ASSESSING THE IMPACT OF STRUCTURAL CHANGES IN THE FINANCIAL SECTOR ON THE ALGERIAN ECONOMY: A FINANCIAL SOCIAL ACCOUNTING MATRIX APPROACH

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Abstract:

In the spirit of inter-industry analytical framework, this work examines the cross-institution relationship by means of a Financial Social Accounting Matrix multipliers model for the case of Algeria. Our purpose is to understand the role of structural institutional changes implemented in the financial sector and their contribution to overall economic growth. More specifically, we attempt to quantify these changes and their impact on production, income, transfers, and saving. The empirical investigation is based on the 2003 and 2011 Financial Social Accounting Matrices built for the Algerian economy and on the derived multipliers model. The analysis of backward and forward linkage indices and the results obtained from the hypothetical extraction method show that financial structural changes have led to an expansion of the production sectors and an increase of the income of the production factors and the resources of the institutional sectors

Keywords: Financial institutions, Multipliers model, Financial Social Accounting Matrix, Structural change, key sectors, Hypothetical Extraction Method, Backward and forward linkage indices.

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Introduction

It is widely acknowledged that the efficiency of the financial sector is an important determinant of economic growth and a factor that conditions the success of economic policy. Carelessness towards the financial sector or excessive intervention that distorts the normal functioning of the market mechanism weakens economic growth (Berthélemy and Varoudakis, 1996).

Development and structural changes are highly interdependent. Most economists recognize this interdependence and some have emphasized the need of structural changes for growth. The accumulation of physical and human capital, changes in the composition of demand, trade, production and employment are considered as the core of economic structural transformation (Chenery, 1981). The process of modern economic growth also includes the changes that occur within the institutions and lead to structural changes (Syrkin, 2007). The structural changes within the financial institutions, which are the focus of our study, are an example. The development process requires that these structural changes take place both in the real sphere and the financial side of the economy.

However, the economic literature up until 2007 has not given much attention to macro-financial linkages and the economics discipline has failed to adequately integrate financial and macro-economic variables in the toolkits of macroeconomists. Starting in 2007, research stemming from the International Monetary Fund and some operational work began to concentrate more on macro-financial-related issues (Caprio, 2011). Our analysis attempts to contribute to this effort by providing an analysis of the Algerian case.

Algeria has experienced a long period of financial repression during which commercial banks have been unable to exercise their principal function of financial intermediary. The financial and monetary reforms of the 1990s and the early 2000s aimed at introducing market mechanisms based on the criterion of profitability in the financial sector. These reforms have led to structural changes in the financial sector through the liberalization of interest rates, the creation of a stock market exchange and financial institutions specialized in the long run financing, recapitalizing of commercial

banks, the opening of the sector to foreign competition, the creation of new financial institutions, the transformation of existing ones, the establishment of prudential regulation, the strengthening the powers of supervision, and the launching of microcredit programs.

In the 1990s, while the reforms have certainly brought significant improvements in the sector, the financial intermediation activity has remained limited, especially as far as the allocation of financial 11 endogenizing financial linkage. In recent years, several such Financial Social Accounting Matrix (FSAM) models have been constructed for developed and developing countries and used to address various issues. The methodological approach followed in this work in order to elaborate Algeria's FSAM is inspired by the work of Thorbecke (1985), Zantman (1994), and Andres Blancas (2003, 2006).

1.1. Literature review

According to Thissen (2001), attempts to integrate the financial sector in the Social Accounting Matrix framework have been made in the so-called *Totality Model* developed by L.Klein (1977) by combining the disaggregated Keynesian Macroeconomic demand approach using the Leontief Input-Output model and Compeland's flow-of-funds matrix[1]. Roe (1985) suggested an approach to disaggregate capital account and financial claims. Robinson (1991) offered a schematic framework of practical use for the elaboration of FSAM. Following the latter author, Emini and Fofac (2004), Waheed and Ezaki (2006), Li Jia (2008), and Leung and Secrieru (2010) derived the multipliers models based on FSAM to evaluate the role of financial institutions in the economy.

Recently, Blancas (2006) has provided an alternative approach to construct the FSAM, which emphasizes the importance of interdependence of the real and financial spheres of the economy.. In this study, we refer to Blancas's approach because we seek to give due interest to the linkage between these two spheres in the Algerian economy.

Three central banks, namely, Bank of Indonesia, the European Central Bank, and Bank of Canada, have compiled FSAMs for their

[1] Flow of founds framework was firstly presented by Copeland (1952).

respective economies. The FSAM of Euro area, known as the Euro Area Accounting Matrix (EAAM), offers a framework describing the production structure, the inter-institutions flows, and the financial flows within the Euro region. It can be used to analyze the economic structure of this region including the development of financial transactions. In addition, the EAAM helps provide a better understanding of the transmission mechanism of monetary policy in the Euro region (Jellema et al., 2004). The Bank of Canada and Statistics Canada have built a detailed SAM for Canada for 2004 by adding income flows and financial flows to input-output data (Leung and Secrieru, 2011).

1.2. Data sources and structure of Algeria's FSAM

Following Zantman (1994) and Blancas (2003 and 2006), the FSAM is composed of four sub-matrices. The Northwest sub-matrix lists the current operations as production, distribution, and use of value added. The South West sub-matrix details the structure of overall saving. The North East sub-matrix disaggregates capital formation and finally the Southeast sub-matrix represents the balance of flow of loanable funds (changes in monetary and financial assets).

The structure of the FSAM for the Algerian economy is divided into two parts: Real and financial. The real economy is composed of the following accounts: Activities account (1) involving the production sectors, a product account (2) that aggregates all goods and services produced by the productive sectors, factors of production accounts (3 and 4) (labor and capital) which outlines the formation of value added. Two current accounts of economic agents, precisely private sector (5)[2] and the public sector (6)[3], describe inter-institutional transfers. A current account is also reserved for the Rest of the World, which outlines the current operations between the national economy and the outside (7).

The financial sector includes two capital accounts for economic agents (private and public sectors 8 and 9 respectively) describing the changes in their receivables and liabilities, two capital accounts involving financial institutions namely the central bank (10) and the

[2] Household and firms.
[3] Government.

commercial banks (11) which trace changes in their assets and liabilities; and finally capital account for the Rest of the World (12). The structure of the FSAM for Algeria is shown in Table 1 of Appendix 1.We choose to build FSAM for the years 2003 and 2011 in order to evaluate the structural changes occurring in the financial sector and their implications in Algeria. For the construction of the real part of the FSAM, the sources of information used are taken from the Total Economic Tables (TET) for 2003 and 2011 published by the National Statistics Office (NSO). As for the financial part, most of the data sources are extracted from the Statistical Bulletin and reports of the Bank of Algeria.[4]

The FSAM that we have built contains imbalances between some rows and columns. These inequalities appear in the production account, the capital account of the government, the capital accounts of the Central Bank, commercial banks, and the Rest of the World. This causes inconsistency in our accounting framework. It is therefore necessary to adjust the framework to achieve a coherent FSAM. By an iteration process inspired by the RAS method, we have addressed these imbalances. The results of the estimation of these matrices are given in Table 2 and 3 of Appendix 2. The empirical framework is described in Box 1 of Appendix 2.

2. Brief overview of the empirical literature based on the fsam multiplier model

The increasing use of the multiplier SAM approach to assess policy impact, the structural changes, and the identification of key sectors is justified by the fact that the SAM endogenizes the links between production, income generation, and income allocation.

2.1. Definition and hypothesis

The SAM multiplier model is defined as an extension of the Input-Output Model. It is a static model that allows for short-term inferences. Indeed, it captures not only the input-output flows, but also the flows of household expenditures on goods and services and firms' payments to households for factor services. Unlike the Input-Output Multiplier Model, however, the SAM multiplier model captures

[4] For more details, see Touati and Kherbachi (2011).

income and household consumption linkages, thereby permitting an assessment of the global effect of specific changes in the economy.

Faizullaey et al. (2001) emphasize the fact that the SAM multiplier model possesses the following peculiarities: Ability to forecast the GDP based on aggregate demand fluctuations (The Keynesian approach); Causal links between intermediate and final production sectors (The Input-Output Table); Causal links between money supply and inflation rate (The Kalecki model); Causal links between household income and consumption (The Stone model).

The analyses based on the SAM multiplier assume that prices and wages are sticky and do not instantaneously clear the market. In such an approach, inferences are based on quantities and only activity levels may vary. Functional relationships are often taken to be linear in the financial SAM column and the models are demand-driven as the supply side is not a constraint on economic activities, especially when the production function is of a Leontief specification type (Emini and Fofac, 2004).

2.2. Recent applications of the FSAM multiplier model

Despite these restrictions, the SAM multiplier framework has been widely used to study the distribution of income (Roland-Holst and Sancho, 1992), the short-term effects of fiscal policies (Whalley and Hillaire, 1987), the sources of growth, and the sectoral distribution of resources. More recently, this framework has been used to analyze the effects of financial crises.

The work of Emini and Fofac (2004) focuses on the growth and income effects of public investment and capital expenditures using the financial SAM multiplier model. These authors find that the estimated values of the financial side multipliers of the Multiplier Matrix are relatively low for most accounts except for non-financial companies.

Waheed and Mitsuo (2006) use the production, social accounting, and financial social accounting multiplier models to identify the sectors and institutions of Pakistan’s economy that have an accelerating effect on growth.

Using a financial SAM multiplier analysis, Li (2008) conducts a broad review of changes in China’s financial sector, which resulted in

the establishment of a consistent accounting system for the Chinese economy. This concludes that the links between the real economy and the financial sector has significantly contributed to the country's economic growth.

Tsujimura and Tsujimura (2011) describe the US subprime mortgage crisis within the framework of the balance sheet economics, which has originally been proposed by Stone (1966) and Klein (1977, 1983). Since it is almost impossible to collect all the balance sheets of economic entities, they use flow-of-funds accounts instead to simulate the negative consequences resulting from home mortgage delinquencies. They show that the pass-through sequence converges when the original delinquency is made up by loss of net worth in any of the economic entities. Most of the losses have been incurred by "Households and Nonprofit Organizations" and the "Rest of the World". A portion of pass-through losses has been also incurred by foreign countries with excess external assets such as Japan and Ireland.

Ogawa et al. (2012) extend the input-output analysis to study the propagation mechanism of balance sheet deterioration in financial institutions and firms during the late 1990s and early 2000s (the so-called "lost decade") in Japan by using a unique input-output table augmented by firm size and linked to the balance sheet conditions of financial institutions and firms. They find that the lending attitude of financial institutions affected firms' input decision in the late 1990s and the early 2000s. These authors also perform simulation exercises to evaluate the effects of changes in the lending attitude toward small firms, which is not as favorable as that toward large firms, on sectorial allocations. They show that output increased for small firms and decreased for large firms. They report a non-negligible change in output (about 5.5% of the initial output of each sector). In particular, it exceeded 20% in textile, iron and steel, and fabricated metal products.

Using the first financial social accounting matrix (FSAM) constructed for the Philippine economy, Francisco et al. (2013) identify sectorial vulnerabilities and strengths for the economy. They perform an expanded multiplier analysis that incorporates three stages of inter-linkages (direct, indirect, and induced), backward and forward linkage indicators, and value- added multipliers. This framework

allows them to estimate multipliers quantifying both the sectoral and overall impact of any given change in the institutional and industrial structure as well as in the economic behavior of agents. They extend the multiplier analysis to estimate the impact of the global financial crisis on the productive sectors. Their findings highlight the widespread linkages of the financial intermediation sector with other industries, thus underscoring the importance of efforts to safeguard financial stability.

Piamchan (2011) studies the linkages between the property market and the commercial banking sector and their impact on the Thai economy. In addition to using Input-Output and SAM models, a Financial SAM model is adopted to study the impact of the commercial banking sector. Their results show that Thailand has a strong backward linkage, which implies that a crisis in the property sector would lead to a banking crisis and eventually to an economic crisis. In addition, the paper shows that the economic impact found by using a Financial SAM methodology is higher than those from SAM.

3. Assessing structural change in the financial sector using a real financial multiplier model

The empirical literature on the identification of key sectors, based on the input-output analysis typically assumes that the relationship between production, income generation, and use of income are exogenous. By focusing exclusively on production, the approach missed crucial links. The real SAM multipliers that endogenize linkages between production, income generation, and income expenditure provide a better way of identifying key sectors in the economy. Hajnovicova and Lapisakova (2002) apply the method of Rasmussen on multipliers of the input-output table and those of the SAM to determine the upstream and downstream connections. Cardenete and Sancho (2006) propose to extend the hypothetical extraction methodology for SAM to identify key sectors. Cardenete and al. (2009) use the methodology developed by Rasmussen and the hypothetical extraction method, and backward linkages indices based on SAM to identify key sectors.

3.1. The structure of the SAM multiplier model

In order to derive a multiplier model from FSAM, we follow the approach of Defourny and Thorbecke (1984). The multiplier analysis starts by dividing the accounts of the Financial Social Accounting Matrix into two categories: Endogenous and exogenous accounts.

Let Y represent the total of each endogenous account, X the exogenous accounts, N the matrix of transactions between endogenous accounts, and A the average expenditure propensities matrix obtained by dividing each element of the matrix N by the total of the corresponding column. By construction, we have then:

$Y = AY + X$ (1) or $Y = M X$ (2)

Where $M = (I - A)^{-1}$ is the Multiplier Matrix. The element M_{ij} of this matrix measures the increase in the income of account *i* following a unitary exogenous injection received by account *j*.

3.2. Backward and forward linkage analysis applied to FSAM

Blancas (2003 and 2006) suggests that in order to investigate the links between financial side and real side of the economy, matrices of multipliers should be calculated. The following citation from Blancas (2006) illustrates the approach: "In the SAM framework the cash flow transactions among institutions are classified in current and capital accounts that are registering the current income-spending and liabilities-assets transactions, respectively. As a result, there are two kinds of backward- forward linkages: current account and financial linkages. In a backward current account linkage, the increase of an institution's demand will imply increased current spending. Meanwhile, in the forward current account linkage, there will be more cash flows as current incomes. On the other hand, in the backward financial linkage, an institution is lending to other institutions, thus increasing its capital assets. Finally, in the forward capital linkage, an institution is borrowing from other institutions, thus increasing its liabilities."

We have retained the account of current government transactions as exogenous and then assessed the extent to which the financial account and the real account are connected in the economy following an injection into this State account. The sum over the column, i.e.,

over the index j of the M_{ij} elements indicates the total effect due to backward linkages while that over the row, i.e., over the index i of the M_{ij} indicates the total effect due to forward linkages (See Appendix 3).

The comparison between forward linkages indices of different accounts of the FSAM of 2003 and 2011 (see Table 1 below) shows that the account of commercial banks and the central bank exhibit the lowest forward linkages for these two years. This means that the expansion of the economic activity through fiscal policy does not lead to an expansion of the financial side of the economy. However, in 2011 the forward linkage has improved. This improvement can be explained by the financial and monetary reforms conducted in the 1990s and the early 2000s.

Table N°1: **Comparison of forward linkages indices**

Endogenous accounts	2003	2011
1. Activities	32.5938	30.7295
2. Product	39.7403	38.9279
3. Labor	3.4373	3.695
4. Capital	12.2157	17.7229
5. Private Sector	17.1494	23.0562
7. Rest of the World	5.932	8.6477
8. Private Sector	6.1799	10.0443
9. Government	-1.122	3.246
10. Commercial Banks	1.3984	3.9896
11. Central Bank	0.8514	3.4939
12. Rest of the World	-0.8369	0.6437

Sources: Computed by the authors from the 2003 and 2011 FSAM for Algeria.

Unlike forward linkages indices, account of commercial banks and central bank exhibit higher backward linkages. A remarkable improvement can be seen in the evolution of backward linkages indices between 2003 and 2011 (See Table 2 below).

Table N°2 : **Comparison of backward linkages indices**

Endogenous accounts	2003	2011
1. Activities	11.308	10.9239
2. Product	11.5803	11.0688
3. Labor	11.2629	10.5617
4. Capital	11.2629	10.5617
5. Private Sector	10.2629	9.5617
7. Rest Of the World	10.235	8.79
8. Private Sector	14.2785	14.5561
9. Government	7.4748	16.8077
10. Commercial Banks	7.1799	16.715
11. Central Bank	7.1793	17.8249
12. Rest of the World	15.5148	16.8252

Sources: Computed by the authors from the 2003 and 2011 FSAM for Algeria.

3.3. Application of the hypothetical extraction to the FSAM

The Hypothetical Extraction Method (HEM) measures the importance of a sector by analyzing the extent of the consequences of its elimination from the economy. The HEM approach has been used for the analysis of water use (Duarte et al., 2004), for detecting key sectors in an economy (Andreosso- O'Callaghan and Yue, 2004), and to study the economy-wide roles of different sectors such as the agriculture sector (Cai and Leung, 2004), the construction sector (Song et al., 2006), and the real estate sector (Song and Liu, 2007). Los (2004) has identified integrated the HEM in a dynamic input-output growth model to identify strategic industries. Kay et al. (2007) has used the HEM applied to SAM to measure the role of the sector of services while Cardenete and Sancho (2006) and Cardenete et al. (2008) use the HEM based SAM for key sectors identification.

In this paper, we extract commercial banks of the two RFSA and examine the consequences. To do this, we simply replace the value of the expenditure coefficients of commercial banks by zero. The results obtained are summarized Table 3 below. We see from this table that under the hypothesis of increased public spending, the extraction of commercial banks from FSAM generates the following losses: the

sectors' activities diminish by 27% of their production in 2011 (comparatively to 2003, losses are limited to 23%), wages decrease by 20% (while in 2003, the wage decreases only by 3%) and corporate profits declines by 26 %, the private sector looses 23 % of its income and 37% of its financial resources

Table N°3: **Losses due to the extraction of commercial banks accounts**

Endogenous accounts	Before extraction (2003)	After extraction (2003)	Before extraction (2011)	After extraction (2011)
1. Activities	32.5938	25.0676	30.7295	22.2393
2. Product	39.7403	30.2735	38.9279	27.811
3. Labor	3.4373	3.3288	3.695	2.9503
4. Capital	12.2157	13.1953	17.7229	13.1026
5. Private Sector	17.1494	18.3745	23.0562	17.53
7. Rest of the World	5.932	6.3699	8.6477	6.4639
8. Private Sector	6.1799	6.0251	10.0443	6.2959
9. Government	-1.122	-0.0522	3.246	1.5197
10.Commercial Banks	1.3984	1	3.9896	1
11. Central Bank	0.8514	1.2708	3.4939	2.2941
12. Rest of the World	-0.8369	-0.7508	0.6437	0.2548

Sources: Computed by the authors from the 2003 and 2011 FSAM for Algeria.

4. Effect of structural changes in the financial sector

The recent financial decisions made by the government, including the supply of credit facilities, the rate subsidy of the mortgage loans rates, and the establishment of investment funds have led to an increase in national production and in income for economic agents.

4.1. Algeria's financial policy

Financial constraints constitute one of the main obstacles to the growth of the private sector in Algeria. From the beginning of the 1990s, the government has been attempting to encourage the emergence of this sector, in particular, the development of small and medium enterprises (SMEs). This was done through various initiatives, including new investment codes, specific programs for

SMES or micro-enterprises such as those launched by the National Agency for Support to Youth Employment (NASYE), the National Agency for Investment Development (NAID), the National Unemployment Insurance Fund (NUIF), and the National Agency for Management of Microcredit (NAMM). Guarantee funds such as the Guarantee Fund loans to SMEs (GARF) and the Credit Guarantee Fund and SME investments were also established to provide the necessary support for the debt solvency of private companies.

Following the measures implemented in 2011 aimed at improving access to microcredit, NAMM loans have been increasing at an impressive rate. While in 2005 the number of loans granted by this agency was equal 3329, since 2010 its average annual increase is about 100.000. This strong increasing trend is due to the combination of several factors related to the easing of administrative procedures and the providing of support to the banking commitments associated to projects.[5]

From 1996, the year of its establishment in 1996, until 2004, the NASYE has allowed the creation of 183,124 companies and about 485,704 jobs. The number of businesses created nearly doubled between 2008 and 2009 and between 2010 and 2011.[6] Similarly, the number of mico-enterprises created under the NUIF device has considerably increased. Indeed, between January the 1st and August the 31st 2011, this agency has approved 57,490 projects submitted by young promoters. This represents an increase of 477% compared to the same period in 2010.[7]

In addition to these private entrepreneurship-dedicated agencies, the National Investment Fund (NIF) plays an increasing role in the financing of SMEs, including through the creation of 48 regional offices. Private investment funds for SMEs begin to develop, including seed and venture capital funds.

Moreover, the agricultural sector, as a substantial source of employment, has benefited in 2011 from a series of decisions, such as the allocation of subsidized loans worth 1 million dinars per hectare

[5] ANGEM Data extracted from www.angem.dz.
[6] Statistics of ANSEJ, from the Direction Générale de l'ANSEJ.
[7] Statistics of CNAC extracted from the Regional Direction of CNAC.

for land development and the creation of farms. In addition, the granting of subsidized credits for the benefit of agro-industry units as well the establishment of a guarantee scheme for bank loans to farmers should boost the agricultural sector.

Measures taken under the 2009 Finance Act such as the subsidy of the mortgage loans rates should also make housing more affordable and thus stimulate the growth of the construction and public works sector. According to the report of Bank of Algeria, the outstanding mortgage loans increased from 149.4 billion dinars at the end of 2009 to 171.1 billion dinars at the end of 2010, to 203.1 billion dinars at the end of 2011, to reach 257.7 billion dinars at the end of 2012, corresponding to an increase of 26.9% against 18.7% in 2011 and 14.5% in 2010.

The 2012 report of Bank of Algeria noted the uptrend medium and long terms credits the relative share of which has reached 68.3% of the outstanding loans distributed in late 2012 against 31.7% for short-term loans. The uptrend began after 2006 resulting, in particular, in the increase of long-term loans (29.2% in 2012) distributed to finance investments in the sectors of energy and water. At the end of 2012, medium and long-term loans distributed by public banks represented 73.9% of their total credit against 68.7% at the end of 2011 and 63.1% at the end of 2010. The share of loans to private companies and households in the total lending by banks stood at 52.3% against 53.2% in 2011.[8]

4.2. Effect of increase of credits

In this section, we assume that the accounts of Commercial banks and Central Bank are exogenous and evaluate the effect of structural changes in the financial sector on production and income. We adopt the same approach as in Section 3, but here, Commercials banks and Central Bank accounts are taken out of the matrix of the endogenous accounts. Multiplying each of the matrix multiplier (M) by the vector of exogenous injections ΔX, i.e. forming $M.\Delta X$, gives the effect of an increase of credit to the private sector on the economy. We set the elements of the vector ΔX equal to zero except the eighth,

[8] Bank of Algeria (2012).

representing credit to the private sector, which we set equal to one. The results obtained are shown in Table 4 and Figure 1 below.

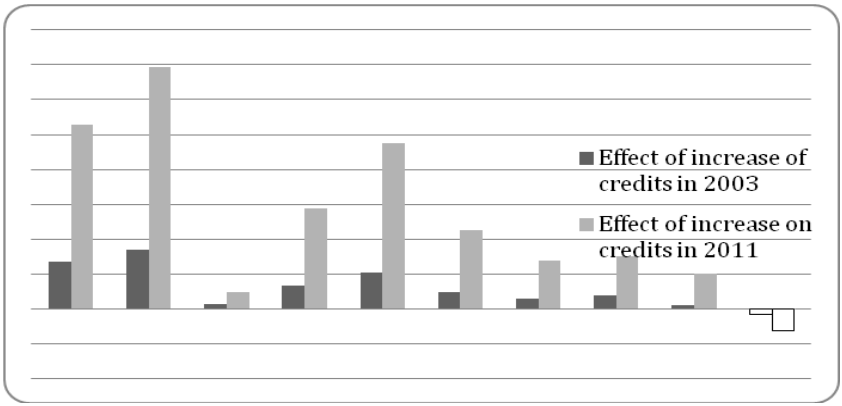
The structural changes in the financial sector have led to increases in the production sectors, the income of production factors, and the resources of the institutional sectors. In 2003, the impact of the financial sector on the production sector represents only 13.5 units. In 2001 this effect jumps to 52.95 units. However, the effect on labor compensation has only slightly improved going from 1.25 units in 2003 to only 4.64 units in 2011. In contrast, the return on capital was remarkably influenced going from 6.5834 units in 2003 to 28.81 units in 2011. This improvement can be explained by the implementation of microcredit programs and the investment funds made available to finance SMEs.

Table N°4 **: Effect of increase of credits (2003 and 2011)**

Endogenous account	2003	2011
1. Activities	13.5321	52.9528
2. Product	17.0216	69.3371
3.Labor	1.2571	4.6440
4. Capital	6.5834	28.8169
5. Private Sector	10.2186	47.6355
6. Government	4.7697	22.5952
7. Rest of the World	3.0179	13.7559
9. Private Sector	3.8367	15.1502
10. Government	0.9413	10.1529
12. Rest of the World	-1.6490	-6.4666

Sources: Computed by the authors from the 2003 and 2011 FSAM for Algeria..

Figure N°1 : **Effect of increase of credits (2003 and 2011)**



Sources: Computed by the authors from the 2003 and 2011 FSAM for Algeria.

Conclusion

The FSAM, as a general equilibrium data framework, is a useful analytical tool for constructing models within which transmission mechanisms between the real and financial sectors of the economy can be examined. This work provides a comprehensive analysis of the structural roles and the relative importance of not only sectors' activities but also of institutional economic decision makers, such as the private sector, the government and the financial institutions, based on their contribution to GDP, Gross Capital Formation, Final Consumption, and Financial Transactions.

The simulations based on the Financial SAM allowed us to understand the link between the financial and real spheres of the economy. The Backward and Forward linkage analysis applied to the RFSA Matrices indicates that the commercial banks and the central bank present the lowest forward linkages indices and the strongest backward linkages indices. This means that the expansion of economic activity through fiscal policy does not necessarily lead to the expansion of the financial sector, whereas the latter induces the expansion of the real sphere through the increase of the private sector credit.

The Hypothetical Extraction methodology applied to the Financial Social Accounting Matrices shows that the structure of the banking

sector in Algeria has changed. Sectors of economic activities and the factors of production have suffered considerable losses in 2011 following a hypothetical extraction of commercial banks. Comparatively to 2011, these losses were not substantial in 2003. This highlights the structural changes operated in the financial sector. These changes have led to a growth of the production sectors and an increase of income of production factors and resources of the institutional sectors.

Appendix 1

Structure of FSAM for Algeria

Table A1.1: **Structure of FSAM for Algeria**

Accounts	**1**	**2**	**3**	**4**	**5**	**6**
1.Activities		Domestic output				
2. Product	Intermediate demand				Consumption Spending of Private Sector	Consumption Spending of government
3. Labor	Labor compensation					
4. Capital	Gross operating surplus					
5.Private sector			Labor compensation	Gross operating surplus		Subsidies for enterprises and social benefit
6. Government	Taxes on production	Value Added taxes & duties taxes on import			Income taxes and social contribution	
7. ROW		Import Payments			Current transfers sent by private sector for ROW	Current transfers sent by government for ROW
8.Private Sector					Private Savings	
9.Public Sector						Public Savings
10.Commercial banks						
11.Central Bank						
12.ROW						

Sources: Constructed by the authors

Table A1.1 (continued) : Structure of FSAM for Algeria

Accounts	***7***	***8***	***9***	***10***	***11***	***12***
1. Activities						
2. Product	Export	Investment Demand of private sector	Investment Demand			
3. Labor						
4. Capital						
5. Private sector	Transfers from ROW to private sector					
6. Government	Transfers from ROW to gove-rnment					
7. ROW						
8Private sector				Credit to enterprises		
9.Public Sector		Deposits		Public sector lending by commercial banks	Public sector lending by central bank	foreign debt of private sector
10. Commercial banks		Deposits	Deposits of government in commercials banks		Refinancing for commercial banks	Δforeign debt of government
11.Central Bank		Currency in circulation	Deposits of government in central banks	ΔReserves of commercial banks		foreign debt of Commercial banks
12.ROW	Current account balance			Net foreign assets	Net foreign assets	foreign debt of Central Bank

Sources: Constructed by the authors.

Appendix 2

Construction of FSAM for Algeria: 2003 and 2011

Table A2.1 : **FSAM for Algeria, 2003 (in billions of DZD)**

	1	2	3	4	5	6
1. Activities		6397422.5				
2. Product	2089464.9				2089319.2	245550.2
3.Labor	594341					
4. Capital	3112652.7					
5. Private Sector			594341	3112652.7		933902.2
6. Government	600963.9	399003.6			1252919.2	
7.Rest of the World		1250630.2			174703.2	1 399.80
8. Private Sector					1314447.3	
9. Government						1074476
10.Commercial Banks						
11. Central Bank						
12.Rest of the World						
Total	6397422.5	8047056.3	594341	3112652.7	4831388.9	2255328

	7	8	9	10	11	12	Total
1. Activities							6397422.5
2. Product	2013436.3	996677.4	612608.3				8047056.3
3.Labor							594341
4. Capital							3112652.7
5. Private Sector	190493						4831388.9
6. Government	2 441.60						2255328.3
7. Rest of the World							1426733.2
8. Private Sector				113431	-100	4154.1	1431932.4
9. Government		4102		-35389	-159300	-99071.8	784817.3
10. Commercial Banks		317153	4680		0	5269	327102
11. Central Bank		114000	167529	191700		-32082	441147
12. Rest of the World	-779637.7			57360	600547		-121730.7
Total	1426733.2	1431932	784817.3	327102	441147	-121730.7	

Sources: Computed by the authors from the Total Economic Table for 2003 and Reports of Bank of Algeria for 2004 and 2003.

Table A2.2 : **FSAM for Algeria, 2011 (in Billions of DZD)**

	1	2	3	4	5	6
1. Activities		16000361.0				
2. Product	4697456.2				5423938.5	57709.7
3.Labor	1403549.6					
4. Capital	8706831.3					
5. Private Sector			1403549.6	8706831.3		3976996.743
6. Government	1192523.9	836391.2			4626558.647	
7. Rest of the World		4114739.8			1709.99	40175.2511
8. Private Sector					4341892.3	
9. Government						2753883.406
10.Commercial Banks						
11. Central Bank						
12. Rest of the World						
Total	16000361.0	20951492	1403549.6	8706831.3	14394099.44	6828765.1

	7	8	9	10	11	12	Total
1. Activities							16000361
2. Product	5630649.3	2827739.3	2313999.0				20951492.0
3.Labor							1403549.6
4. Capital							8706831.3
5. Private Sector	306721.8						14394099.44
6. Government	173291.4						6828765.1
7.Rest of the World							4156625.041
8. Private Sector				458034	382	-1020	4799288.3
9. Government		390329.7		312262	125	-900	3455700.106
10.Commercial Banks		888281	46196			-51001	883476
11. Central Bank		692 938.30	1095505.106	65318		22487.594	1876249
12.Rest of the World	-1954037.46			47862	1875742		-30433.456
Total	4156625.041	4799288.3	2904595.0	883476	1876249	-30433.406	

Sources: Computed by the authors from the Total Economic Table for 2011 and Reports of Bank of Algeria for 2012 and 2011.

Box 1: reading FMSAM of 2011

Input-output transactions among different sectors in the economy are aggregated in the total uses of output in row 1 and total production costs in column 1. In row 1, the sources of production activities incomes are received from the supply of different kinds of commodities and also the supply of intermediate commodities to other production activities.[9] Thus, these revenues are represented as a gross output of activities (intersection with column 2) [10.] The column 1 represents total gross input from the market production cost and revenue. The intersections between column 1 and row 2 shows that sales revenues of each production activities in part of purchasing raw materials.[11], the rest of the production costs (value added) at the intersection with row 3 and 4 indicates the values of paid out to the factors of productions in form of wages (labor)[12], and profits (capital)[13] . Activities account pay also taxes Related to the production to the government whose value is extracted from TET (1207352 DA). The value of all goods services transactions are extracted from Total Economic Table in 2011 published in 2012 by National Office of Statistics.

In column 2, goods and services pay the value of goods and services produced by activities (domestic production) into the activities accounts (16000361.0) and pay the value of imported products to the rest of the world account (intersection with raw 7; 4114739.8). The prices used for evaluating goods and services are market prices, which include indirect taxes (intersection with raw 6; 836391.2)[14]. Their receipts (row 2) proceed from: sales in the domestic market of intermediate products to activities (4697456.2; intersection with column 1), final goods to private sector

[9] All digits are in millions of DA

[10] The value of output of activities account is extracted from the TET (gross output is equal to 16000361.0 in 2011).

[11] The value of Intermediate demand of activities is extracted from the Total Economic Table (TET) of 2011 (4697456,2 million DA)

[12] This value is calculated from TET data , wages and salaries paid by both "Corporations and Quasi Corporations" (791581,7) and "Households and Individual Businesses" (611967,9)(1403549.6 million in 2011)

[13] 8706831.3 DA million

[14] The Value Added Tax and Customs Duties and , see TET of 2011

(consumption of household)[15] and government for consumption[16], investment goods to the capital account of private sector (2827739.3)[17] and government (2313999.0)[18]

Factor accounts (3 and 4) show how value added is distributed to the factors of production, and how the factor income is transferred to private sector. The row entry in the labor account represents the compensation of employees (wages and salaries), which the labor receives from the sale of their services to the activities. Income payment received by the capital factor account in the form of rent and profit is computed as a residual payment. In the column (3 and 4) , the labor account pays wages and salaries to households, whereas the capital account pays capital income to firms ; in our FSAM, all the value added is distributed to private sector since the later represents households and firms (intersection of column 3 and 4with row 5).

In row 5, private sector income includes factor incomes (10110380.9 million DA) and compensation of employees paid by the government (2354732), public transfers form of social benefits (807555.1), operating grants (14828.1) and transfers from the Rest of the World (306721,8). In column 5, expenditure consists of final consumption (5423938.5), direct and indirect taxes and social contributions payd for government (see the intersection of column 5 and row 6; the value is equal to 4626558.647), and transfers paid to the Rest of the World (80058 7)[19], with residual saving transfer to

[15] The Final Consumption of Household is calculated from TET, the value is equal to 5423,938.5 million DA.

[17] The value of private sector investment (2827739.3 million DA) consists of Gross Fixed Capital Formation of Corporations and Quasi Corporations (CQC) and of the Households and Individual Businesses (HIB) (ie: 22956236 M DA) Inventory changes of (CQC) and those of HIB (which amount is equal to 494243 M DA) and net acquisitions of land of CQC and HIB (37,872.7 M DA).

[18] The value of government investment is equal to 2313999 million DA, see TET of 2011

[19] the amount of institutional transfers is calculated using the method for the allocation of expenses , for more details see Fofana Ismail (2007)

their capital account[20] of the private sector (see the intersection of column 5 and row 8; 4341892.3) [21]**.**

In row 6, Government receipts are taxes on production (1192523.9), imports (836391.2) and income (indirect and direct taxes, 4626558.647) and current transfers from abroad (173291.4). Expenditures of government are on current consumptions (57709.7), transfers to the household and firms (3976996.743), and transfers to the rest of the world (40175.2511); while government savings are transferred to the capital account of government (see the intersection of column 5 and row 9; the amount of government saving is equal to 2753883.406)[22]**.**

The rest of the world account represents all the transaction between the domestic economy and foreign countries. The rest of the world (ROW) receipts are payments of domestic economy for imports and public current transfer to abroad. The rest of the world expenditures are payments for exports, transfer to domestic economy (household and government) and foreign savings (net foreign capital inflow or current account deficit, the value is equal to -1954037.4)[23].

The capital account shows in the rows institutional savings and liabilities adding to investment finance. The columns register the use of investment funds by private sector and Government. The values contained in the financial sub-matrix are expressed in terms of annual variation (gap of asset value between 2011 and 2010) reflecting changes in assets and liabilities of various financial accounts.

In row 11, private sector take loans from both the banking system (commercial banks, 458034)[24] and foreign sources (-1020)[25] by direct indebtedness, The "other receivables" post in the balance sheet of the

[20] The difference between income and spending in the current account leads to institutional saving which can be positive or negative registered in capital accounts

[21] This amount represents the resources-uses balance of private sector account

[22] This amount represents the resources-uses balance of government sector account

[23] This amount represents the resources-uses balance of ROW account

[24] This is the difference between the amount of credits to the economy granted by commercial banks between 2011 and 2010 (3724747 - 3266712 = 458035), see Statistical Bulletin of the Bank of Algeria, monetary retrospective statistical series1964-2011 published by the Bank of Algeria, P 62.

[25] The Foreign debt of private sector is estimated to (-1020)

Bank of Algeria is considered, in our case, as a claim on the private sector with a value of (382)[26]. On the other hand, Assets of private sector includes deposits in the commercial banks (888281) currency and coins emitted by the central bank, deposits in Treasury (intersection with the government row, 390329.7)[27].

Public sector gets financial resources from commercial banks (312262)[28] , the central bank (65318), private sector as deposits at the Treasury and the Rest of the World whose , those the value is extracted from the position of Treasury operations (-900)[29] . Assets of Public sector consist in deposits in commercial banks (46196)[30] deposits at the Bank of Algeria (1095505.106)[31]. **Assets of commercial banks** include credit to private sector (intersection with column10, 458034) and Government (rows 9, 312262) and reserves for demand deposits on central bank (row 11, 65318) and Net foreign assets (row 12, 47862). Liabilities registered in row 10 include demand deposits from private (888281) and government sector (46196) and net debt with the foreign sector (row 10, column 12, -51001).

In The column of the central bank account shows the credit to private (382) and public sectors (125), and foreign exchange reserves (1875742) .The row of the central bank account registers the currency and coins held by private sector (692 938.30), reserves for demand deposits from commercial(65318), and public sector (1095505.106), and net debt with foreign sector (22487.594)

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[26] Idem, P 65

[27] Statistical Bulletin of the Bank of Algeria, monetary retrospective statistical series1964-2011 published by the Bank of Algeria, P 69

[28] The value is calculated from the situation of banks (1462327 - 1150065 = 312262 M DA)

[29] government register negative asset transactions with the ROW

[30] See Statistical Bulletin of the Bank of Algeria, monetary retrospective statistical series1964-2011 published by the Bank of Algeria p70. The amount is calculated from data on the situation of Creator banks Currency (346369-302987 = 43382) + (17301-14487 = 2814) = (46196).

[31]The Value is calculated from data on the situation of the Bank of Algeria; See Statistical Bulletin of the Bank of Algeria, monetary retrospective statistical series1964-2011 published by the Bank of Algeria,,p 66.

In the row 12, the foreign accounts shows the foreign exchange reserves hold by central bank (1875742) and commercial bank (47862) ; on the column side, net direct indebtness of the private sector, government and banking system.

Appendix 3

Evaluation of structural changes of the financial sector using backward and forward linkage applied to FSAM, 2003 and 2011

Table A3.1 : **Backward and forward linkages applied to FSAM, 2003**

Endogenous accounts	1	2	3	5	6	7
1. Activities	3.4004	3.1793	2.3508	2.3508	2.3508	3.0631
2. Product	3.0194	3.9991	2.9569	2.9569	2.9569	3.8529
3.Labor	0.3159	0.2954	1.2184	0.2184	0.2184	0.2846
4. Capital	1.6543	1.5467	1.1436	2.1436	1.1436	1.4902
5. Private Sector	2.0427	1.9344	2.4351	2.4351	2.4351	1.9978
7.Rest of the World	0.5432	0.6915	0.5477	0.5477	0.5477	1.6711
8. Private Sector	0.6142	0.5917	0.7265	0.7265	0.7265	0.6655
9. Government	-0.2158	-0.3373	-0.1823	-0.1823	-0.1823	-1.0667
10.Commercial Banks	0.145	0.1472	0.1673	0.1673	0.1673	0.2052
11.Central Bank	0.0254	-0.049	0.0715	0.0715	0.0715	-0.4454
12.Rest of the World	-0.2367	-0.4187	-0.1726	-0.1726	-0.1726	-1.4833
Total	**11.308**	**11.5803**	**11.2629**	**11.2629**	**10.2629**	**10.235**

	8	9	10	11	12	Total
1. Activities	3.1795	3.1797	3.18	3.1797	3.1797	**32.5938**
2. Product	3.9994	3.9997	3.9999	3.9996	3.9996	**39.7403**
3.Labor	0.2954	0.2954	0.2954	0.2954	0.2954	**3.4373**
4. Capital	1.5468	1.5469	1.5470	1.5469	1.5469	**12.2157**
5. Private Sector	1.9345	1.9347	1.9348	1.9347	1.9347	**17.1494**
7. Rest of the World	0.6915	0.6916	0.6916	0.6916	0.6916	**5.932**
8. Private Sector	1.6412	0.5652	0.8629	0.4596	0.4878	**6.1799**
9. Government	0.0081	0.9676	0.7022	1.0617	1.0366	**-1.122**
10.Commercial Banks	0.3537	0.1252	1.1267	0.0165	0.0454	**1.3984**
11. Central Bank	0.3999	0.3604	1.2966	1.8308	0.706	**0.8514**
12. Rest of the World	0.2285	0.1347	1.5847	2.1173	1.5911	**-0.8369**
Total	**14.2785**	**7.4748**	**7.1799**	**7.1793**	**15.5148**	

Sources: Computed by the authors from the 2003 FSAM for Algeria..

Table A3.2 : **Backward and forward linkages applied to FSAM, 2011**

Endogenous accounts	1	2	3	5	6	7
1. Activities	3.0957	2.8521	1.9913	1.9913	1.9913	2.4845
2. Product	2.7441	3.7346	2.6074	2.6074	2.6074	3.2532
3.Labor	0.2715	0.2501	1.1746	0.1746	0.1746	0.2179
4. Capital	1.6847	1.5521	1.0836	2.0836	1.0836	1.3521
5. Private Sector	1.9959	1.8564	2.2961	2.2961	2.2961	1.6909
7.Rest of the World	0.5391	0.7337	0.5123	0.5123	0.5123	1.6391
8. Private Sector	0.5683	0.4252	0.7018	0.7018	0.7018	-0.0446
9. Government	0.0226	-0.0585	0.0629	0.0629	0.0629	-0.3858
10.Commercial Banks	-0.0587	-0.2473	0.022	0.022	0.022	-1.0308
11.Central Bank	0.1587	0.1644	0.1747	0.1747	0.1747	0.22
12.Rest of the world	-0.098	-0.194	-0.065	-0.065	-0.065	-0.6065
Total	**10.9239**	**11.0688**	**10.5617**	**10.5617**	**9.5617**	**8.79**

	8	9	10	11	12	Total
1. Activities	3.0383	3.5482	3.2448	3.246	3.246	**30.7295**
2. Product	3.9783	4.6461	4.2488	4.2503	4.2503	**38.9279**
3.Labor	0.2665	0.3112	0.2846	0.2847	0.2847	**3.695**
4. Capital	1.6534	1.931	1.7658	1.7665	1.7665	**17.7229**
5. Private Sector	1.9776	2.3095	2.112	2.1128	2.1128	**23.0562**
7. Rest of the World	0.7815	0.9127	0.8347	0.835	0.835	**8.6477**
8 . Private Sector	1.7955	0.9011	1.4325	1.4305	1.4304	**10.0443**
9. Government	0.2819	1.2135	0.6598	0.6619	0.6619	**3.246**
10.Commercial Banks	0.3822	0.3867	1.5248	1.4832	1.4835	**3.9896**
11. Central Bank	0.3739	0.528	0.4585	1.0332	0.0331	**3.4939**
12. Rest of the World	0.027	0.1197	0.1487	0.7208	0.721	**0.6437**
Total	**14.5561**	**16.8077**	**16.715**	**17.8249**	**16.8252**	

Sources: Computed by the authors from the 2011 FSAM for Algeria..

Appendix 4

Evaluation of structural changes of financial sector using the hypothetical extraction method based on the 2003 and 2011 RFSAM

Table A4.1 **: Hypothetical extraction method based on the 2003 FSAM for Algeria**

Endogenous accounts	1	2	3	5	6	7
1.Activities	2.9912	2.764	1.8786	1.8786	1.8786	2.4839
2.Product	2.5046	3.4767	2.363	2.363	2.363	3.1244
3.Labor	0.2779	0.2568	1.1745	0.1745	0.1745	0.2308
4.Capital	1.4552	1.3447	0.9139	1.9139	0.9139	1.2084
5.Private Sector	1.7937	1.6817	2.1479	2.1479	2.1479	1.6454
7.Rest of the World	0.4542	0.6012	0.445	0.445	0.445	1.5451
8.Private Sector	0.5031	0.479	0.5984	0.5984	0.5984	0.5083
9.Government	-0.3061	-0.429	-0.2865	-0.2865	-0.2865	-1.1947
10.Commercial Banks	0	0	0	0	0	0
11.Central Bank	-0.1414	-0.2183	-0.121	-0.121	-0.121	-0.6815
12.Rest of the World	-0.4407	-0.6257	-0.4079	-0.4079	-0.4079	-1.772

	8	9	10	11	12	Total
1.Activities	2.1813	2.8265	0	3.1332	3.0517	**25.0676**
2.Product	2.7438	3.5553	0	3.9411	3.8386	**30.2735**
3.Labor	0.2026	0.2626	0	0.2911	0.2835	**3.3288**
4. Capital	1.0612	1.3751	0	1.5243	1.4847	**13.1953**
5.Private Sector	1.3272	1.7197	0	1.9063	1.8568	**18.3745**
7.Rest of the World	0.4744	0.6148	0	0.6815	0.6637	**6.3699**
8.Private Sector	1.3703	0.4693	0	0.4469	0.453	**6.0251**
9.Government	-0.2123	0.8896	0	1.0515	1.0083	**-0.0522**
10.Commercial Banks	0	0	1.0000	0	0	**1**
11.Central Bank	-0.0071	0.2164	0	1.8119	0.6538	**1.2708**
12.Rest of the World	-0.2689	-0.0413	0	2.0942	1.5273	**-0.7508**

Sources: Computed by the authors from the 2003 FSAM for Algeria.

Table A4.2 : **Hypothetical extraction method based on the 2011 FSAM for Algeria**

Endogenous accounts	1	2	3	5	6	7
1. Activities	3.2206	3.3783	1.9445	1.9445	1.9445	4.6779
2. Product	2.9077	4.4236	2.5461	2.5461	2.5461	6.1254
3.Labor	0.2824	0.2963	1.1705	0.1705	0.1705	0.4103
4. Capital	1.7526	1.8385	1.0582	2.0582	1.0582	2.5457
5. Private Sector	2.0773	2.1989	2.2656	2.2656	2.2656	3.1186
7. Rest of the World	0.5713	0.869	0.5003	0.5003	0.5003	2.2033
8. Private Sector	0.6234	0.6575	0.6811	0.6811	0.6811	0.9237
9. Government	0.048	0.0485	0.0534	0.0534	0.0534	0.0602
10. Commercial Banks	0	0	0	0	0	0
11. Central Bank	0.1763	0.2387	0.1681	0.1681	0.1681	0.53
12.Rest of the World	-0.0923	-0.1699	-0.0671	-0.0671	-0.0671	-0.506

	8	9	10	11	12	Total
1. Activities	2.225	2.7253	0	0.0897	0.089	**22.2393**
2. Product	2.9135	3.5686	0	0.1174	0.1165	**27.811**
3.Labor	0.1951	0.239	0	0.0079	0.0078	**2.9503**
4. Capital	1.2109	1.4831	0	0.0488	0.0484	**13.1026**
5. Private Sector	1.4482	1.7739	0	0.0584	0.0579	**17.53**
7. Rest of the World	0.5724	0.701	0	0.0231	0.0229	**6.4639**
8. Private Sector	1.4365	0.5378	0	0.037	0.0367	**6.2959**
9. Government	0.1165	1.0462	0	0.0201	0.02	**1.5197**
10.Commercial Banks	0	0	1	0	0	**1**
11. Central Bank	0.2589	0.4117	0	0.5872	-0.413	**2.2941**
12. Rest of the Word	-0.0102	0.082	0	0.5762	0.5763	**0.2548**

Sources: Computed by the authors from the 2011 FSAM for Algeria.

Appendix 5

Effect of structural changes in the financial sector using the 2003 and 2011 FSAM for Algeria

Table A5.1 - Effect of increase of commercial banks credits (2003)

	1	2	3	4	5	6
1. Activities	18.8179	19.3797	17.164	17.164	17.164	16.4389
2. Product	22.4124	24.377	21.59	21.59	21.59	20.6778
3.Labor	1.7482	1.8004	2.5945	1.5945	1.5945	1.5272
4. Capital	9.1549	9.4282	8.3503	9.3503	8.3503	7.9975
5. Private Sector	14.1513	14.6342	14.0876	14.0876	14.0876	12.8801
6. Government	6.5549	6.8309	6.3421	6.3421	6.3421	6.9153
7.Rest of the World	3.9991	4.322	3.8689	3.8689	3.8689	3.6837
8. Private Sector	3.9251	4.0625	3.9053	3.9053	3.9053	3.5733
9. Government	1.3557	1.3439	1.3121	1.3121	1.3121	1.6666
12.Rest of the World	-2.1851	-2.3616	-2.1139	-2.1139	-2.1139	-2.0128

	7	8	9	12
1. Activities	23.1925	13.5321	15.1278	11.8511
2. Product	29.173	17.0216	19.0287	14.907
3.Labor	2.1546	1.2571	1.4054	1.101
4. Capital	11.2832	6.5834	7.3597	5.7655
5. Private Sector	17.6646	10.2186	11.4235	8.9491
6. Government	8.2157	4.7697	5.3322	4.1772
7.Rest of the World	6.1779	3.0179	3.3738	2.643
8. Private Sector	4.9217	3.8367	3.1712	2.4502
9.Government	1.1808	0.9413	2.0491	1.6356
12.Rest of the World	-3.3756	-1.649	-1.8434	-0.4441

Sources: Computed by the authors from FSAM for Algeria,2003.

Table A5.2 : **Effect of increase of commercial banks credits (2011)**

	1	2	3	4	5	6
1. Activities	72.7522	80.971	68.0283	68.0283	68.0283	67.0077
2. Product	93.9534	106.0247	89.0772	89.0772	89.0772	87.7408
3. Labor	6.3804	7.1012	6.9661	5.9661	5.9661	5.8766
4. Capital	39.5918	44.0644	37.0210	38.0210	37.0210	36.4656
5. Private Sector	65.3782	72.8403	62.4278	62.4278	62.4278	60.9965
6. Government	30.9587	34.5507	29.4236	29.4236	29.4236	29.8234
7. Rest of the World	18.6416	21.0344	17.6746	17.6746	17.6746	17.4144
8. Private Sector	19.4245	21.6374	18.5499	18.5499	18.5499	18.1223
9. Government	13.8055	15.4007	13.1287	13.1287	13.1287	13.2588
12.Rest of the World	-8.7634	-9.8883	-8.3088	-8.3088	-8.3088	-8.1865

	7	8	9	12
1. Activities	115.7665	52.9528	64.5096	3.6834
2. Product	151.5863	69.3371	84.4698	4.8231
3.Labor	10.1527	4.6440	5.6575	0.323
4. Capital	63.0001	28.8169	35.1061	2.0045
5. Private Sector	104.2625	47.6355	58.0318	3.3135
6. Government	49.4786	22.5952	27.5266	1.5717
7.Rest of the World	31.0739	13.7559	16.7581	0.9569
8. Private Sector	30.9562	15.1502	17.2385	1.0178
9. Government	22.0391	10.1529	13.2698	0.7329
12.Rest of the World	-14.6078	-6.4666	-7.8780	0.5502

Sources: Computed by the authors from FSAM for Algeria, 2011.

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