GROWTH OF BANKING AND NEAR-MONEY SUBSTITUTION: SOME EVIDENCE

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1. Introduction

Earlier approaches to evaluating near-money substitution with bank deposits have not explicitly accounted for growth and spread of banking facilities over time. These approaches have implicitly assumed that either the expansion of banking facilities is constant or that such expansion is of little consequence for near-money substitution and can therefore be ignored. In India, a spectacular growth in bank deposits occurred but with a shift out of demand deposits (D) and into time deposits (T) especially since the nationalisation of banks in 1969. Keeping in line with the above conventional wisdom, it has been argued that changes in interest rates - and hence in the relative prices - on bank deposits have entirely been responsible for the shift in deposit preferences. Unfortunately, no attempt was made so far to seriously verify that a significant portion of the deposit-shift may have been spurred by the spectacular expansion in branch network of banks and the resultant acceleration in the spread of banking habit. Subrahmanyam (1977) and Vasudevan (1980) both recognised the significant contribution of banks' branch expansion to growth in time deposits of banks. But they also did not make an attempt to quantify the influence of branch expansion on the elasticity of substitution between D and T. The shift in the wealth holders' preferences may have largely been facilitated by the availability of near-money assets offered by the widespread branch network of the commercial banks in India. While the importance of the issue for monetary planning need no overemphasizing, there is need to empirically delineate the extent of influence of relative rates of return from the impact of banking expansion on the substitutability between demand and time deposits of banks.

2. Some Preliminaries

India's banking development provides a valuable testing ground for our hypothesis for two reasons: (i) the number of domestic all scheduled commercial bank (ASCB) offices increased from about 2700 (RBI, 1955) in December 1951 to around 8300 in June 1969; (ii) from about 8300 in June 1969 the number of branches increased to around 48,000 in December 1985; and (iii) while the demand and time deposits of all scheduled commercial banks (ASCBs) increased 224 times and 29 times respectively approximately during 1950/51 - 1984/85 the administered average one-year time-deposit rate increased from a low of 1.55 per cent to a high of 8.50 per cent during the same period which was a 5.5 times increase. The implicit interest paid on demand deposits, estimated by us, also increased over 5 times between 1950/51 and 1984/85.

Our primary interest in this paper is to formulate a simple model so that the theoretical implications of the influence of relative rates of return can be empirically delineated and tested from the effect of growth in banking on the substitutability between demand and time deposits. More specifically, we estimate the Hicks-Allen elasticity of substitution parameter to ascertain the publics' relative preferences between D and T and test for its temporal variation due to the growth of banking during 1950/51 - 1984/85. Econometric testing of the hypothesis is carried out in the utility function framework involving D and T as its arguments. Despite the availability of many flexible functional froms, this study employs the Constant Elasticity of Substitution (CES) utility function framework à la Chetty (1969) for atleast three important reasons: (i) although a priori we do not know the form of the function, it is very convenient to use the CES function over the others in that it is easier to model the effect of banking expansion on the elasticity of substitution without any loss of generality; (ii) the CES function is more flexible than the Cobb-Douglas function because, the elasticity of substitution is always unity for the latter, and (iii) this line of approach to studying near-money substitutability and related issues accords well with that widely employed by researchers in the area (see Boughton 1985, and Koening and Fomby 1990 among others).

3. The Model

We assume that the typical asset holder maximizes utility represented by a twice differential CES index function

$$U = A\left[k_d D^{-a} + k_t T^{-a}\right]^{-1/a} \tag{1}$$

where D, T, are as defined earlier, and A, K_i and 'a' are neutral scale, distribution and substitution parameters respectively. The usual one-period optimization involves maximization of relation (1) subject to the expenditure constraint

$$\pi_d D + \pi_t T = E \tag{2}$$

where π_d and π_t are rental prices of D and T respectively and E is the expenditure on monetary assets. Following Barnett (1978) π_d and π_t are computed from the formula:

$$\pi_i \frac{R - r_i}{1+R},\ i = D,\ T \tag{3}$$

where π_i is the discounted interest foregone by holding one rupee's worth of the asset, r_i denotes own rate of return on the ith asset and 'R' is the yield on a 'benchmark' asset purposefully selected to exceed 'r_i' such that R - r_i always remains positive for theoretical and empirical convenience. In case of D its own rate of return is zero because no explicit interest is payable by law on these deposits. However, following the suggestions by Friedman (1969) several attempts were made in the past to compute the implicit rate on these deposits in the US context (Barro and Santamero, 1972 and Klein, 1974). Following Klein (1974) we have derived a time series of competitive interest payments implicitly said to have been paid by banks for demand deposits. The assumption underlying the derivation is that competition among banks forces them to distribute at least some of excess income over servicing costs to depositors in the form of free services.

First-order condition from maximising (1) subject to (2) and when logarithmically transformed yields

$$1n\left(\frac{D^*}{T^*}\right) = 1n\left(\frac{k_d}{k_t}\right) + b\ 1n\left(\frac{\pi_t}{\pi_d}\right) \tag{4}$$

where b = 1/(1 + a) is the (constant) elasticity of substitution and D^*/T^* is the optimal ratio of demand to time deposits. Following the earlier discussion, we postulate that the measured elasticity of substitution 'b' may overstate the true value in the absence of the policy-driven expansion of bank branches as in case of the Indian experiment. In other words, the phenomenal increase in the number of bank branches all over the country must have affected the measured elasticity of substitution between D and T. Therefore we assume that 'b' is a linear function of the number of bank branches per thousand population, 'B', where $0 \leq B \leq 1$. Then the functional relation of 'b' can be written as

$$b = b_0 + b_1 B \tag{5}$$

where b_0 and b_1 are parameters. Parameter b_0 is the constant component of the elasticity of substitution and b_1 is the component that varies with the proxy for growth in banking. Substitution of (5) into (4) yields

$$1n\left(\frac{D^*}{T^*}\right) = cb_0 + cb_1 B + b_0\ 1n\left(\frac{\pi_t}{\pi_d}\right) + b_1 B\ 1n\left(\frac{\pi_t}{\pi_d}\right) \tag{6}$$

where $c = 1n\ (k_d/k_t)$ is a constant.

Another way in which branches per thousand population can influence the D^*/T^* is to impact the ratio directly through their geographic spread. Hitherto forced currency holdings will be converted into D and T in view of the easy reach of a bank branch. But this reach of a bank branch need not influence the preferences for D vis-a-vis T neutrally. In fact, the influence may be exerted non- neutrally either relatively more D-augmenting than T-augmenting or vice versa. Therefore, if augmentation coefficients were introduced into (1) to read

$$U = A\,[k_d\,(\theta_d D)^{-a} + k_t\,(\theta_t T)^{-a}]^{-1/a} \qquad (7)$$

where θ_d and θ_t are augmentation coefficients of D and T respectively, then we can write.

$$1n\,(\theta_d/\theta_t) = f + gB \qquad (8)$$

Substituting (8) into equation (6) and rearranging gives.

$$1n\,(D^*/T^*) = (cb_0 + b_0 f) + (cb_1 + b_0 g + fb_1)B + b_0 1n\,(\pi_t/\pi_d) + b_1 B 1n\,(\pi_t/\pi_d) + b_1 g B^2 \qquad (9)$$

Thus, by adding the B^2 term to the estimating equation (6) we can test whether the effect of branch expansion has been more D-augmenting than T-augmenting or vice versa.

Finally, the D^*/T^* is an equilibrium ratio and in this sense a desirable ratio which is not directly observable. Therefore, under a partial adjustment process applied to the log form of the desirable ratio after rearrangement of terms and with a stochastic error term added to it equation (9) now reads in the final estimation form as

$$1n\,(D/T)_t = \delta\,(cb_0 + fb_0) + \delta\,(b_0 g + b_1 c + b_1 f)\,B_t + \delta b_0\,1n\,(\pi_t/\pi_d)_t + \delta b_1 B 1n\,(\pi_t/\pi_d)_t + \delta b_1 g\,B_t^2 + (1-\delta)\,1n\,(D/T)_{t-1}\,\delta U_t \qquad (10)$$

where δ, $(0 \leq \delta \leq 1)$ is the coefficient of adjustment, U is the error term with regular properties and rest of the equation is same as equation (9). Relation (10) is the final form employed to test out our hypotheses:

(i) the measured elasticity of substitution between D and T is not affected by the phenomenal branch network expansion of banks ($H_0 : b_1 = 0$ $H_A : b_1 \neq 0$)

(ii) the relative argumentation effects of the branch expansion on D and T are neutral

$$(H_0 g = 0,\ H_A : g \neq 0) \qquad (11)$$

(iii) adjustment is complete ($H_0 : \delta = 1,\ H_A : 0 \leq \delta \leq 1$).

4. Data, Estimation and Results

All required data on the variables, D,T, B and r_t (rate of interest on time deposits) were collected from various issues of *Report on Currency and Finance*, RBI, Bombay. The implicit interest rate on D i.e. 'r_d' was estimated by us as explained earlier. The period of study covers thirty five years 1950/51 -1984/85. Separate estimations were also conducted for subperiods 1950/51 - 1968/69 and 1969/70 - 1984/85 in view of the first large scale nationalisation of banks that took place in July 1969. The reason for truncating the study period up to 1984/85 is that since 1985 the period of consolidation commenced ending the period of big-push expansion as a result of which restrictions were placed on manpower growth and branch expansion in the public sector banks. Assuming that U_t and hence δU_t satisfies the usual assumptions that justify application of the Ordinary Least Squares (OLS) regression, different truncated versions of equation (10) were estimated applying the OLS technique.

Table 1: Regression Results of Equation (10) for 1950/51 - 1968/69

Dependent Variable: 1n(D/T)$_t$

Independent variables	(1)	(2)	(3)	(4)
Constant (C)	1.77	11.63	17.27	2.99
B_t	–	-87.96	-218.01	-25.47
		(-2.34)	(-2.30)	(-1.20)
$1n\,(\pi_t/\pi_d)_t$	2.36	11.16	6.43	3.03
	(5.75)	(2.42)	(1.18)	(1.27)
$B_t\,1n\,(\pi_t/\pi_d)_t$	-	-78.18	-37.01	-24.26
		(-2.02)	(-0.80)	(-1.22)
B_t^2	–	–	701.25	–
			(1.49)	
$1n\,(D/T)_{t-1}$	–	–	–	0.23
				(1.61)
$\bar{R}^2$	0.6403	0.7345	0.7543	0.8596
F	33.05	17.60	14.81	16.89
DW	0.782	1.561	1.617	2.070

Note: Figures in parentheses beneath regression coefficients are computed t-values.

Table 2: Regression Results of Equation (10) for 1969/70 - 1984/85

Dependent Variable: 1n(D/T)

Independent variables	(1)	(2)	(3)	(4)
Constant (C)	-1.65	-1.27	-0.54	-1.07
B_i	–	0.04	-2.03	0.20
		(0.10)	(-1.04)	(-1.42)
$1n\ (\pi_i/\pi_e)_t$	-0.69	-0.55	-0.03	-0.51
	(-7.29)	(-2.71)	(-0.06)	(-2.37)
$B_i\ 1n\ (\pi_i/\pi_e)_t$	–	1.02	0.20	1.04
		(1.82)	(0.22)	(1.79)
B_i^2	–	–	1.43	–
			(1.08)	
$1n\ (D/T)_{t-1}$	–	–	–	0.21
				(0.64)
$\bar{R}^2$	0.7768	0.9426	0.9435	0.9397
F	53.21	83.18	63.60	59.40
DW	1.000	1.726	1.577	1.870

Note: Figures in parentheses beneath regression coefficients are computed t-values

Table 3: Regression Results of Equation (10) for 1950/51 - 1984/85

Dependent Variable: 1n(D/T)

Independent variables	(1)	(2)	(3)	(4)
Constant (C)	0.38	2.07	2.81	0.16
B_i	–	-4.88	-11.38	-1.12
		(-2.95)	(-5.55)	(-1.04)
$1n\ (\pi_i/\pi_e)_t$	0.32	2.39	2.72	-0.00
	(0.60)	(4.10)	(5.69)	(-0.01)
$B_i\ 1n\ (\pi_i/\pi_e)_t$	–	-2.40	-5.00	0.02
		(-0.93)	(-2.29)	(0.84)
B_i^2	–	–	6.96	1.06
			(4.18)	(0.98)
$1n\ (D/T)_{t-1}$	–	–	–	0.20
				(1.90)
$\bar{R}^2$	-0.0193	0.7668	0.8478	0.8801
F	0.36	38.26	48.33	52.30
DW	1.030	1.548	1.749	1.802

Note: Figures in parentheses beneath regression coefficients are computed t-values

Regression results of equation (10) and its earlier truncated versions were reported in Tables 1, 2 and 3 for the two sub-periods and the total period respectively. The fact that in the regression estimation of equation (10) if one or both coefficient of $B\ln(\pi_T/\pi_D)$ and B^2variables turn out to be statistically significant, implies that the simple regression based on equation (4) is considered misspecified. This way, the empirical appropriateness of the conventional specification given by equation (4) can be assessed. In fact, according to hypothesis 11 (i) statistical significance of the $B\ln(\pi_T/\pi_D)$ variable verifies that the elasticity of substitution between D and T is not constant but varied with 'B' over the sample period. Similarly, according to hypothesis (11) (ii), B^2 variable in Table 3 showed significance implying that the differential rate of augmentation was more D-augmenting than T-augmenting. Most probably, because the data were annual the partial adjustment parameter δ was not significantly different from unity implying full adjustment of the actual to the desired values within a year. A casual investigation into the results, following Blinder (1986) also corroborated our inference about δ in this paper.

Table 4: Elasticity of Substitution (σ) Estimates

Select years	(1)	(2)	(3)
1950-51	1.89		2.13
1955-56	3.15		2.21
1960-61	2.29		2.15
1965-66	1.28		2.09
1968-69	-0.38		1.96
1969-70	-	-0.38	1.78
1970-71	-	-0.34	1.69
1975-76	-	-0.23	1.18
1980-81	-	-0.06	0.31
1984-85	-	+0.09	-0.41

Note: Numbers in columns (1), (2) and (3) were derived from $\sigma = 11.16 - (78.18\,B)$, $\sigma = -0.55 + (1.02\,B)$ and $\sigma = 2.72 - (5\,B)$ respectively. The three relationships were based on the parameter estimates of equation (2) of Tables 1 and 2 and equation (3) of Table 3 respectively.

Table 4 reported estimates of elasticity of substitution between D and T for select years for all the three sub-periods. In each case the estimates were based on the best and meaningful results thrown up by equation (10) and its truncated regressions. Accordingly, the three columns of estimates were derived on the basis of the regression results of equation (2) from Tables 1 and 2 and equation (3) from Table 3 respectively, which were chosen as the most meaningful regressions. Overall, the estimates suggest that simple regression of log (D/T) on log (π_t/π_d) would have yielded biased and misleading results. Though not directly comparable with the results of this paper, still these results cast a doubt on the magnitude of elasticity of substitution estimates between D and T obtained earlier by Subrahmanyam (1977).

Theoretically there were coefficient restrictions across variables as evidenced in equation (10). Verification of these constraints was possible only through the application of non-linear least squares to the non-log form of equation (10). But that involved an additive error term whose implications were different for parameter estimates than the log-normal error term implied in the estimation of (10).

Some sensitivity tests were also conducted to examine whether the substitution parameter estimates remain robust for introduction of a scale variable. The inclusion of log of real net national product in the estimation of equation (10) did not show any statistical significance. The implication is that, over the study period, the rate of differential influence of the scale variable on the growth of D and T did not vary significantly.

5. Concluding Remarks

In this paper we have attempted a modest extension of Chetty's (1969) near-money substitution framework to explicitly test for the significant influence of banking expansion on the elasticity of substitution between demand and time deposits with banks. The big-push growth in banking facilities was part of a deliberate policy of supply-side banking innovation undertaken in India. The effect of such a structural change must have been captured by the elasticity of substitution parameter in the simple framework of equation (4) thus, resulting in over-estimation of the parameter than in the presence of the structural change variable in the equation. In the testing framework, the elasticity of substitution parameter was made a linear function of bank branches per thousand population which was used to proxy for the structural change. Besides this, care was also taken to filter the augmentation effects on D and T from the relative rates of return in a user cost of money formulation of Barnett (1978). Equation (10) was estimated for the total period and for two subperiods. The estimated elasticity of substitution values clearly verified our hypothesis. In the absence of explicitly accounting for the effect of banking expansion, the parameter estimates would overestimate the degree of substitutability between demand and time deposits. Our results remained robust to some sensitivity tests. Notwithstanding the evidence corroborating our hypotheses, this study was only a modest first attempt and can be extended in several directions. In view of this, the results of this study could only be tentative in nature.

References

Barnett, W.A., "The User Cost of Money," *Economics Letters*, Vol. 1 (1978) pp. 145-149.

Barro, R.J., and A. Santomero, "Household Money Holdings and the Demand Deposit Rate", *Journal of Money Credit and Banking*, Vol. 4 (May 1972) pp. 397-413.

Blinder, A.S., "More on the Speed of Adjustment in Investory Models," *Journal of Money, Credit and Banking*, Vol. 18 (August 1986) pp. 355-365.

Boughton, J.M., "Money and its Substitutes," *Journal of Monetary Economics*, Vol. 8 (November 1981) pp. 375-386.

Chetty, V.K., "On Measuring the Nearness of Near Moneys," *American Economic Review*, Vol. 59 (June 1969) pp. 270-281.

Friedman, M., The Optimum Quantity of Money and Other Essays.

Klein, B., "Competitive Interest Payments on Bank Deposits and the Long-Run Demand for Money," *American Economic Review*, Vol. 64 (December 1974) pp. 931-949.

Koening, E.F., and T.B. Fomby, "A New Monetary Aggregate," *Economic Review*, Federal Reserve Bank of Dallas (May 1990) pp. 1-14.

Reserve Bank of India, Trends and Progress of Banking in India, Bombay, 1955.

Subrahmanyam, G., "On the Nearness of Time Deposits to Money: An Empirical Study," *Indian Economic Journal*, Vol. 24 (April-June 1977) pp. 414-422.

Vasudevan, A., "The Monetary Impact of Time Deposits: The Indian Experience, 1950-51 - 1977-78, "*Reserve Bank of India Occasional Papers*, Vol. 1 (June 1980).

Abstract

This study has shown that the elasticity of near-money substitution parameter a la Chetty (1969) tends to be biased because it captures the influence of a big-push expansion of banking facilities as has taken place in India since 1969. Employing Barnett's (1978) user cost of money concept, the elasticity of substitution parameter between demand and time deposits has been made a linear function of bank branches per thousand population for India for the period 1950/51 - 1984/85 and for two subperiods therein. The empirical evidence has clearly indicated overestimation of the elasticity parameter and the result has remained robust to some sensitivity tests over the study period.

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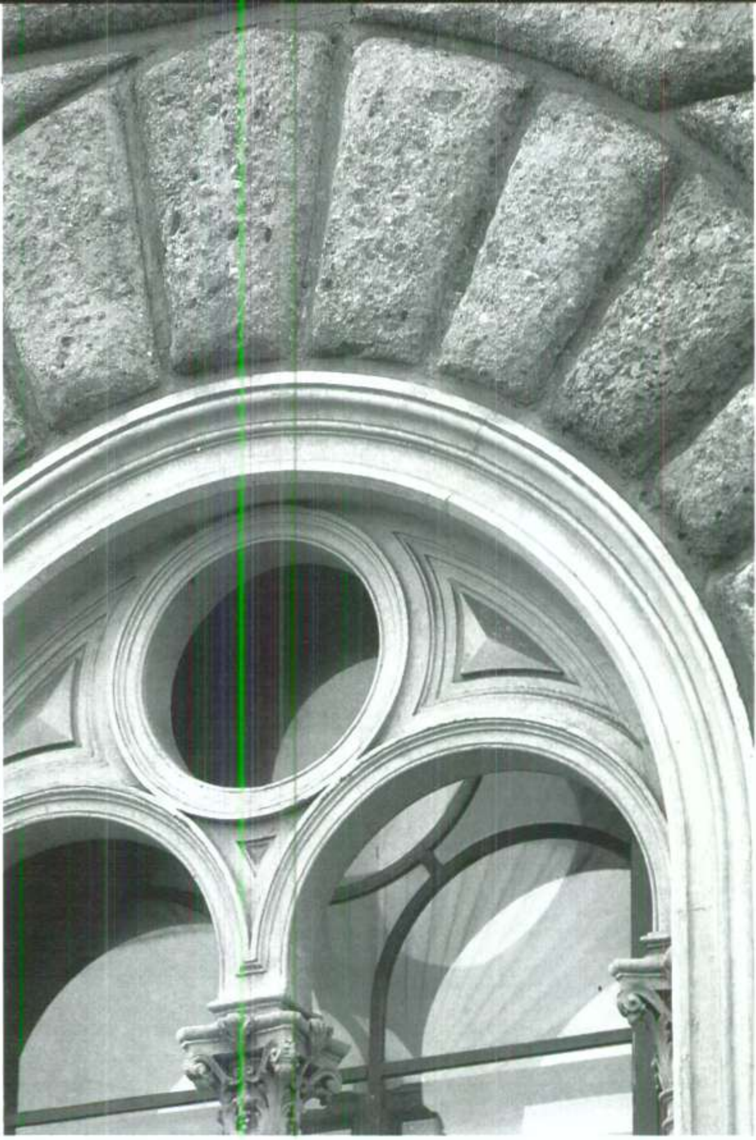

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Summary

The crucial aspect to focus upon in evaluating Africa's experience in financial sector development is its savings effort, the level and quality of financial intermediation and the efficiency in resource use. On all these scores, the African financial sector has performed very badly. Upon acceding to political independence, African governments decided to remodel their financial infrastructure by the establishment of a diversified set of financial institutions - viz - commercial banks, development banks, savings banks, co-operative banks, housing finance and postal savings banks, etc. Unfortunately, the ensuing benefits have not been commensurate with the enormous costs incurred. A great deal of effort was geared towards the provision of credit rather than the mobilization of resources. The official attitude to resource mobilization has been extremely lax partly due to foreign resource inflows and partly due to the inexpensive rediscounting terms and facilities provided by the central bank.
Commercial bank branches have not yet been sufficiently diffused in the rural hinterland with the result that Africa's resource potential in the rural areas still remains untapped. Development and Co-operative banks have literally become mere retailers of foreign loans and government funds even though many were empowered to mobilize resources in their statutes of establishment. The operations of specialised financial institutions are generally insulated from competition by various legislations, and are even provided with generous subsidies. Instead of undertaking much wider and more demanding tasks, (eg. bringing in financial innovation, developing money and capital markets, broadening the monetized sector of the economy, improving the unorganized segment), central banks in developing Africa are confined to the narrow contours of a regulator, and are circumventing financial deepening through the provision of generous accommodation to the commercial banks and the government.
Bank credit still remains a financial appendage of certain enclaves: large-scale mineral exporters, highly protected manufacturing, foreign owned undertakings, and the parastatal sector. In contrast, small farmers and indigenous small-scale enterprises remain financially repressed although they possess quite a large share of the deposit resources on which bank credit is based. These repressive influences of the formal banking system are perpetuating the enlargement of the informal sector.

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Dr. Abebe Adera is currently Chief of the African Least Developed Countries Programme at the United Nations Economic Commission for Africa. Before assuming his present post, he was Chief of the Fiscal, Monetary and Financial Policy and Institutions Section at the same Secretariat. Prior to joining the United Nations in 1978, he served as Director of the Research, Planning and Policy Coordination Division of the Commercial Bank of Ethiopia. He was also part time lecturer in Money and Banking at the Addis Ababa University from 1972 to 1978 and at the Ethioplan Institute of Banking and Insurance from 1969 to 1974. **Abebe Adera** holds a B. Com. (Hons) degree from the University of Delhi; an M.A. and M.Sc. degrees from the University of Wisconsin at Madison and a Ph. D degree from Jadavpur University.

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