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THE NEXUS BETWEEN FINANCIAL CRISIS AND HOUSEHOLD CONSUMPTION: EVIDENCE FROM EMERGING COUNTRIES

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ABSTRACT

This paper stains to test the effects of financial crisis on household consumption. More specifically, an aggregate annual data from 36 emerging countries from 1990-2012, is used to estimate a model that capture the interrelationship between financial crisis and household consumption. Our findings show that emerging countries that have experienced financial crisis during the last three decades tend to experience a substantially greater contraction of their consumption level. Whatever the type of crisis considered, they are generally followed by a substantial contraction of their welfare. More specifically, banking crisis, in contrast to the currency ones, appears to have a more important impact on the standard living household. On the other hand, twin crisis seems to have a more pronounced impact than the two first ones.

Keywords: Financial crisis, Currency crisis, Twin crisis, Consumption, Well being, Emerging countries.

Contribution/ Originality

While it is widely accepted that financial crisis has adverse consequences for economic growth, unemployment and investment, relatively little empirical work investigates the nexus between financial crisis and household consumption. This paper therefore, contributes to the literature on the mechanisms linking financial shocks and the standard of living of households. More specifically, the paper stains to determine whether the level of welfare in emerging countries has been affected by the turmoil in international financial crisis that hit the world during the last three decades.

1. INTRODUCTION

The new economy of globalization is characterized by the very rapid movement of a massive volume of international capital and the integration of production and marketing of goods and services across national borders. In this respect, the behavior of speculation and predation main actors in international finance, plus lax fiscal and monetary authorities are causing recurrent financial crisis. The financial crisis has affected not only financial institutions, but also public authorities at all levels, businesses and consumers worldwide. Its impact will be global and it will not only economic but also political, social and environmental, and affect all sectors, from health to education. One of the most serious consequences of crisis is the loss of public confidence in the financial system that underpins the economy.

Financial crisis occur when a break occurs in the financial system, because markets are unable to effectively organize the transfer of funds to the borrower's agents who offer opportunities for productive investment, causing a sharp contraction in economic activity. They are characterized by sharp declines in asset prices and the failure of many financial and non-financial companies. Everything starts with an adverse shock: deflation of a speculative bubble, an inadequate exchange rate or monetary policy, structural problems, particularly in the banking sector, which prevent the adjustment of the economy after the shock and cause a drop in prices, which does not stimulate application as in the traditional competitive rebalancing model, due to the rigidity of the nominal interest rate. The decline in inflation is then up interest rates and real debt ratio, hence drop in production.

The earliest possible diagnosis of the origin of financial crisis interprets these as the result of the intrinsic fragility of the countries concerned, particularly with respect to expansionary monetary policy, fiscal deficit, excessive debt, and deficiencies in the banking system, etc... However, other studies tend to show that the extension of crisis can be made according to contagion mechanisms explaining not only by fundamentals affected economies (Van Royen, 2002; Collins and Biekpe, 2003). Financial links were the second main transmission mechanism of crisis in emerging economies. Several emerging economies have faced a severe restriction of credit due to "sudden stops", that is to say, the rapid and drastic reversal of inflows international private capital. Bank loans and portfolio investments are activities that have declined the most in proportional terms (IMF, 2010).

The successive crises are of great similarities in their conduct. Empirical work, such as (Kaminsky and Reinhart, 1999), or those conducted within the International Monetary Fund and several central banks analyze the effects of financial crisis on the decline of a certain macro economic variables like economic growth and investment but the question of the effects of financial crisis on the well being of the household remains a question rarely considered in empirical work. The objective of this present paper is part of this framework and seeks to test whether the standard of living of households can be really affected by the global financial crisis. More specifically, the paper stains to determine whether the level of household consumption in emerging countries[1] has been affected by the turmoil in international financial crisis that hit the world during the last three decades. To do this, the paper utilizes aggregate annual panel data, on

[1] Emerging market economies indicates transition, underdevelopment to development, middle-income and high growth potential that these emerging open to the global economy by making important institutional and structural changes, and, practice a more or less effectively, the market economy and they have access to international financing.

a sample composed of 32 emerging countries, from 1990-2012 to estimate a model that capture the interrelationship between financial crisis and households well-being.

The remainder of the paper is organized as follows: Following this introduction is an Overview of Financial Crisis and their impact on the real economy. Section three presents empirical model specification and variables description. Model appraisal and validation are handled in section four. While the paper concludes and presents policy implications in section five.

2. OVERVIEW OF FINANCIAL CRISIS AND THEIR IMPACT ON THE REAL ECONOMY

Throughout recent years, the economic sphere has experienced a wave of unprecedented crisis in history. These crisis shaking the world economy without interruption, they were especially frequent and deep for the most newly integrated economies to international financial flows. These attacks take various forms so it is not easy to draw general lessons to protect it against these attacks and to their appearance. Financial crisis are not a phenomenon specific to the contemporary capitalist system.

From 90's years the world economy has characterized by the proliferation of banking crisis and currency crisis that occurred in most developed and emerging countries. These crises were quantified in the study conducted by the IMF in 1998. This study shows that there were over 50 banking crisis and 150 currency crisis that have occurred during the period 1975-1997, excluding the Russian debt crisis of August 1998, the Brazilian crisis of January 1999, Turkish and Argentine crisis of 2001 and the subprime crisis in 2007 .

The succession of striking panic in world economic history explicitly reflect instability and increasing financial vulnerability of countries, especially developing countries open to international capital markets following the financial liberalization efforts undertaken in the early 80s. The wave of international financial crisis of the 1990s is part of a long trend. The consequences of the latter in terms of cumulative production losses were more severe.

The IMF study shows that in 1998 the accumulated loss of output relative to the trend of economic growth after the onset of currency crisis reached 4 to 8 % of GDP, while the loss of production after banking crisis and twin crisis and respectively about 12 and 15% of GDP. However, a reversal of capital inflows becoming higher during the crisis of the 1990s, which may largely explain the magnitude of these shocks (Cartapanis, 2004). Losses on crisis are very high, they are in the order of 30$ billion in Latin America after the Mexican crisis Nickname 1994, 100$ billion in Asian countries after a crisis of 1997 and more 10 billion in Turkey during the 2000-2001 crisis (Boratav and Yeldan, 2006). The crisis of the 1990s, which are characterized by their impact on the financial sphere and the real sphere, also differ in their effects (contagion).

2.1. Financial Crisis and Well-Being

The issue of the impact of financial crisis on the level of welfare is a very important issue in the economic literature. This importance is firstly, to the fact that it is the developing countries with their huge share of poor who are vulnerable to financial crisis. But given that the issue of the impact of crisis on the level of welfare and inequality of household income is more or less marginalized. This question runs several issues namely: what are the mechanisms with which financial crisis can affect household consumption? What are the policy implications that arise in this context? Theoretically financial crisis should affect household consumption and increasing inequality for a number of reasons:

The first reason is for the deterioration of the labor market. Secondly, the change in relative prices. Large currency depreciations can lead also to an increase of the national inflation rate, which in turn may weaken consumer skills. Insofar as goods that can be imported foods, cost more, because these are going to spend a proportionately larger amount for food. After the crisis there is usually a monetary and fiscal policy at least more tightly. Indeed, public spending on health and education will be reduced after a period of crisis, which may adversely affect the situation of households. Such a situation may be more severe because of the strict fiscal policy put in place following the crisis and the restrictive monetary policy for the purpose of stability and aim to prevent capital flight for.

In this context, (Gupta *et al.*, 2007) examined the relationship between financial crisis and poverty, findings show that the advent of the financial crisis is likely to increase inflation to 62 % relative compared to the year near crisis. The unemployment rate increased its share by 1.1 % relative to the year before the crisis. Results show also that the advent of the financial crisis may lead to deterioration in the level of household welfare also on income distribution.

2.2. Transmission Channels of Financial Crisis

Since the 1997 Asian crisis, the issue of transmission channels and the spread of financial crisis began attracting the attention of economists. However, the phenomenon of propagation is complex, it does not exist despite the abundance of literature has studied this phenomenon, an accurate identification of contagion. Studies realize in this context may be marked by two major phases: the first refers to the concept of contagion in its broadest sense, that is to say, it is enough that propagation of a crisis country to another to identify the contagion whatever the transmission channel; Financial links were the second main transmission mechanism of crisis in emerging economies. Several emerging economies have faced a severe restriction of credit due to "sudden stops", that is to say, the rapid and drastic reversal of international private capital inflows. In fact, there are four transmission channels that contribute to contagion. First, the trade channel that has been developed by (Coresetti, 1999), this channel result for example of the devaluation of a currency that has little turn improve the competitiveness of an economy in relation to another, either increasing imports of the latter, either by reducing its exports to a third market. This negative impact could prompt another economy devalue its currency. The second channel is the channel of the transmission policy coordination. Indeed, the agreements between the two countries could engage one of the two to follow the same policy in response to an economic shock. There is also the similarity of fundamental channel. Finally, (Olivier and Paul, 2000) discussed another channel called mechanism of the effect of monsoon that a common shock such as for example an increase in interest rates, a decline in demand, a contraction of capital etc ... could affect the fundamentals of several economies with a subsequent crisis. Indeed, if there is a crisis transmission through these channels, (Rigobon and Fobes, 2001) considered that it is not the contagion in its strict sense, but only interdependence.

Three other transmission channels could identify pure contagion. The first is that of multiple equilibriums based on investor psychology. Indeed, the crisis is triggered in one country can have a disruptive effect on investor psychology and then affect their expectations about another country which would lead to the collapse of the other market. The second transmission mechanism of pure contagion is the endogenous liquidity shock. The advent of a crisis may reduce the liquidity of investors; they become forced to sell these assets in other markets, which in turn cause significant price falls in other markets. The last channel is the Policy contagion.

Overall, the concept of the transmission channels of financial crisis is not very obvious. In fact, studies conducted on the issue of transmission channels lead to different results. Indeed, there are studies that have highlighted the importance of trade channels to explain how financial crisis are transmitted to other countries. However, other recent studies have emphasized the sharp increase in financial interdependence of economies and thus the channels of contagion of banking and financial systems. The relevance of the contagion of panic is staged by the notion of shift contagion.

3. EMPIRICAL EVIDENCE

Recall that the main objective of this paper is to really appreciate the effects of financial turmoil on household living standards. The model explains household consumption by a core set of control variables, overall GDPG per capita, to capture the contribution of economic development. It is incorporated in the model to reflect the level of development of the economic system. We therefore, expect a positive coefficient of this variable. We add growth of the consumer price index (inflation), to control for the macroeconomic environment; the sum of exports and imports as a share of GDP to capture the degree of international openness (trade openness). However, few empirical studies have also identified some determinants of consumption such as human capital, institutional quality and the investment level. The baseline model is then augmented by some financial variables such as the financial development measured by domestic credit to private sector to GDP, financial liberalization and by an indicator measuring financial crisis. These indicators are presented in details on the following section.

The estimation of the impact of financial crisis on the level of welfare of households as measured by per capita consumption expenditure is made from the following model:

$$C_{it} = \alpha_0 + \alpha_1 GDPG_{it} + \alpha_2 INF_{it} + \alpha_3 HUM_{it} + \alpha_4 TRADE_{it} + \alpha_5 INST_{it} \\ + \alpha_6 INV_{it} + \alpha_7 FL_{it} + \alpha_8 FD_{it} + \alpha_9 FC_{it} + \xi_{it}$$

Where; C_{it} is the indicator of Household consumption for a country i at a period t; *GDPG* represent growth of *GDP* per capita. *TRADE* is an indicator measuring trade openness. *INF* is an indicator of inflation. *INV* represents investment level. *HUM* is the average years of secondary schooling in the total population which measures human capital, *INST* is an index measuring the quality institutions; *FD* is an indicator of financial development, *FL* represents financial liberalization, FC is a proxy of financial crisis and ξ_{it} is the error term.

Accordance with the implications of the theoretical and empirical models of economic growth, an increase in capital (physical or human), financial liberalization, financial development, institutional quality and GDP growth leads to increase of household consumption. In contrast, an increase in inflation, and the emergence of a crisis result in a lower rate of household consumption expenditure. Therefore, the expected sign of the latter is negative.

3.1. Data Description

Annual time series data, which covers the period 1990-2012, is utilized in this study. The data used in the study are obtained from different sources, including various series of the world Governance Indicators, World Bank and International Financial Statistics (IFS). The sample size (36 emerging countries[2]) and the period of our study are limited by the availability of data on emerging countries that have suffered from any types of crisis.

Consumption: represent the household standard living level. It is captured by Household final consumption expenditure in percentage of GDP. According to the economic literature more the level of Household final consumption expenditure is high more is the standard living level.

Currency crisis: a currency crisis is manifested in a situation of massive sales generally speculative origin of a domestic currency. To identify empirically the currency crisis, we follow the methodology of (Kaminsky *et al.*, 1998) based on the synthetic indicator of (Sachs *et al.*, 1996). This indicator of speculative pressure takes into account both the variation of the exchange rate and the level of foreign exchange reserves.

Banking crisis: A banking crisis is defined as an episode of panic bank or serious bank failures may create disturbances in the economy affecting its funding mechanisms and payment system. This type of crisis is difficult to identify empirically, partly because of their intrinsic nature and also the lack of data on bank deposits. To identify a banking crisis we followed the methodology of (Laeven and Valencia, 2008; Reinhart and Kenneth, 2009; Chambers, 2011), the base is inspired by (Caprio and Klingebiel, 1996).

[2]Argentina, Belarus, Bolivia, Brazil, Burundi, Chile, Colombia, Costa Rica, Ecuador, Finland, Georgia, Indonesia, Japan, Jordan, Korea Rep. Macedonia, Malaysia, Mexico, Morocco, Nepal, Nicaragua, Norway, Pakistan, Panama, Peru, Philippines, South Africa, Serbia, Sri Lanka, Swaziland, Sweden, Tanzania, Turkey, Ukraine, Uruguay, Venezuela.

Twin-crisis: In our study, we assume that a twin crisis is a combination of two crisis, currency and banking called also in economic literature "twin crisis".

Financial Development (FD): it is measured by the ratio of domestic credit provided by banking sector relative to GDP. This indicator is generally used in empirical studies.

Institutional Quality (INST): here, we opt for the widely used indicator of Law and Order-also called Rule of Law-compiled by International Country Risk Guide (ICRG), which assesses the strength and impartiality of the legal system, and the popular observance of the law.

4. MAIN RESULTS

The purpose of this paper is to empirically assess the impact of financial crisis on the level of well being of households from a sample of emerging countries over the period 1990-2012 using a static approach panel. Through this study, we will try to detect the sensitivity of household consumption during the period of financial crisis. According to theoretical and empirical models on consumption, increases in physical or human capital, openness lead to an increased level of well being. Similarly an increase in the level of inflation, the unemployment rate will result in a lower level of consumption. Experiences of previous crisis therefore indicate that the nature, speed and impact of the measures taken by the government have a decisive impact on the extent and cost of the crisis. All these conditions were taken in our model to make the implications of financial crisis in emerging economies during the period which runs from 1990-2012. The results of our estimates of the impact of banking crisis, currency and financial crisis on the level of household consumption are listed in the following table:

Table-1. Incidence of financial crisis on Household consumption

Variables	(1)	(2)	(3)
GDPG	0.25	0.21	0.25
	(3.14)**	(3.86)**	(4.03)**
INF	-0.117	-0.116	-0.119
	(-2.58)**	(-2.39)**	(-2.92)**
HUM	0.173	0.174	0.174
	(1.53)	(1.83)**	(1.65)*
TRADE	0.322	0.317	0.281
	(1.50)	(1.33)	(1.56)
INST	0.042	0.044	0.053
	(1.89)**	(1.83)**	(2.11)***
INV	0.122	0.132	0.145
	(5.16)***	(6.23)**	(6.47)***
FL	0.613	0.681	0.671
	(2.26)**	(2.52)**	(2.14)**
FD	0.171	0.168	0.182
	(3.47)**	(3.53)**	(4.01)***
CC	-0.012	--	--
	(-1.91)**	--	--
BC	--	-0.035	--
	--	(-2.23)**	--
FC	--	--	-0.065
	--	--	(-4.72)***
Constant	3.74	3.79	4.62
	(7.65)***	(7.43)***	(8.73)***
Nb of obs.	828	828	828
R^2	0.47	0.52	0.55

Notes: * significant at 10% ** Significant at 5%; *** Significant at 1%.

Note that for any type of crisis considered, the coefficients associated with different measures of the financial crisis have the expected signs and they are largely significant. Indeed, a currency crisis reduced the level of consumption by about 1.2%. This results can be explained by the fact that financial sector in emerging countries still unable to provide the necessary financial services especially to rural farmers. This can be explained by several reasons: first, the demand for facilitation of deposit is low due to macroeconomic instability or gaps in the regulation and supervision of financial institutions. Second, the lack of a strong legal system in these countries prevents lenders to obtain reimbursement of their loans. The third reason may be due to space factor.

For the coefficient associated to the banking crisis, it appears to have a negative and significant effect on household consumption. In fact, a banking crisis reduced the consumption level by about 3.5%. This type of crisis seems to have a greater negative impact on household standard living compared to that providing by currency crisis. As regards the twin crisis, it seems to have a greater negative effect by providing other two types of crisis. Indeed, a twin crisis brought down the level of consumption of about 6.5%. This result highlights the multiplier effect of a twin crisis written depth Asian crisis of 1997, which was at once a banking and currency crisis.

Our results are consistent with the results founded by (Barro and Lee, 2000) witch assessed the extent of banking and currency crisis in Asia in 1997 on household consumption, investment and economic growth. The results of this study show that a currency crisis is associated with a loss of 1.3 % growth rate of real GDP and 0.4% of the investment rate. A banking crisis reduces the rate of economic growth per capita by 0.6% per year and the investment rate of 0.9 %. In the same context, (Bordo *et al.*, 2001) showed that financial crisis has an annual cost of 5 to 10 % of GDP and that its effects last on average 2 to 3 years.

Our results are consistent with a number of papers that have attempted to investigate the effect of the recent global financial crisis on household expenditure, in the both the United States and the United Kingdom. Most of these studies simulate wealth losses using pre-crisis wealth holdings and national price indices. (Bosworth and Smart, 2009) find that, on average, United States households aged over 50 lost nearly a fifth of their net wealth. (Johnson *et al.*, 2008) use United States data on wealth in the period covered by the financial crisis, and consider the losses in retirement account accounts between September 2007 and September 2008. They find that the total funds accumulated falls by 18.3%, with the median accumulated retirement account for households aged 50 and over in 2008 being around the level it was in 2005., (Banks and Tetlow, 2010) consider households in the United Kingdom and estimate that for older households average losses from the crisis would have been relatively small as a share of either gross or net wealth, of the order of around 5%.

In the main vein of studies, (Matthew, 2010) presents multivariate analyses of the effects of the financial crisis, taking the decline in planned consumption as the indicator of the effects of the crisis: (i)Having financial losses is strongly associated with a decline in consumption. For the mean household with financial assets, these losses reduce consumption by about 0.3 percentage points. (ii)Having little or no financial wealth is, however, associated with even larger drops in consumption. Findings show that financial wealth fell by about 15 percent for the median household. These financial losses were concentrated among households with high levels of wealth and high cognitive capacities, which tend to have higher exposure to the stock market. Nonetheless, households with little financial wealth suffered declines in well-being measured by declines in consumption as large on average as households with substantial exposure to the stock market.

As regards the control variables, the coefficients associated with control variables have the expected sign and are of the same order of magnitude as those usually obtained in the empirical literature, except the indicator of trade openness. The results show that the GDP per capita appears to have a positive and significant impact on the household consumption; this is interpreted in conformity with the expected results which confirm the existence of a strong positive relationship between the GDP Growth per capita and the level of Household final consumption expenditure. This suggests that high levels of economic development are associated with higher levels of consumption per capita. As for the coefficient on the variable inflation, it appears to have a significantly negative impact on household's well-being, confirming the theoretical predictions. For the case of the elasticity's associated with human capital, it appears to affect positively and significantly the household consumption. We notice that a high level of education is positively associated with a higher standard living. As regards the trade openness, it appears to have no significant impact on household consumption expenditure.

Finally, we believe that regional specificity may play a significant role in the severity of crises. Indeed, analysis of the impact of crises in emerging markets can be refined by distinguishing, for example, the countries of Latin America from those of South East Asia and other regions of the world. Therefore, the existence of regional differences might suggest that there is a net effect of crises according to regional affiliation countries. This can be a subsequent study.

5. CONCLUSION AND POLICY IMPLICATIONS

While the literature on the impact financial crisis on macroeconomic variables for individual countries and for panels of countries has increased over the last few decades, there is no study, except error of our part that examines the interrelationship between financial crisis and the household standard living level. The objective of the present study is to fill this research gap by examining the above interaction for 36 emerging countries over the period 1990-2012. Our findings show that emerging countries that have experienced financial crisis during the last three decades tend to experience a substantially greater contraction of their well-being. Results show also that the effect of the twin crisis seems to have a more pronounced impact than the banking and the currency crisis.

The main lesson of the analysis in this paper is: (i) preventive measures should be taken in response to such crisis; the key to these problems lies in an improved system of regulation and control. It is time to develop a new regulation of the international financial system, rather than using macroeconomic, monetary or fiscal instruments that satisfy everyone in the short term, but prepare the next financial storm. (ii) Bankruptcies and banking crisis can have very significant effects. Thus, in order to limit these negative effects, full resolution, in most cases, is only possible by a rapid and massive government intervention. Then, existing mechanisms of social protection clearly help mitigate the social impact of the crisis. (iii) Improving market transparency, for example by inviting institutions to disclose all financial risks to which they are exposed, submit basic statistics of these markets and to improve the level and quality of information provided to investors.

Finally, we thank that the big lesson is that in the new economy after globalization, no credible adjustment is possible if each country stands alone and acts according to its own interests. The current international monetary and financial system cannot function properly and stem the crisis that if macroeconomic policies implemented by partner countries are stable and balanced, i.e if those countries agree to resolve common problems through coordinated macroeconomic policies. The lack of coordination is evident as the main cause of global financial instability.

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