA	0.178	0.157	0.164	0.178	0.178	0.123	0.142	0.122	0.137	0.115
RSS	0.178	0.156	0.163	0.178	0.178	0.122	0.141	0.122	0.137	0.115
ROW	0.181	0.153	0.164	0.181	0.181	0.127	0.141	0.125	0.137	0.117
Reg\sector	ppp	p_c	crp	nmm	i_s	nfm	fmp	mvh	otn	ele
AUS	0.295	0.454	0.397	0.248	0.289	0.289	0.258	0.245	0.245	0.39
NZL	0.256	0.279	0.29	0.209	0.199	0.214	0.217	0.257	0.257	0.305
JPN	0.415	0.376	0.37	0.378	0.368	0.378	0.361	0.4	0.4	0.382
KOR	0.296	0.201	0.281	0.21	0.206	0.224	0.221	0.231	0.231	0.269
IDN	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239
MYS	0.18	0.208	0.193	0.165	0.169	0.176	0.167	0.175	0.175	0.197
PHL	0.15	0.09	0.209	0.113	0.085	0.123	0.137	0.178	0.178	0.229
SGP	0.314	0.397	0.324	0.267	0.275	0.269	0.263	0.292	0.292	0.332
THA	0.167	0.169	0.193	0.147	0.142	0.158	0.155	0.171	0.171	0.201
VNM	0.153	0.172	0.165	0.145	0.149	0.158	0.148	0.15	0.15	0.168
CHN	0.155	0.175	0.167	0.147	0.151	0.159	0.15	0.151	0.151	0.17
HKG	0.419	0.575	0.393	0.352	0.315	0.315	0.315	0.451	0.451	0.451
TWN	0.199	0.204	0.262	0.212	0.172	0.23	0.221	0.268	0.268	0.322
IND	0.153	0.162	0.171	0.142	0.141	0.153	0.147	0.154	0.154	0.176
LKA	0.156	0.173	0.171	0.147	0.149	0.158	0.15	0.154	0.154	0.174
RAS	0.153	0.161	0.172	0.141	0.14	0.153	0.147	0.154	0.154	0.178
CAN	0.3	0.271	0.352	0.19	0.165	0.165	0.208	0.302	0.302	0.37
USA	0.355	0.356	0.439	0.252	0.206	0.244	0.278	0.387	0.387	0.478
MEX	0.183	0.189	0.211	0.159	0.152	0.168	0.167	0.187	0.187	0.221
CAM	0.164	0.168	0.188	0.146	0.142	0.157	0.154	0.167	0.167	0.195
VEN	0.173	0.155	0.213	0.143	0.129	0.153	0.157	0.186	0.186	0.226
COL	0.161	0.157	0.189	0.142	0.134	0.152	0.151	0.168	0.168	0.198
RAP	0.157	0.129	0.198	0.13	0.114	0.14	0.145	0.172	0.172	0.212
ARG	0.208	0.194	0.253	0.166	0.148	0.173	0.181	0.221	0.221	0.27
BRA	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141
CHL	0.177	0.174	0.208	0.152	0.143	0.161	0.161	0.183	0.183	0.218
URY	0.18	0.161	0.222	0.147	0.131	0.156	0.162	0.193	0.193	0.236
RSM	0.161	0.167	0.183	0.145	0.142	0.156	0.152	0.163	0.163	0.19

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Table 18.7 The results of skill labor payment shares for GTAP version 4 (continued)

Reg\sector	ppp	p_c	crp	nmm	i_s	nfm	fmp	mvh	otn	ele
GBR	0.317	0.391	0.334	0.266	0.268	0.267	0.264	0.3	0.3	0.344
DEU	0.376	0.471	0.394	0.31	0.312	0.307	0.305	0.353	0.353	0.407
DNK	0.404	0.512	0.419	0.331	0.336	0.327	0.325	0.376	0.376	0.433
SWE	0.413	0.515	0.435	0.334	0.335	0.329	0.331	0.389	0.389	0.451
FIN	0.343	0.404	0.372	0.276	0.271	0.275	0.279	0.331	0.331	0.388
REU	0.301	0.548	0.37	0.25	0.269	0.248	0.248	0.283	0.283	0.38
EFT	0.441	0.579	0.447	0.365	0.376	0.359	0.353	0.404	0.404	0.459
CEA	0.166	0.144	0.205	0.138	0.123	0.147	0.152	0.179	0.179	0.218
FSU	0.166	0.144	0.205	0.138	0.123	0.148	0.152	0.179	0.179	0.219
TUR	0.175	0.19	0.195	0.157	0.156	0.167	0.162	0.175	0.175	0.201
RME	0.169	0.165	0.199	0.146	0.138	0.157	0.156	0.176	0.176	0.208
MAR	0.161	0.175	0.178	0.148	0.148	0.159	0.153	0.16	0.16	0.183
RNF	0.17	0.178	0.193	0.152	0.148	0.162	0.158	0.172	0.172	0.201
SAF	0.177	0.2	0.192	0.162	0.163	0.172	0.165	0.173	0.173	0.197
RSA	0.157	0.18	0.168	0.149	0.154	0.161	0.151	0.153	0.153	0.171
RSS	0.157	0.178	0.169	0.149	0.153	0.161	0.151	0.153	0.153	0.171
ROW	0.162	0.18	0.177	0.151	0.152	0.162	0.154	0.16	0.16	0.181
Reg\sector	ome	omf	ely	gdt	wtr	cns	t_t	osp	osg	dwe
AUS	0.39	0.263	0.365	0.365	0.365	0.254	0.281	0.483	0.654	0
NZL	0.305	0.202	0.342	0.342	0.342	0.214	0.229	0.456	0.566	0
JPN	0.382	0.345	0.417	0.417	0.417	0.421	0.387	0.407	0.365	0
KOR	0.269	0.185	0.152	0.152	0.152	0.167	0.206	0.352	0.473	0
IDN	0.239	0.065	0.493	0.493	0.493	0.154	0.084	0.32	0.553	0
MYS	0.197	0.134	0.353	0.353	0.353	0.174	0.204	0.41	0.593	0
PHL	0.229	0.091	0.249	0.249	0.249	0.101	0.091	0.514	0.633	0
SGP	0.332	0.265	0.413	0.413	0.413	0.286	0.323	0.402	0.525	0
THA	0.201	0.117	0.323	0.323	0.323	0.15	0.169	0.438	0.606	0
VNM	0.168	0.107	0.344	0.344	0.344	0.153	0.183	0.408	0.606	0
CHN	0.17	0.109	0.345	0.345	0.345	0.154	0.185	0.408	0.605	0
HKG	0.451	0.352	0.472	0.472	0.472	0.27	0.428	0.451	0.682	0
TWN	0.322	0.226	0.391	0.391	0.391	0.216	0.335	0.369	0.775	0
IND	0.176	0.106	0.332	0.332	0.332	0.146	0.171	0.422	0.609	0
LKA	0.174	0.11	0.341	0.341	0.341	0.153	0.181	0.413	0.606	0
RAS	0.178	0.106	0.33	0.33	0.33	0.145	0.17	0.424	0.61	0

contd

Table 18.7 The results of skill labor payment shares for GTAP version 4 (continued)

Reg\sector	ome	omf	ely	gdt	wtr	cns	t_t	osp	osg	dwe
CAN	0.37	0.207	0.257	0.257	0.257	0.193	0.195	0.381	0.641	0
USA	0.478	0.285	0.332	0.332	0.332	0.251	0.207	0.628	0.494	0
MEX	0.221	0.133	0.326	0.326	0.326	0.161	0.179	0.443	0.599	0
CAM	0.195	0.115	0.325	0.325	0.325	0.149	0.17	0.434	0.607	0
VEN	0.226	0.12	0.298	0.298	0.298	0.14	0.148	0.47	0.611	0
COL	0.198	0.111	0.316	0.316	0.316	0.143	0.16	0.444	0.61	0
RAP	0.212	0.103	0.288	0.288	0.288	0.125	0.131	0.474	0.62	0
ARG	0.27	0.152	0.301	0.301	0.301	0.163	0.167	0.482	0.596	0
BRA	0.141	0.141	0.239	0.239	0.239	0.176	0.159	0.529	0.529	0
CHL	0.218	0.126	0.317	0.317	0.317	0.153	0.168	0.45	0.604	0
URY	0.236	0.126	0.297	0.297	0.297	0.144	0.15	0.474	0.608	0
RSM	0.19	0.113	0.328	0.328	0.328	0.149	0.171	0.43	0.607	0
GBR	0.344	0.266	0.4	0.4	0.4	0.281	0.313	0.418	0.527	0
DEU	0.407	0.323	0.423	0.423	0.423	0.329	0.361	0.419	0.498	0
DNK	0.433	0.351	0.437	0.437	0.437	0.353	0.388	0.414	0.483	0
SWE	0.451	0.358	0.429	0.429	0.429	0.355	0.384	0.428	0.482	0
FIN	0.388	0.287	0.385	0.385	0.385	0.289	0.31	0.446	0.521	0
REU	0.38	0.237	0.574	0.574	0.574	0.242	0.27	0.536	0.563	0
EFT	0.459	0.39	0.47	0.47	0.47	0.393	0.437	0.393	0.46	0
CEA	0.218	0.112	0.295	0.295	0.295	0.134	0.142	0.47	0.614	0
FSU	0.219	0.112	0.295	0.295	0.295	0.134	0.142	0.47	0.614	0
TUR	0.201	0.127	0.337	0.337	0.337	0.162	0.187	0.425	0.599	0
RME	0.208	0.118	0.316	0.316	0.316	0.147	0.163	0.448	0.607	0
MAR	0.183	0.114	0.337	0.337	0.337	0.154	0.18	0.42	0.605	0
RNF	0.201	0.121	0.33	0.33	0.33	0.155	0.177	0.432	0.603	0
SAF	0.197	0.13	0.347	0.347	0.347	0.169	0.197	0.415	0.596	0
RSA	0.171	0.112	0.348	0.348	0.348	0.157	0.188	0.406	0.603	0
RSS	0.171	0.111	0.346	0.346	0.346	0.156	0.187	0.407	0.604	0
ROW	0.181	0.116	0.342	0.342	0.342	0.157	0.185	0.414	0.603	0

Table 18.8 Implied wage ratio of skilled to unskilled for some version 4 GTAP regions

Region	(1) Total labor body counts	(2) Skilled total	(3) Skilled body count share	(4) Payment share of skilled labor	(5) S/U wage ratio
USA	119149000	35419000	29.73%	39.22%	1.53
CAN	13592900	4020000	29.57%	27.55%	0.91
MEX	30534083	3520303	11.53%	27.47%	2.91
JPN	64360000	10140000	15.76%	36.39%	3.06
HKG	2738300	383600	14.01%	42.16%	4.47
KOR	18921000	1898000	10.03%	26.56%	3.24
SGP	1576151	459728	29.17%	33.25%	1.21
AUS	7933400	1933300	24.37%	40.14%	2.08
NZL	1466400	372000	25.37%	32.72%	1.43
PHL	23917000	1676000	7.01%	22.51%	3.86
MYS	6175800	583800	9.45%	24.23%	3.06
THA	23684480	1134056	4.79%	24.89%	6.59
IDN	62457138	2248761	3.60%	15.53%	4.92
CHN	521505618	34588305	6.63%	17.49%	2.98
BRA	42271526	3453046	8.17%	31.25%	5.11
CHl	4773310	556600	11.66%	27.81%	2.92
DNK	2902212	752856	25.94%	38.73%	1.80
DEU	51692478	10726544	20.75%	34.87%	2.05
GBR	23440500	6449480	27.51%	36.78%	1.53
SWE	4430000	1450000	32.73%	37.01%	1.21
TUR	19491948	1359754	6.98%	24.68%	4.37
VEN	6769251	1096063	16.19%	26.85%	1.90
COL	2819500	396302	14.06%	27.52%	2.32
SAF	5789797	666515	11.51%	32.03%	3.62
LKA	5158965	597090	11.57%	21.87%	2.14

Source: Data in GTAP version 4 and the results from table 18.7.

S/U wage ratio = skill labor's average wage to unskilled labor's average wage

$$\textit{Column (3)} = (2)/(1)*100$$

$$\textit{Column (4)} = \frac{(4)/(3)}{((1)-(4))/((1)-(3))}$$

References

Australian Bureau of Statistics (ABS), 1994. *Australian National Accounts: National Income, Expenditure and Product 1992-93*, Cat. No 5204.0, Canberra.

---------- , 1993a. *Labor Force and Educational Attainment, Australia*, Cat. No 6235.0, Canberra.

---------- , 1993b. *Labor Statistics, Australia 1992,* Cat. No 6101.0, Canberra.

---------- , 1992. *The Labor Force, Australia 1978-89,* Cat. No 6204.0, Canberra.

---------- , 1990. *Australian Standard Classification of Occupations: Occupation Definitions*, Canberra.

ABS and Social Science Data Archives(SSDA), ANU, 1994. 1991 Census of Population and Housing: Household Sample File (Computer File and User's Guide) , Canberra.

---------- , 1984. 1981 Census of Population and Housing: Persons Sample File (Computer File and User's Guide), Canberra.

China Labour Statistical Yearbook 1995

China, Reforming the Urban Employment and Wage System, Document of the World Bank, June 1992

Department of Agriculture and Forestry, Taiwan Provincial Government, 1990. Taiwan Agricultural Yearbook, June (in Chinese and English).

Department of Statistics, Hong Kong 1991. Hong Kong 1991 Population Census.

Directorate-General of Budget, Accounting and Statistics, Executive Yuan, 1991. Survey on Occupations and Earnings, May, Republic of China (in Chinese).

---------- , 1990. Yearbook of Earnings and Productivity Statistics, Taiwan Area, Republic of China, May (in Chinese and English).

Eurostat, 1992. Earnings: Industry and Services, Luxembourg.

---------- , 1991. Labor Cost: Survey 1988, Luxembourg.

GTAP version 3 Documents, various issues, Centre of Global Trade Analysis, Department of Agricultural Economics, Purdue University.

GEMPACK User's Documentation, Release 5.1. Volumes 1 and 2. Centre of Global Trade Analysis, Department of Agricultural Economics, Purdue University.

Hambley, J., 1993. " Early Stage Processing of International Trade and Input-Output Data for SALTER ", SALTER Working Paper No 15, Industry Commission, Canberra, May.

ILO Labour Statistics Data base, 1995.

ILO, various issues, Yearbook of Labor Statistics, International Labor Organisation, Geneva.

Kenderes, M. and Strzelecki, A., 1992. "Listing of the 1986-87 ORANI Data base", Internal Working Document, Industry Commission Research Memorandum No OA-569, Canberra, July.

Manpower profile India, Institute of applied manpower research yearbook 1996.

McDougall Robert, 1994 "DAGG Guide". Centre of Global Trade Analysis, Department of Agricultural Economics, Purdue University.

McDougall, R. and R. Tyers, 1995. Developing country expansion and relative wages in industrial countries. Ch.7 in Hertel, T. (ed.) Global Trade Analysis Using the GTAP Model, New York: Cambridge University Press, forthcoming.

Ministry of Labor of Japan, 1992. Basic Survey on Wage Structure, Tokyo (in Japanese).

----------, 1970. Basic Survey on Wage Structure, Tokyo (in Japanese).

National Statistical Office, 1993. Report on Mining and Manufacturing Survey 1991, Seoul.

National Accounts Statistics: Main aggregates and detailed tables, 1993, United Nations

Nehru, Swanson and Dubey 1993 'A New Data base on Human Capital Stock.' Policy research working paper 1123, Washington D.C: The World Bank.

Ryan, C., 1992. "The SALTER Model: Construction of the European Data base", SALTER Working Paper No 10, Industry Commission, July.

Tri Thanh Vo and Rod Tyers, 1996. "Splitting Labor by Occupation in GTAP: Source and Assumptions". Australian National University.

Trade and Wage Dispersion Project World Bank, IECIT, Revise, September 1995.

Statistics Canada, 1989. *The Nation: Employment Income by Occupation, Census Recensement 1986*, Ottawa, March.

Union Bank of Switzerland, 1994. *Prices and Earnings Around the Globe: An International Comparison of Purchasing Power*, Zurich.

Union Bank of Switzerland (information for Bombay)

US Bureau of the Census, 1992. Current Population Survey March-1992: Technical Documentation (and Computer File), Washington DC

US Department of Commerce, Bureau of the Census, 1993. *Statistical Abstract of the United States*, Washington DC

----------, 1981. *Statistical Abstract of the United States*, Washington DC

----------, 1972a. *1970 Census of Population, Subject Reports: Earnings by Occupation and Education*, Washington D. C, October.

----------, 1972b. *1970 Census of Population, Subject Reports: Occupation by Industry*, Washington D. C, October.

World Bank: *PWT Series Data*. Web site A:\gdp\rgdp.data.htm.