

How the financial intermediation affects Brazilian industry output? The Miyazawa Expansion Factor applied to financial flows

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This paper aims to verify the relation between the financial intermediation sector and the Brazilian economic sectors. We calculate and analyze the multiplier product (Leontief, 1941) applying the Miyazawa Expansion Factor (1976) on the financial flows of Brazilian Financial and Social Accounting Matrix (FSAM). The multiplier determines the impact of exogenous variation of a currency in the financial intermediation sector, in the final product of the other sectors of economic activity and total output of the economy. The work contributes to the understanding the role of financial intermediation on the economic activity. The Brazilian financial market has expanded considerably in the last decade, pointing to a widening of credit supply, increased use of the securities market by Brazilian companies and most dynamic stock market. In this sense, understand how the financial intermediation sector affects the production of economic sectors can contribute to the creation of growth and development policies. Financial multipliers are obtained by expanding the multiplier SAM matrix, $(I - A^{SAM})^{-1}$, by a factor of $[I - (I - A^{SAM})^{-1} A_{12} A_{21}]^{-1}$. This multiplier is referred to as Miyazawa External factor (1976). The external multiplier shows the effect of changes in rights and financial obligations, A_{12} and A_{21} , in the real economy, $(I - A^{SAM})^{-1}$, calculated by the least identity Leontief inverse of SAM (array spending ratios standard) multiplied by the variations of the coefficient matrix of financial assets and liabilities $(I - A^{SAM})^{-1} A_{12} A_{21}$. The multipliers vector is formed by the column 45 of the multiplier matrix FSAM reflect the effect of the financial sector on the other sectors. The value of the total sum of the column is the impact on currencies, changes in a currency on demand from the financial intermediation sector, in the total output of the economy. The value of each cell intersection of the column 45 with each of the sectors that are in the lines is the impact of the financial intermediation sector in each of the other economic sectors. The FSAM built for the Brazilian economy for the period 2005 to 2009, have seven main groups of accounts: Production Account, Activities Account, Factors Account, Current Account, Capital Account, Financial Account and Rest of World Account. The accounts were detailed using the information from: Make and Uses Tables (TRU) published by the Regional Center of Economic Research (NEREUS/USP); the Integrated Economic Accounts (CEI) from the Brazilian Institute of Geography and Statistics (IBGE); and the Financial Account from IBGE and the Central Bank of Brazil. We observe that the exogenous shock of a currency in the financial intermediation sector generated an average net increase of 2.2 units in the total output of the economy over the years 2005 and 2009. We show that the impact of financial intermediation in the total economic output was higher in the post crisis period, showing the ability of financial intermediation in transmitting monetary and credit policies, countercyclical, and stimulate economic growth. It is noteworthy that the effect occurs heterogeneously among the sectors of economic activities. Looking at the average over the years, Trade sectors, Information services, Business services, Food and beverage industry and Real estate and rents are the sectors with higher multipliers and Public education and health, Ore iron, Tobacco products, Cement, Paints, varnishes, enamels and lacquers with smaller multiplier. These observations may contribute to the targeting of policies, given that the sectors that had the greatest increase in the impact of financial intermediation in its production were the sectors with the largest government incentives to increase the availability of credit directed to these sectors. It was possible to see that financial intermediation is efficient in distributing targeted form of resources, the sectors with the highest government incentives with greater release of credit (such as Automobiles and Construction Sectors) were those who experienced a greater increase in their multipliers. Importantly, on the other hand, the small capacity of financial intermediation in promoting activities related to the production chains of Mining

and Metallurgy, Manufacture of coke, derived products from the biofuel oil, Manufacture of chemicals, among other industries, which are important sectors for product formation and the dynamics in the Brazilian economy but essentially depending on the foreign demand.