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Review Of "Sources Of Economic-Growth In Korea: 1963-1982" By K.-S. Kim and J.-K. Park

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Recommended Citation

Larry E. Westphal. (1986). "Review Of "Sources Of Economic-Growth In Korea: 1963-1982" By K.-S. Kim and J.-K. Park". *Journal Of Economic Literature*. Volume 24, Issue 3. 1245-1247.
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Review

Reviewed Work(s): Sources of Economic Growth in Korea: 1963-1982. by Kwang-Suk Kim and Joon-Kyung Park

Review by: Larry E. Westphal

Source: *Journal of Economic Literature*, Vol. 24, No. 3 (Sep., 1986), pp. 1245-1247

Published by: American Economic Association

Stable URL: <http://www.jstor.org/stable/2725885>

Accessed: 21-09-2017 15:48 UTC

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Sources of economic growth in Korea: 1963–1982. By KWANG-SUK KIM AND JOON-KYUNG PARK. Seoul: Korea Development Institute, 1985. Pp. xx, 217. Available from The Korea Development Institute, P. O. Box 113, Chungryang, Seoul, Korea. *JEL 85-0449*

In his preface, Edward F. Denison states that this study by Kwang-suk Kim and Joon-kyung Park is sufficiently comparable to his own studies to permit comparison with them. Denison's evaluation is important for it suggests that Kim and Park achieved their objective, which was to enable comparative analysis that would provide insights into the sources of Korea's extraordinarily rapid growth.

Table 1 gives the comparative numbers. In the Korean study, the various elements were measured as follows. Capital: the simple aggregation of tangible fixed assets and inventories, with adjustment to reflect depreciation, plus land, which is assumed constant over time. Labor: an index which reflects changes in total employment, in the average number of hours worked per week (with a partially offsetting adjustment for resulting efficiency changes), in the age and sex distribution of the workforce, and in the distribution of the workforce among classes of educational attainment. Allocation: the effects of labor reallocation from primary to other sectors as well as away from self-employment in the nonagricultural sectors. Scale: economies of scale associated with larger output and with changes in the composition of demand toward production characterized by greater increasing returns.

Methods of estimation are an adaptation to Korean data of those used by Denison and William K. Chung in their 1976 study of Japanese growth. Lack of relevant data means that the Korean estimates are necessarily somewhat more crude and that some sources (allocational effects from changes in trade barriers, for example) are neglected.

As Table 1 shows, the growth of total inputs accounted on average for a considerably smaller share of the growth of output in OECD countries than in Korea (the shares are respec-

TABLE 1
CONTRIBUTIONS TO STANDARDIZED GROWTH
RATES OF NATIONAL INCOME
(PERCENTAGE POINTS)

	Korea	Japan	Other Countries: ^a Various Periods
	1963–82	1953–71	
Output	8.13	8.81	4.21
Total Input	4.89	3.95	1.76
Capital	1.58	2.10	.86
Labor	3.31	1.85	.89
(Education)	(.39)	(.34)	(.29)
Output/Input	3.24	4.86	2.45
Allocation	.66	.95	.71
Scale	1.49	1.94	.78
Residual	1.09	1.97	.96

Sources: Korea: Kim and Park (1985, pp. 67–68, 169); Japan and others: Denison and Chung (1976, pp. 42–43).

Notes: Standardized growth rates incorporate adjustments to remove the influence of cyclical elements. ^a Simple averages of estimates for Belgium, Denmark, France, Italy, the Netherlands, Norway, the United Kingdom, and West Germany, 1950–62; Canada, 1950–67; and the United States, 1948–69.

tively 46 and 60 percent). Indeed, factor inputs have grown comparatively fast in Korea. Comparisons can readily be made only for nonresidential business sectors and then only among Korea, Japan, and the U.S. The respective annual growth rates of capital are 8.45, 10.17, and 3.63 percent; of labor, 4.95, 2.60, and 1.19 (Kim and Park 1985, pp. 54–55 and 131; Denison and Chung 1976, pp. 33 and 31; Denison 1979, pp. 62 and 29).

Perhaps most striking is what the comparative numbers reveal about the atypically fast growth of labor input in Korea. Contrary to plausible speculation, but consistent with what the data show, little of the difference can be traced to a faster pace of human capital accumulation in Korea—the respective rates of human capital accumulation are 0.72, 0.53, and 0.61 (see the immediately preceding references). This finding is consistent with what Noel F. McGinn and his colleagues concluded in a 1980 study of education in Korea: “Korea’s rate of educational expansion is not unique . . .

What is unique . . . is that a high level of human resources was developed early and despite a low per capita income" (p. 66).

The return to education in Korea—as it is typically measured using relative wage data—also appears to be comparatively low. This is virtually impossible to document by reference to the individual studies because of differences in the information presented. However, it is supported by McGinn and colleagues (1980, pp. 175–80), who speculate that the comparatively low return may be the result of institutional factors that compress the structure of wages in Korea. Compression of the wage structure might also explain the notably small contribution made by labor reallocation to Korea's growth. In turn, the division of the remaining total factor productivity growth (TFPG) between scale economies and the residual should be considered at best illustrative owing to the heroic assumptions necessary to accomplish it.

Kim and Park provide separate estimates for 1963–1972 and 1972–1982. The intertemporal differences are noteworthy. But, given the competing hypotheses that might explain them, it is apparent that no profound conclusion can be reached without further research. The contribution of TFPG fell from 4.04 percentage points in 1963–72 to 2.44 percentage points in 1972–82; the residual fell from 1.89 to 0.30 percentage points. The authors advance several possible explanations: the attenuation with time of the TFPG-inducing effects of the early-1960's policy reforms which put Korea on the track of export-led growth; the relative shift toward capital-intensive, import-substituting industrialization during the 1970s; the increasing levels of industrial concentration in industries that remained sheltered from import competition; the overestimation of labor input growth during the latter period because of neglect of the increasing number of hours spent by the male workforce in paramilitary training and activities; and—consistent with explanations offered for the finding of reduced TFPG after 1973 in many countries—the impact of two successive oil shocks.

I would add that the decline in TFPG may largely reflect changes in the trend of capacity utilization rates over time. The generally accepted estimate by Young Chin Kim and Jene

K. Kwon (1977) is that capacity utilization rates in manufacturing increased at about eight percent per year between 1962 and 1971. From all indications, capacity utilization rates fell from 1972 to 1982. In turn, Kim and Kwon found that the residual in an estimation of contributions to manufacturing output growth fell from 36 to eight percent when changes in capacity utilization rates were taken into account.

How do the comparative numbers obtained via the Denson approach stack up against comparative numbers from other methods? I know of only one study with which comparison can be made, that by Laurits R. Christensen and Dianne Cummings (1981). They examined the sources of Korean growth in comparison with those of eight OECD countries for the period 1960 to 1973, and found that TFPG accounted for 43 percent of Korea's growth versus an average of 47.5 percent for the OECD countries. Their estimate for Korea may be compared to that obtained by Kim and Park for 1963–1972—49 percent.

Can one reach any tentative conclusion from these two studies about the comparative importance of TFPG in a rapidly industrializing country? Owing to the problematic effects of the oil shocks, I would discount the relevance of the Korean estimates for 1972–82 and, based on the Korean and Japanese estimates, conclude that it matters whether one is considering relative or absolute contributions. The relative contribution of TFPG may not be inherently different, but the absolute contribution appears to be substantially greater than in the typical industrialized country.

To conclude: Kim and Park have produced estimates that should be of considerable interest to many economists. Except to specialists, however, the book itself will be of limited interest, and this for several reasons. It makes very little reference to the relevant literature on Korean development, even to other studies of the sources of Korean growth. Hence the reader is denied useful insights—for example, concerning the possible validity of the authors' estimates—and the authors fail to capitalize on different findings (some with respect to quite important details) to pinpoint fruitful areas for further research. In turn, the book does not provide all of the comparative information that

one wants; comparisons are almost exclusively in terms of percentage contributions to growth. Moreover, the text by-and-large either discusses the derivation of the estimates or simply reproduces what is in the tables. It is also annoying that there are a variety of minor errors of various sorts that could have been rectified with careful editing.

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300 Domestic Monetary and Fiscal Theory and Institutions

310 DOMESTIC MONETARY AND FINANCIAL THEORY AND INSTITUTIONS

Money and markets: Essays by Robert W. Clower. By ROBERT W. CLOWER. Edited by DONALD A. WALKER. Cambridge, New York and Sydney: Cambridge University Press, 1984. Pp. xv, 277. \$37.50. ISBN 0-521-26231-3. JEL 85-0757

Robert Clower's influence on the course of macroeconomics and monetary theory over the past twenty years is indisputable. This volume, which collects his papers in these areas, is aptly titled, since his *idée fixe* throughout this time has been that macroeconomics must pay careful attention to the role of money and that money can only be understood through attention to the actual processes of exchange—

to markets as they really are rather than to the abstract auctions of Walrasian theory.

A collection of papers by a single author is justified only if in some sense the whole is greater than the sum of its parts. This collection meets this criterion—but just barely.

Such a collection is warranted if it makes important papers more easily accessible. This volume does. Clower's influence is largely attributable to just two of the papers reprinted here: "The Keynesian Counter-revolution: A Theoretical Appraisal," in which he formulated his famous "dual decision hypothesis" and showed how Walras' Law might not hold in disequilibrium; and "A Reconsideration of the Microfoundations of Monetary Theory," in which he popularized the use of the finance- (or cash-in-advance or Clower) constraint in models of monetary economics. The former paper spawned the voluminous literature on fixed-price models, which Clower now only grudgingly acknowledges as his progeny. The latter paper introduced a technique for modeling money that has been adopted by economists of every theoretical complexion—including new classicals (e.g., Robert Lucas) whom Clower openly disparages. "The Keynesian Counter-revolution" was originally published in a Swiss journal in German and then in an English version in a British conference volume. The "Microfoundations" paper was first published in the *Western Economic Journal* before its change of name to *Economic Inquiry* and before Clower's stint as editor brought it its present high stature. Although both papers are also available in anthologies, it is convenient to have them reprinted here.

A second justification for such a collection would be that together the papers tell a coherent tale not obvious when taken separately. And to some extent this is also true. The themes of the importance of disequilibrium, of the analysis of dynamic processes, of the importance of the exchange mechanism in monetary analysis are developed in slow steps across the eighteen published papers. Clower's own Afterword (and to a lesser extent Donald Walker's Introduction) help to bind the papers together. Unfortunately, one's progress across this difficult terrain is often hampered by weariness: the same points are hammered again and again with little variation (in one case at