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Impact of the Terms of Trade on the Trade Balance of Malaysia: An Empirical Examination

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I. Introduction

This paper presents estimates of the impact of changes in the terms of trade on Malaysia's trade balance. In recent years, Malaysia's policymakers have been forced to take renewed interest in the evaluation of how changes in the terms of trade impact the trade balance.[1] The terms of trade may shift as a result of small but continuous changes in effective exchange rates, such as those frequently encountered in the generalized floating period, or as a result of policy actions such as devaluation. In fact, proponents of the elasticities approach describe the necessary and sufficient conditions for an improvement in the trade balance in terms of elasticities of demand and supply, referred to as the *Marshall-Lerner* conditions.[2]

As pointed out by *McPheters* and *Stronge* (1979), one of the problems with attempts to manipulate the terms of trade by a policy of devaluation is that changes in the terms of trade may not immediately change the trade balance in the desired direction. In particular, an exchange-rate-induced deterioration of the terms of trade may evoke a worsening of the trade balance at first and a sustained improvement only after a considerable lag. The time path of

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* The author is grateful to *Ali Darrat, Ed Manton* and *Raymond Ballard* for helpful comments on an earlier draft, and to *Chatri Sriwalosakul* and *Marilyn King* for competent research assistance. Special thanks to Trezzie Pressley for continued support and to Nancy Swanson for excellent typing.

1 For example, see "Malaysia – a Time for Consolidation." supplement to EUROMOLNEY, April 1987, pp. 2 - 3.

2 Proponents of the absorption approach (e.g., *Alexander,* 1952) describe how devaluation may change the terms of trade, increase production, and switch expenditures from foreign to domestic goods, thus improving the trade balance. International monetarists argue that devaluation reduces the real value of cash balances and/or changes the relative price of traded and nontrated goods, thus improving both the trade balance and balance of payments.

the response of trade flows to a devaluation can be described in terms of the J-curve phenomenon.[3]

The J-curve phenomenon has been explained by several factors. *Goldstein* and *Khan* (1985, p. 1077) have argued that the value of the trade balance can worsen in the short run in response to devaluation because of low short-run price elasticities of demand and the tendency for import prices to rise more rapidly in local currency terms than in export prices. Over time the price elasticities of demand grow larger and export prices catch up with import prices, with the result that the initial deterioration in the trade balance is halted and then reversed. *Krueger* (1983, p. 39) has attributed the phenomenon to the fact that at the time an exchange rate change occurs, goods already in transit and under contract have been purchased, and completion of those transactions dominates the short-term change in the trade balance. Therefore, the trade balance worsens first, but after a considerable lag begins to improve. *Magee* (1973, pp. 306 - 307) has associated the process with the fact that the rapid increase in domestic activity (measured by real income) relative to activity abroad may override any favorable effects that the devaluation might generate. He characterizes the process as consisting of a period during which contracts already in force in specified currencies dominate the determinants of the current account. Over time new contracts made after the devaluation begin to dominate, and the "pass-through" of the devaluation or depreciation is affected. Finally, *Junz* and *Rhomberg* (1973, p. 416) have argued that the expansion of exports and the retardation of imports occur only after substantial lags. Using pooled time-series and cross-section data, they have identified five different types of lags between the response of goods traded to changes in relative prices: recognition lags of changing competitive condition, decision lags in forming new business connections and placing new orders, delivery lags between the time new orders are placed and their impact on trade and payment flows, replacement lags in using up inventories and wearing out existing machinery before placing new orders, and production lags involved in increasing the output of commodities for which demand has increased. In their study of lags in the devaluation adjustment process, they made the following estimates for trade in manufactured goods: (1) the response of trade flows to relative price changes stretches out over a period of some four to five years; (2) following

[3] The J-curve became widely discussed upon observation of adverse short-run movements in the British trade balance after that country's devaluation in 1967. Further discussions on this phenomenon resulted when the U.S. trade balance deteriorated so much in 1972 despite the devaluation of the dollar in 1971. For more recent discussions, see *Hakkio* and *Roberts* (1987), *Feldman* (1982), and *Goldstein* and *Young* (1979).

a price change almost 50 percent of the full trade flow response occurs within the first three years, while about 90 percent takes place during the first five years.

Recent empirical evidence on the J-curve phenomenon is mixed. *Miles* (1979), using annual data for 14 countries (most of them industrial) over the period 1956 to 1972, found no evidence of a J-curve effect. In addition, he found that devaluation did not improve the trade balance but improved the balance of payments. *Spitaller* (1980) reports that the perverse initial response of the trade balance can frequently last for approximately four to five quarters, and it can amount to as much as 10 percent of the local currency value of imports. *Haynes* and *Stone* (1982) found no evidence of a J-curve effect for the 1947 to 1954 period, whereas for the period 1955 to 1974, they found evidence in support of this phenomenon for the United States' economy. *Felmingham* (1988), using Australian data, concluded that there is no evidence of a J-curve effect in the period of managed and free-floating eras. For the fixed exchange, the cumulative sum of the terms of trade variable, although positive, was statistically insignificant. It is also noteworthy that the lag pattern on the terms of trade variable in the fixed exchange era was not that of a typical J-curve effect. Felmingham notes that the lag time between the terms of trade correction and trade balance was more than two years. *Branson* (1972) notes that "popular guess" holds that these lags are about two years in length.[4]

The aim of this paper is to increase our empirical understanding of the J-curve effect in a developing, small, open economy by analyzing the Malaysian experience over the period 1973: 1 through 1985: 4. More specifically, the present inquiry uses a regression procedure suggested recently by *Haynes* and *Stone* (H-S) (1982) to test directly whether deterioration in the terms of trade improved the Malaysian trade balance (in value terms).

The H-S method is used here, although somewhat modified by the methodology of *Felmingham* (1988) to include a time variable and measures of domestic and foreign real incomes. Increases in real income affect the trade balance by increasing the demand for imports by Malaysian residents and demand for exports by foreigners. The demand for imports, like the demand for any commodity, depends on real income. As Malaysian real income rises, some additional income is spent for imported goods. Similarly,

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[4] *McPheters* and *Stronge* (1979) offer statistical support for this belief. *Haynes* and *Stone* (1982), reworking the analyses of *McPheters* and *Stronge,* found that the trade balance worsens after one and two quarters but improves at eight quarters and beyond. For LDCs, *Bahmani-Oskooee* (1985) reports that it takes between two and four quarters for the trade balance to deteriorate before improving.

DOI https://doi.org/10.3790/ccm.23.1.125 | Generated on 2024-11-08 00:24:54

as real income rises abroad, foreigners increase their purchases of Malaysian goods.[5] If Malaysia's growth is greater than foreign growth, imports will tend to grow faster than exports, causing the Malaysian trade balance to worsen. However, if Malaysian and foreign income rise by the same amount, imports and exports will also rise by approximately the same amount and the trade balance will not be much affected.

The rest of the paper is organized as follows. Section II contains a brief description of trends in the Malaysian economy. Section III describes the trade balance functions as estimated for Malaysia. Section IV reports the empirical results. Finally some concluding remarks are drawn in Section V.

II. Trends in the Malaysian Economy

By general agreement[6] Malaysia's development performance since independence in 1957 has been impressive; and according to conventional criteria, few Asian or African countries exceed the Malaysian standard of living. Per capita income in 1970 was nearly three times the Southeast Asian average; and growth in real gross domestic product (GDP) averaged over six percent per year between 1957 and 1970, and 7.4 percent from 1970 to 1975.

Despite these favorable statistics Malaysia, as a major commodities exporter and a country moving into export-oriented manufacturing, could not insulate itself from the world recessions of 1975 and 1982. The drop in demand from industrial countries in those years resulted in declines in both the prices and volumes of Malaysia's primary exports. Restrictive monetary policies, pursued in a number of Malaysia's trading partners to control inflation, reduce imports and maintain interest rates at high levels, greatly increased service payments on a floating-rate debt. This combination of declines in export receipts and increases in interest payments created severe balance-of-payments problems for Malaysia. For 1975, merchandise sales abroad were estimated to have dropped by 13 percent over the previous year to M$ 8,900 million (US$ 3,803.4 million). Exports to the large Japanese, Singapore, and British markets were also down by about 20 percent. Reduced demand was reflected in the unit values of the top exports. The

[5] However, note that the effect of domestic or foreign income on trade flows may be negative. See *Magee* (1973), and *Goldstein* and *Khan* (1985) for details.

[6] These and the following data are from *Blau* (1985), *Schlegel* (1981), and the Far Eastern Economic Review (1976). Note that in 1980, Malaysia's per capita product was $ 1750 per person, whereas in Philippines and Indonesia, respectively, it was $ 730 and $ 460. In addition, from 1970 to 1980, Malaysia's economy grew by an average of 9.5% per year. Malaysia is the world's leading producer of rubber and palm oil. Manufacturing plays an increasingly important role in the economy and accounted for 21% of the GDP in 1985.

price of rubber fell 27 percent from 1974, tin by 12 percent, palm oil by 4 percent, sawlogs by 18 percent, and sawn timber by 7 percent. Malaysia's terms of trade deteriorated by 17 percent. The deficit for the current account of goods, services, and transfers for 1975 was estimated at M$ 1,284 million, the largest ever recorded. As the balance-of-payments position weakened, net international reserves fell by about $ 100 million by the end of 1975. In 1982, Malaysia recorded a trade deficit of M$ 914.8 million. However, the balance of trade recovered quickly, and the country recorded a surplus of M$ 5,687 in 1984 and one of M$ 7,769 million in 1985. The current account of the balance of payments moved into deficit in 1980: the deficit reached US $ 3,601 million in 1982 but eased to $ 3,497 million in 1983, to $ 1,671 million in 1984, and to $ 723 million in 1985, reflecting the improving trade balance.[7]

Improvement in the trade balance came as a result of the weakening of the ringgit (Malaysian currency) against currencies of major trading partners – Japan, Singapore, and the United States – which in 1985 accounted for 23 percent, 15.8 percent and 16.3 percent of imports, and for 24.5 percent, 19.4 percent, and 13.0 percent of exports, respectively.

III. Model Specification

The H-S procedure requires that the inverse trade balance, that is, the ratio of the value of imports to exports, be used as the dependent variable in order to obtain directly the signs of the estimated coefficients as well as the lag pattern (H-S, 1982, p. 704). H-S chose the log-linear functional form for ease of interpretation. Therefore, the equation estimated by H-S may be written as:

$$\log (TB)_t = A + \sum_{K=0}^{n_1} a_K \log P_{t-K} + Z_t \tag{1}$$

where (TB) is the inverse measure of the trade balance in current Malaysian ringgit, P is the terms of trade in domestic currency measured as the ratio of quarterly indices of export to import prices, n_1 relates to the length of the Almon lags, and Z is a white-noise disturbance term. A J-curve response is indicated if for a smaller value of K (a_1, a_2 or a_3) the coefficients of P are negative; but if the coefficients of P become positive for larger values of K (a_5, a_6, etc.), then the lag pattern resembles the profile of the J-curve. If deterioration in the terms of trade does not ultimately improve the trade balance, the sum is non-positive.

[7] See World Development Report (1985, p. 38; 1986, pp. 38 - 39) for more on this.

Based on the previous discussion, when equation (1) is modified to include a time variable and measures of domestic and foreign real incomes, it becomes:

$$\text{(2)} \qquad \log (TB)_t = A + \sum_{K=0}^{n_1} a_K \log P_{t-K} + \sum_{K=0}^{n_2} b_K \log Y_{t-1-K} + \sum_{K=0}^{n_3} c_K \log Yw_{t-K} + d\,(\text{Time}) + e_t$$

where P = terms of trade in current ringgit, Y = domestic real income, Yw = the weighted real income of trading partners, Time = a time-trend variable, n_i ($i = 1, 2, 3$) relates to the lengths of the *Almon* lags, and e is a white-noise disturbance term. It is worth noting that as specified in equation (2), the contemporaneous values on domestic real income are omitted from the estimation because domestic income is truly a current endogenous variable, a property which makes estimates of equation (2) inconsistent. [See *Felmingham* (1988, p. 48) for more on this.] To get consistent estimates, equation (2) is fitted by instrumental variables (IV), with lagged values of domestic income serving as the instrument for the endogenous variable and with P and Yw assumed exogenous.

Three alternative specifications of equation (2) are also examined. In the first alternative we exclude domestic income and use the level of the domestic portion of high-power money, that is, the portion under the control of the monetary authorities. We assume that this money supply variable (M) belongs in the import demand function so that a domestic monetary expansion leads to excess money balances, and hence more imports. For more on the use of M in trade balance equation, see *Miles* (1979, p. 604) and *Bahmani-Oskooee* (1985, p. 502). A second alternative specification is the exclusion of a time-trend variable from equation (2), while the third is to ignore the simultaneous system bias and use real income in place of lagged real income in our basic model equation (2).

Based on the foregoing discussion, this paper examines the performance of four trade balance equations. The technique employed here to estimate the equations involves the use of the Almon-lag process. Rather than imposing arbitrary lag structures, *Akaike*'s final prediction error (FPE) in conjunction with *Theil*'s residual variance criteria are used.[8] *Schmidt* and *Waud*

(1973) and *Giles* and *Smith* (1977) recommend this procedure as a way of dealing with potential bias in coefficient estimates that may result from under-specifying the true lag length for one or more variables.

IV. Empirical Results

The immediate issue following estimation is the adoption of appropriate criteria to choose among the various models. In the absence of undisputed econometric standards for choosing among alternative results with the same functional forms, we employ a model selection procedure similar to the test procedure recently proposed by *Thursby* (1981).[9] In the first step, RESET (regression specification error test) is applied to check for incorrect functional form and omitted variables. RESET is robust to autocorrelation and heteroscedasticity. The former was established in *Thursby* (1979) and the latter in *Ramsey* and *Gilbert* (1972). Therefore, the use of RESET allows due to any process and specification error.[10] Since the presence of a first-order autoregressive (AR(1)) process is evident in all equations, the models were corrected for this. As a second step we calculate the *Breusch-Godfrey* (B-G) statistic as a general misspecification test. See *Harvey* (1981, p. 276) for details of this test. In this step we test for a non-AR(1) process (up to the fourth order). As *Johnston* (1984) argues, the advantage of the B-G statistic over the traditional *Durbin-Watson* (D-W) statistic is that it is robust and tests for general autoregressive and moving-average serial correlation processes. In the third step the *Breush-Pagan* (B-P) statistic for heteroscedasticity is calculated, since a key assumption in linear regression is that the error term should have a constant variance. Violation of this assumption leads to inefficient estimates and to invalid test statistics. For a lucid description of this test, see *Johnston* (1984, p. 300). Finally, the *Farley* and *Hinich* (1970) stability test is used to examine the structural stability of the estimated coefficients. Note that this test is for a gradual unknown change point. The model that survived this battery of tests is the one with high-power money acting as a proxy for domestic real income. Specifically, the other models, including our basic equation, failed steps one, two, and four at the 5 percent level of significance. The rest of the paper represents and discusses the empirical results of our preferred equation.

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[8] This FPE criterion is appealing, as *Hsiao* (1981) pointed out, because it balances the risk of selecting a higher lag against the risk of a lower lag.

[9] For application in international trade research, see *Thursby* and *Thursby* (1984). See also *Anderson* and *Rasche* (1982).

[10] Correcting for first-order serial correlation before applying RESET does not in any way affect the selection procedure or the preferred model.

As can be seen in Table 1, the statistical fit of the regression equation is good as indicated by the values of $\bar{R}^2$, F, and the standard error of estimate. These statistics indicating goodness of fit, therefore, suggest that the equation well explains the trade balance path over the sample period, 1973: 1 through 1985: 4. Another indication for the appropriateness of the trade balance model is the absence of a significant autocorrelation as evident in the B-G statistic. Note that the computed chi-square value of 6.96 is not greater than the critical value $\chi^2(3) = 7.82$ at the 5 percent level. Interestingly, the RESET F statistic of 2.69 is not greater than the critical value $F(2, 12 = 3.89)$; therefore, the null hypothesis of no specification error is not rejected at the 5 percent level. Importantly, the B-P statistic of 6.06 is less than the critical value of $\chi^2(14) = 23.69$ so that the null hypothesis of homoscedasticity cannot be rejected at the 5 percent level. Furthermore, the *Farley* and *Hinich* F-value of 0.64 is not greater than the critical value $F(12, 13 = 2.6)$; therefore, the null hypothesis of no gradual change in the coefficient estimates is not rejected at the 5 percent level. As a post-sample prediction test, we re-estimated the equation over 1973: 1 through 1981: 4 (that is, using our prior knowledge of world recession in 1982, mentioned in section II of this paper) and compared the error sum of squares to those of the full period, 1973: 1 through 1985: 4. In so doing, we used the test procedure suggested by *Wilson* (1978, p. 66). The resulting *Chow-F* value of 1.06 is less than $F(16, 10 = 2.82)$ required to reject the null hypothesis at the 5 percent level. One possible problem with the estimates presented in Table 1 is that of simultaneous equation bias. To check for this, we use the test proposed by *White* (1980) that tests for the direction of causation in single-equation models.[11] [For recent applications of this test in this context, see *Ram* (1985) and *Darrat* (1987).][12] The computed chisquare value of 13.2 is less than the critical value $\chi^2(15) = 24.996$; again, this finding supports the appropriateness of this model for the Malaysian data.

As explained in section I, the purpose of this study is to test directly whether deterioration in the terms of trade improved the Malaysian trade balance over the period 1973: 1 through 1985: 4. As may be seen in Table 1, the lag pattern on the terms-of-trade variable is not that of the typical

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[11] Although *White*'s test might appear as a test for general heteroscedasticity, it is indeed useful in testing for simultaneous equations bias. See White (1980, pp. 823 - 24).

[12] Since the *Almon* procedure is used in this study, it is important to explain how *White*'s test was calculated. To run the test, we obtain the vector of residuals from regressing trade balance on the contemporaneous values of the right-hand side variables. The squared residuals are then regressed on the original variables, their cross-products, including the squares of the original regressors. Using the R^2 from this residual regression, the test statistic is derived as TR^2 where T is the sample size.

Table 1: **Estimates of the Trade Balance Equation for Malaysia, 1973:1 to 1985:4**

	Estimates of the sum coefficients on[a)]					*Summary statistics*				*Diagnostic check statistics*[b)]			
									Reset	*B - G*	*B - P*	Farley	Chow
Constant	Time	logP	logM	logYw		$\bar{R}^2$	*SE*	*F*	*F*	χ^2	χ^2	*F*	*F*
−9.05	−0.086	−0.061	2.564	1.059		0.915	0.041	32.01	2.69	6.96	6.06	0.64	1.06
(4.88)	(4.4)												
Lag Quarters	0	1	2	3	4	5	6	7	8	9	10	11	12
logP	−0.533	−0.180	0.039	0.148	0.173	0.137	0.067	−0.014	−0.08	−0.106	−0.068	0.059	0.30
	(8.24)	(6.17)	(1.52)	(4.87)	(6.02)	(6.45)	(5.01)	(0.94)	(3.70)	(4.28)	(3.06)	(2.28)	(5.22)
logM	0.399	−0.002	0.023	0.297	0.642	0.879	0.832	0.322	−0.828				
	(1.39)	(0.02)	(0.16)	(2.33)	(6.22)	(6.80)	(5.72)	(2.44)	(2.61)				
logYw	0.496	0.005	0.243	0.450	−0.135								
	(2.32)	(0.03)	(1.86)	(3.43)	(0.73)								

Notes: The numbers in parentheses are absolute values of *t*-statistics. $\bar{R}^2$ is the coefficient of multiple determination corrected for degrees of freedom. F-value is for testing the null hypothesis that all the right-hand side variables, as a group, except the constant term, have zero coefficient. *SE* is the standard error of the regression. The regression equation is estimated using unconstrained Almon technique with serial correlation adjustment (see, SAS PDLREG). Third-degree polynomial used and lag lengths shown above were empirically superior.

a) The F-value to test the estimates of the sum coefficients on logP, logM and logYw are 18.87, 16.2 and 3.32, respectively. The critical value is 2.76.

b) Reset F-value is for testing the null hypothesis of no specification error against the alternative that a specification error has occurred which results in a nonzero disturbance mean (critical value is 3.89). *B-G* is the *Breusch-Godfrey* statistic to test for remaining autocorrelation (critical value is 7.82). *B-P* is the *Breusch-Pagan* statistic to test for heteroscedasticity (critical value is 23.69). *Farley F*-value is the *Farley* and *Hinich* test statistic used to test the null hypothesis of no gradual (in contrast to a single) shift in the parameters (critical value is 2.6). *Chow* F-value is the *Chow - Wilson* test statistic for testing the null hypothesis of parameter constancy between sub-periods (critical value is 2.82).

J-curve process but appears to resemble a W-curve, to use the terminology of *Magee* (1975, p. 323).[13] In addition, deterioration in terms of trade did not ultimately improve the trade balance over the sample period, since the sum is −0.061. This finding is consistent with *Felmingham* (1988) who found no evidence of J-curve in Australia in the generalized floating period, which is specifically the period examined in this paper.

While our primary focus thus far has been on the terms-of-trade variable, several other features of the results deserve attention. First, the coefficient of 0.086 on the time-trend variable suggests about a 9 percent per quarter steady-state decline in the inverse trade balance. Second, the monetary variable is positive (2.56), suggesting that, ceteris paribus, as increases in money supply affect the economy, the demand for imports rises and forces the inverse trade balance to rise. Finally, any increase in world income which boosts the foreign demand for exports increases the value of export sales and reduces the inverse trade balance. However, this is not the case for Malaysian exports. Since the price paid by importers of Malaysian exports fluctuates inversely to world supplies, sometimes in an extreme way, the Malaysian national income does not necessarily increase when production rises. The data in Table 1 show that world income is positive (1.06), suggesting an increase in the inverse trade balance.

V. Conclusion

The purpose of this study has been to increase our empirical understanding of the J-curve effect in a developing, small, open economy by analyzing the Malaysian experience over the period 1973: 1 through 1985: 4. More specifically, we have tested whether deterioration in the terms of trade improved the Malaysian trade balance (in value terms). The empirical evidence given above suggests, among other things, the absence of the typical J-curve effect in Malaysia. This paper offers four possible explanations for this finding: (1) Malaysian exports (which are generally crude products such as crude oil, palm oil, cocoa, rubber, logs, and timber) are highly vulnerable to world supplies; that is, rising production of these goods does not necessarily result in increased revenue; (2) the country lacks an import replacement capacity, a fact which may explain the continuing increase of import prices and the low elasticity of demand for Malaysia's imports; (3) the coun-

[13] This is not surprising since the J-curve is based more on empirical observation than on theory. We are not the first to observe the absence of a J-curve effect. *Miles* (1979), *Ueda* (1983), *Bahmani-Oskooee* (1985), and *Felmingham* (1988) encountered similar difficulties. However, none of these studies examined the Malaysian economy.

try's current account balance has been in deficit since 1981. These deficits may be attributed in part to the severe deterioration in Malaysia's terms of trade. The major factors affecting the terms of trade are lower oil prices, severe falls in non-oil commodity prices and stability in the prices of manufactures. In July 1984 the deficit was identified by the Minister of Finance, *Tengku Razaleigh Hamzah,* as Malaysia's most important economic priority.[14] As mentioned above, the prolonged worldwide recession following the second oil shock (1979 - 1980) had a double-edged effect on Malaysia: it increased the debt-service burden on an already high level of external debt and at the same time, led to lower export receipts; and finally, the country's inability to translate large doses of investment into profitable ventures is another important factor. For example, Bumiputra Finance Limited (BMF), a subsidiary of Bank Bumiputra (established to help Malays in business), provided an international scandal. As stated by *Rahman* (1984, p. 118), if the Malaysian dollars lost by this bank were joined together, they would stretch round the world five times!

Appendix

All data are quarterly for the period 1973 - 1985 and are taken from two sources:

(a) International Monetary Fund, *International Financial Statistics,* various issues and supplements

(b) International Monetary Fund, *Direction of Trade Statistics,* various issues.

The weights used in determining world real income are: Japan (0.31), Singapore (0.25), USA (0.20), Germany (0.06), Thailand (0.05), UK (0.04), Australia (0.04), France (0.03), and Philippines (0.02). The procedure followed is given in *Bahmani-Oskooee* (1985). Note that this variable was converted to ringgit to preserve uniformity of measurement. Real GDP was not available on a quarterly basis and was interpolated from annual data using the technique in *Goldstein* and *Khan* (1976). The level of domestic high-power money is defined as in *Miles* (1979) and Bahmani-Oskooee (1985), that is, as the sum of lines 14 a and 20 from International Financial Statistics.

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[14] See New Straits Times (Kuala Lumpur), July 9, 1984.

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Zusammenfassung

Die Wirkung der Terms of Trade auf die Handelsbilanz von Malaysia: eine empirische Studie

Dieser Artikel liefert Schätzungen darüber, wie sich Veränderungen der Terms of Trade auf die Handelsbilanz Malaysias auswirken. Für die empirischen Schätzungen werden das *Almon*-Verfahren, *Akaikes* endgültiger Prognosefehler und *Theils* Varianzkriterien verwendet. In der bevorzugten Funktion ist die abhängige Variable der Quotient aus Im- und Exportwert, während unabhängige Variable die Terms of Trade in heimischer Währung, die Basisgeldmenge, die gewichteten Einkommen der Handelspartner und eine Trendvariable sind. Die empirischen Ergebnisse sprechen dafür, daß das Verzögerungsmuster in bezug auf die Terms of Trade nicht dem typischen J-Kurvenverlauf entspricht. Darüber hinaus erbrachte der Untersuchungszeitraum (1973: 1 bis 1985: 4) keinen Nachweis dafür, daß eine Verschlechterung der Terms of Trade die Handelsbilanz verbesserte.

Summary

Impact of the Terms of Trade on the Trade Balance of Malaysia: An Empirical Examination

This paper presents estimates of the impact of changes in terms of trade on Malaysia's trade balance. The *Almon* lag procedure, *Akaike* final prediction error (FPE) and *Theil*'s residual variance criteria are used in the empirical estimation. The dependent variable in the preferred equation is the ratio of the value of imports to exports whereas the explanatory variables are terms of trade in domestic currency, high-power money, weighted income of trading partners and a trend variable. The empirical results suggest that the lag pattern on the terms of trade variable is not that of the typical J-curve process. In addition, over the sample-period, 1973: 1 through 1985: 4, there was no evidence that deterioration in terms of trade improved the trade balance.

Résumé

Les conséquences des indices de commerce extérieur sur la balance commerciale de Malaisie: un examen empirique

Cet article présente des estimations des conséquences de changements des indices de commerce extérieur sur la balance commerciale de Malaisie. L'examen empirique utilise la procédure de retard d'*Almon*, l'erreur de prédiction finale d'*Akaide* et les critères de variance résiduelle de *Theil*. La variable dépendante dans l'équation préférée est le rapport entre la valeur des importations et des exportations, tandis que les variables explicatives sont les indices de commerce extérieur en monnaie nationale, la monnaie de la banque centrale, les revenus évalués des partenaires commerciaux et la variable de trend. Les résultats empiriques suggèrent que le modèle de retard sur les indices de commerce extérieur n'est pas celui du processus typique de la courbe J. En plus, pour la période d'échantillonement, allant de 1973: 1 à 1985: 4, il n'y a aucune preuve que la détérioration des indices de commerce extérieur a amélioré la balance commerciale.