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The Link between Government Spending, Consumer Confidence and Consumption Expenditures in Emerging Market Countries

Summary: The impact of government spending on private consumption is extensively studied in the literature. However, the main theme of these studies is the possible crowding-in or crowding-out impact of government spending on consumer spending. This paper attempts to introduce a new variable to this well-known literature by investigating the existence of a relationship between government expenditure, consumer spending and consumer confidence for a group of emerging market countries. We examine whether a change in consumer confidence causes any change in government spending. Moreover, we analyze whether there is a feedback from government spending and private consumption to consumer confidence. Our empirical findings demonstrate the important role of consumer confidence on government spending and private consumption expenditures.

Key words: Government spending, Consumer confidence, Consumption spending.

JEL: C23, E21, E62.

One of the hotly debated issues in macroeconomics literature is the impact of government spending on private consumption expenditures. Several studies assess the existence of crowding-out versus crowding-in effects of government spending on private consumption expenditures. The effects of changes in government spending on aggregate economic activity and the transmission of these effects into household behavior are important in conducting macroeconomic policy.

In this context, several studies have linked the private consumption expenditures to government spending and have searched for this relationship's direction and magnitude. Studies in the neoclassical tradition usually predict a negative effect on private consumption (Marianne Baxter and Robert G. King 1993), while studies employing Keynesian models usually favor a positive response (Olivier J. Blanchard and Roberto Perotti 1999). Although these issues have been studied extensively, there is still no widespread agreement on policy making from either a theoretical or an empirical point of view (Jordi Gali, J.David Lopez-Salido, and Javier Valles 2005; Davide Furceri and Ricardo M. Sousa 2009).

John G. Matsusaka and Argia M. Sbordone (1995) draw attention to the the link between consumer confidence and economic activity. They examine whether consumer sentiment causes fluctuations in GNP and find evidence consumer confidence is an important independent factor in economic fluctuations for the US economy for the period 1953-1988.

Considering the importance of consumer confidence, this paper attempts to incorporate this variable into the link between government spending and private consumption by investigating the existence of a relationship between government expenditure, consumer spending and consumer confidence for a group of emerging market countries. We examine whether a change in consumer confidence gives rise to a change in government spending. Moreover, we investigate whether government spending and private consumption are determinants of consumer confidence for a group of emerging economies.

Studying a panel of economies should construct a broad picture of the relationship between our variables of interest. Furthermore, emerging markets constitute an appropriate group to test the validity of such conceptual theories derived for developed nations. It is informative observing the robustness of standard theories for countries where public finance is inherently volatile, consumer reactions to changes in the economic environment are rather mixed and a dynamic nature amplifies the significance of consumer expectations. Hence, favorable empirical results will not only strengthen the theoretical propositions but also lead to further research into the sources of identical behavior in emerging economies.

The rest of the paper is organized as follows. Section 1 includes a brief literature survey on the relationship between government spending and consumer expenditures and identifies some of the studies in consumer confidence literature. Section 2 briefly describes the data and the methodology of panel unit root tests and panel cointegration tests and presents the empirical findings we obtain employing these powerful tests. Section 3 concludes with some remarks.

1. Literature Survey

The literature on the relationship between government expenditure and consumer spending is clear cut on the transmission mechanisms and the results of policy actions. On one side stands the standard Real Business Cycle (RBC) model and on the other the corresponding Keynesian IS-LM model. The impacts of government spending on private consumption for these two strands of literature differ remarkably.

According to the RBC model, an increase in government spending should cause a decline in consumption. The RBC model relies on the consumption decisions of infinitely-lived Ricardian households subject to intertemporal budget constraints. *Ceteris paribus*, higher taxes needed to finance higher government spending negatively affect private wealth and consumption[1]. Conversely, the well-known Keynesian IS-LM model asserts consumption rises in response to an increase in government spending. Consumers exhibit non-Ricardian behavior in the IS-LM model and consumption is a function of current disposable income. Therefore, the impact of an increase in government spending relies on how the government spending is financed (Gali, Lopez-Salido, and Valles 2005)[2].

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[1] See also Rao S. Aiyagari, Lawrence J. Christiano, and Martin Eichenbaum (1992), Christiano and Eichenbaum (1992), Baxter and King (1993) and Antonio Fatás and Ilian Mihov (2002), among others.
[2] See Blanchard (2003) for further details.

Some studies find a degree of substitutability between government spending and private consumption (a "crowding-out effect"), while other results show a complementary relationship (or "crowding-in" effect)[3]. Martin J. Bailey (1971) first proposes potential substitutability between government spending and private consumption. Robert J. Barro (1981) incorporates this hypothesis into a general model to analyze the effects of government spending. Roger C. Kormendi (1983), David Alan Aschauer (1985), Shaghil Ahmed (1986), Aiyagari, Christiano, and Eichenbaum (1992), Baxter and King (1993), Tsung-wu Ho (2001) and Furceri and Sousa (2009), among others, find private consumption responds negatively to an increase in government spending.

Georgios Karras (1994) finds government spending and private consumption described as complementary goods when an increase in government consumption tends to increase (or leave unchanged) the marginal utility of private consumption. Other studies associating government spending with an increase in private consumption are Michael B. Devereux, Allen C. Head, and Beverly J. Lapham (1996), Blanchard and Perotti (2002), Fatás and Mihov (2002) and Chien-Chung Nieh and Ho (2006).

Using an estimated New-Keynesian dynamic stochastic general equilibrium model, Günter Coenen and Roland Straub (2005) show the presence of non-Ricardian households is generally conducive to raising the level of consumption in response to government spending shocks in the euro area from 1980 to 1999. However, their results suggest there is only a small chance government spending shocks crowd in consumption[4].

Another issue of interest in macroeconomics is the relationship between personal consumption expenditures and consumer confidence (Daron Acemoglu and Andrew Scott 1994; Christopher D. Carroll, Jeffrey C. Fuhrer, and David W. Wilcox 1994; Alan Garner 2002; Andy C. C. Kwan and John A. Cotsomitis 2004, 2006; Sydney C. Ludvigson 2004; Sadullah Çelik and Yasemin Özerkek 2009). Consumer confidence indexes measure the confidence of consumers about the state of the economy and their spending power[5]. Studies like Acemoglu and Scott (1994) and Carroll, Fuhrer, and Wilcox (1994) search for the forecasting ability of sentiment for changes in consumption to validate additional information content of consumer confidence. Their argument is based on the notion improvements in consumer sentiment should stimulate consumption growth in the short-run. Çelik and Özerkek (2009) examine the relationship between consumer confidence, personal consumption and other relevant economic and financial variables for nine European Union countries. The panel cointegration findings show a long-run relationship in the sense consumers can detect early signals about future rates of economic growth as they communicate through the consumption channel.

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[3] See Ludger Linnemann (2006) among others.

[4] Coenen and Straub (2005) point out this is mainly because the estimated share of non-Ricardian households is relatively low, but also because of the large negative wealth effect induced by the highly persistent nature of government spending shocks.

[5] Consumer confidence index (CCI) is considered as a significant leading indicator in economics due to its earlier announcement compared to other indicators (variables) in the economy. The concern in consumer attitudes stems from the idea that consumers' expectations of future economic circumstances play an important role in macroeconomic results.

2. Data, Methodology and Empirical Findings

2.1 Data

This paper uses quarterly data for the variables of private consumption (PC), consumer confidence index (CCI) and government spending (GS). The countries included in the analysis are Brazil, Czech Republic, Hungary, Poland, South Africa and Turkey. The data is balanced panel and covers 2002: Q1 – 2008: Q3[6].

2.2 Methodology and Empirical Findings

We first ask whether the consumer confidence index (CCI) can be used as a proxy for private consumption (PC) in the relationship between government spending (GS) and private consumption. To this end, we look at the Granger causality results between these variables. The results of bivariate regressions of the form

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + ... + \alpha_l y_{t-l} + \beta_1 x_{t-1} + ... + \beta_l x_{-l} + \varepsilon_t$$
$$x_t = \alpha_0 + \alpha_1 x_{t-1} + ... + \alpha_l x_{t-l} + \beta_1 y_{t-1} + ... + \beta_l y_{-l} + u_t$$

(1)

for all possible pairs of (x, y) series in the group are used. The reported *F*-statistics are the Wald statistics for the joint hypothesis: $\beta_1 = \beta_2 = ... = \beta_l = 0$ for each equation.

Using the lag lengths of 4 and 6[7], Granger causality results show that a) consumer confidence causes government spending and private consumption and b) government spending causes private consumption[8]. The rise in consumer confidence implies that the optimism of households about future economic conditions increases. Accordingly, private consumption goes up. This rise in consumption - a component of aggregate demand - leads to an increase in income. Then the rightward shift in IS curve results in an interest rate increase. *Ceteris paribus*, two effects appear: 1) the increase in consumption should result in an increase in tax revenue and 2) government interest payments should increase as a result of an increased interest rate. The change in government spending depends on the dominant effect. In other words, government spending increases (or decreases) if interest payments exceed (or lag) tax revenues.

We then employ Equation 2 to test the significance of government spending along with personal consumption on consumer confidence by using panel data analysis for six emerging market countries[9].

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[6] The data source for GS is Reuters for all countries. The data for PC is obtained from Reuters for all countries except Turkey for which it is collected from Central Bank of the Republic of Turkey. CCI is obtained from Reuters for all countries except Turkey for which it is collected from CNBC-e and for Poland from http://www.bankier.pl/inwestowanie/notowania/macro/profil.html?id=51.
[7] The lag selection is done according to Schwarz Information Criteria. The results are in Table A in Appendix.
[8] The results of the causality tests are in Appendix.
[9] PC and GS are seasonally adjusted and all variables are in their natural logarithms.

$$\log(CCI_{it}) = \alpha_i + \beta \log(PC_{it}) + \gamma \log(GS_{it}) + \varepsilon_{it} \tag{2}$$

where PC_{it} denotes private consumption at time t, CCI_{it} shows consumer confidence, GS_{it} denotes government spending.

The panel data analysis focuses particularly on unit root and cointegration properties of variables in an attempt to increase statistical power as the conventional unit root tests or cointegration tests are of comparatively low power for non-stationary data[10]. The panel unit root tests are classified as first generation[11] (Andrew Levin, Chien-Fu Lin, and Chia-Shang James Chu 2002, hereafter LLC; Breitung 2000; Kyung So Im, Pesaran, and Yongcheol Shin 2003, hereafter IPS) and second generation (Hyungsik R. Moon and Benoit Perron 2004; and Pesaran 2007)[12]. In our analysis, we use panel unit root tests of LLC, IPS, Moon and Perron (2004) and Pesaran (2007).

Table 1 reports the results of the first generation panel unit root tests for six emerging market countries. We fail to find a unit root in the levels of the variables for 3 out of 12 cases in LLC and IPS tests. Only in the case of government spending we are unable to find a unit root for both tests when a constant and trend is included

Table 1 Panel Unit Root Tests in Levels (First Generation)

Variable	Case	Common unit root	Individual unit root
		LLC	IPS
CCI	Constant	-0.699 (0.242)	-0.070 (0.472)
	Constant and Trend	-0.458 (0.323)	-0.103 (0.458)
PC	Constant	-2.581* (0.004)	0.599 (0.725)
	Constant and Trend	2.499 (0.993)	0.727 (0.766)
GS	Constant	-1.041 (0.148)	0.256 (0.601)
	Constant and Trend	-2.923* (0.001)	-4.160* (0.000)

Note: The null hypothesis for LLC and IPS are unit root. The numbers in brackets are the p-values for all tests. (*) denotes significance at 5 % level.

Source: Authors' estimations.

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[10] See Jörg Breitung and Mohammed H. Pesaran (2008) for a review of the literature on panel unit root and panel cointegration tests.

[11] These first generation panel unit root tests ignore cross-sectional dependence. There are other first generation tests such as Kaddour Hadri (2000), Fisher-ADF and Fisher-PP tests developed by Gangadharrao S. Maddala and Shaowen Wu (1999) and In Choi (2001) utilizing Ronald A. Fisher (1932) results.

[12] Pesaran (2007) is based on single common factor with correlation coefficients for cross sectional dependency. There are other second generation tests such as Peter C. B. Phillips and Donggyu Sul (2003), Jushan Bai and Serena Ng (2004). Christian Gengenbach, Franz C. Palm, and Jean-Pierre Urbain (2004) show that Pesaran's CIPS and CADF statistics exhibit powerful properties.

in the equation. Due to considerable criticism of these first generation panel unit root tests, coupled with the ongoing research usually advocating the powerful characteristics of second generation panel unit root tests, our next step is to apply two of the most powerful second generation panel unit root tests.

Table 2 includes the empirical findings for the second generation panel unit root tests of Pesaran's cross-sectionally augmented IPS test (CIPS)[13] and the Moon and Perron test[14]. In Pesaran CIPS test, employing different specifications for p, we

Table 2 Panel Unit Root Tests in Levels (Second Generation)

Pesaran CIPS Test Statistics (with constant)				
	p=1	p=2	p=3	p=4
CCI	-1.445	-1.410	-1.297	-0.913
PC	-1.241	-1.096	-1.026	-0.835
GS	-1.822	-1.652	-1.627	-1.020

Pesaran CIPS Test Statistics (with constant and trend)				
	p=1	p=2	p=3	p=4
CCI	-2.448	-2.225	-1.997	-1.228
PC	-1.202	-0.986	-0.904	-0.996
GS	-2.448	-2.225	-1.997	-1.228

Moon and Perron Test Statistics (with constant)					
		k=1	k=2	k=3	k=4
CCI	t_a^*	0.024	0.062	0.052	0.029
	t_b^*	0.388	1.075	1.596	0.828
PC	t_a^*	0.010	0.008	0.009	0.013
	t_b^*	2.828	0.734	1.812	14.515
GS	t_a^*	0.021	0.026	0.021	0.014
	t_b^*	4.238	7.896	9.132	6.276

Moon and Perron Test Statistics (with constant and trend)					
		k=1	k=2	k=3	k=4
CCI	t_a^*	-0.468	-0.542	-1.740	-3.277*
	t_b^*	-0.340	-0.468	-1.648	-3.470*
PC	t_a^*	-1.077	-1.058	-2.189	-0.252
	t_b^*	-0.343	-0.343	-1.492	-0.258
GS	t_a^*	-3.003*	-6.508*	-5.899*	-1.483
	t_b^*	-2.289*	-5.791*	-5.538*	-1.304

Note: For CIPS test, the critical value in the case of a constant is -2.33 and in the case of a constant and trend is -2.86 at 5% significance level, respectively. For the Moon and Perron test, see Gengenbach, Palm, and Urbain (2004) and Gutierrez (2005) for the critical values of t_a^* and t_b^*. (*) denotes significance at 5% level, meaning the rejection of the null of unit root.

Source: Authors' estimations.

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[13] Pesaran (2007) shows that CIPS test has satisfactory size and power even for relatively small values of N and T which is important for our data set.

[14] The Moon and Perron (2004) test is a pooled panel unit root test based on "de-factored" observations. Hence, they propose estimating the factor loadings by the principal component method. The asymptotic properties of Moon and Perron test under the unit root null and local alternatives exhibit good asymptotic power if the model does not contain deterministic (incidental) trends.

detect a unit root for each variable in both constant and constant-and-trend cases as we are unable to reject the null of a unit root. However, we would like to enhance our findings from Pesaran test by also employing the Moon and Perron test, using a residual factor model to account for the cross section dependence in the panel data. Moreover, in view of the considerable uncertainty that surrounds the choice of common factors, we compute t_a^* and t_b^* statistics of Moon and Perron for different values of k (from 1 to 4). Moon and Perron do not consider samples with less than 100 time series observations in their simulation so we consider Gengenbach, Palm, and Urbain (2004) and Luciano Gutierrez (2005). From the tables of Gengenbach, Palm, and Urbain (2004), both constant and constant-and-trend statistics of Moon and Perron have rejection frequencies lower than the nominal size if T = 50 and N = 10. Therefore, CCI, PC and GS exhibit non-stationary characteristics.

Table 3 Panel Cointegration Tests

Peter Pedroni (2004)		
Test	**Statistics**	**Weighted Statistic**
Panel v-statistic	0.342 (0.376)	-0.815 (0.286)
Panel ρ-statistic	-0.985 (0.246)	-1.219 (0.189)
Panel pp-statistic	-2.582* (0.014)	-3.194* (0.002)
Panel adf-statistic	-3.432* (0.001)	-3.557* (0.001)
Group ρ-statistic	-0.189 (0.392)	
Group pp-statistic	-2.446* (0.020)	
Group adf-statistic	-2.905* (0.006)	
Joakim Westerlund (2007)		
Test	**Constant**	**Constant and Trend**
G_τ	-3.260*	-6.859*
Gα	0.098	2.270
P_τ	-0.794	-5.135*
P_α	0.297	1.756
Westerlund and David L. Edgerton (2007)		
Constant	lm statistic	0.619*
	bootst p-val	0.753*
	asymp p-val	0.268*
Constant and Trend	lm statistic	2.659*
	bootst p-val	0.116*
	asymp p-val	0.004

Note: For Pedroni (2004), except for panel v-statistic and for Westerlund (2007) all statistics have -1.645 as 5 % critical value. The critical value of v-statistic is 1.645 at 5 % level. The null for Westerlund and Edgerton (2007) is cointegration. (*) denotes significance at 5% level.

Source: Authors' estimations.

The existence of non-stationarity at the same integration order is the priority in order to implement cointegration analysis. We employ panel cointegration tests of Pedroni (1999, 2004), Westerlund (2007) and Westerlund and Edgerton (2007). The results of these tests are presented in Table 3. For Pedroni (1999) and Pedroni (2004), six of eleven cointegration tests for constant and constant-and-trend case result in rejecting the null of no cointegration. Westerlund (2007) tests to check the existence of cointegration and we are able to reject the null of no cointegration in three of eight cases. However, when we apply the Westerlund and Edgerton (2007) test, with more powerful characteristics due to its bootstrapping methodology, we fail to reject the null of cointegration in three of four cases. Hence, our empirical findings suggest the panel cointegration between CCI, PC and GS exists.

Once detecting panel cointegration, it is important to obtain coefficient estimates for the variables in question. In this study, we prefer to use the fully modified ordinary least squares (FM-OLS) method developed by Pedroni (2000) for coefficient estimations in cointegrated panels[15]. We start with CCI as the variable for normalized cointegrating coefficients and repeat the same exercise for GS. In Table 4, FM-OLS estimates of PC and GS are displayed for six emerging market countries individually and for the panel group. We have statistical significance for GS except for the case of Hungary. We reject the null of no significance for only Poland in case of PC with a negative coefficient. This runs counter to our *a priori* theoretical expectations and shows ineffectiveness of the private consumption channel on a country basis analysis. This is hardly valid for the case of GS where we have only one significant and positive coefficient case of South Africa. Nevertheless, panel group estimates of FM-OLS are both statistically significant and provide support for our theoretical framework.

Table 4 FM-OLS Test for Coefficient Estimations of PC and GS

Normalized Variable: CCI COUNTRY	PC	GS
Brazil	1.17 (0.36)	-0.06* (-8.18)
Czech Republic	-1.14 (-1.29)	-1.73* (-3.32)
Hungary	-0.27 (-0.85)	1.46 (0.97)
Poland	-2.10* (-8.68)	-0.79* (-1.78)
South Africa	1.61 (0.58)	0.15* (-2.31)
Turkey	1.18 (0.19)	-0.92* (-4.71)
Panel Group	**0.07*** **(-3.96)**	**-0.31*** **(-7.89)**

Note: The values in the brackets are the t-ratios. FM-OLS test includes a constant and a trend. (*) denotes significance at 5 % level.

Source: Authors' estimations.

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[15] We also employed the dynamic ordinary least squares (DOLS) technique of James Stock and Mark W. Watson (1993). The results have been somewhat similar and are available from the authors upon request.

As expected, the sign of the coefficient for PC in the panel is positive. When private consumption rises, the utility of consumers increases, therefore consumers feel better off. This, in turn, should be reflected in higher levels of confidence in the leading terms, meaning an increase in consumer sentiment. However, this mechanism ignores how (and why) consumers could spend more than the previous period. Our empirical findings show that a 1% increase in private consumption causes about 0.07% increase in consumer confidence in the corresponding term[16].

At the same time, considering the negative coefficient on GS in the panel group, it is well known an increase in non-productive government spending has to be financed through some means. There are several ways to create this revenue. One method affecting consumers directly is imposing new taxes (or increasing the rate of taxation on some regularly consumed items). If taxes are used to finance an increase in government spending, fiscal action has no impact on the size of the government's budget deficit or surplus. In this case, the expectations of consumers about future finances turn pessimistic as they would be subject to higher than normal taxes. This mechanism will create a negative wealth effect, leading to lower consumer sentiment[17]. A second way to finance government spending is to issue bonds/bills. This definitely leads to an increase in interest rates and raises the cost of borrowing, which in turn may reduce consumer confidence. However, realizing this effect depends on several factors, such as the size of and the participants in the bond/bill market, the volatility of the bond/bill market and the amount of bonds/bills issued in the specific auction. A third possible way to finance government spending is to increase the money supply - rarely pursued under inflation targeting monetary policy. Nevertheless, a rise in money supply causes an increase in the inflation rate, in turn resulting in a fall in the purchasing power of the consumer. This fall should induce a decline in consumer confidence after a certain amount of time[18]. Hence, we find that a 1% increase in government spending results in a 0.31% decline in consumer confidence[19].

Overall, the total change in consumer confidence due to changes in private consumption and government spending depends on the difference between the increase in tax revenue and the increase in interest payments. The tax revenue increases due to rising private consumption and the interest payments increase due to rising interest rates as bonds/bills are auctioned for additional government spending. There is no consensus on the results of this issue and our empirical findings show that the effect of government spending is higher in magnitude than the effect of private consumption in our emerging markets[20].

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[16] This seems rather small but there is no consensus on even the existence of a relationship between the two variables. Among others, see Andy C. C. Kwan and John A. Cotsomitis (2004, 2006).

[17] The mechanisms underlying those effects are described in detail in Gali, Lopez-Salido, and Valles (2005).

[18] In their analysis for Sweden 1975-1994, Lennart Berg and Reinhold Bergstrom (1996) find two important factors affect the consumer indices: changes in real interest rates and changes in the inflation rate.

[19] This also seems rather small but there is not even a study which includes consumer confidence as a potential variable in the relationship between personal consumption expenditures and government spending.

[20] Two reasons could be a low real wage due to high inflation and the expectation of a lower nominal wage increase in the future by the public workers, constituting a significant portion in emerging market economies.

Another very significant point is to reverse the question of interest and consider the effects of changes in private consumption and consumer confidence in our cointegrated variables. In Table 5, we show the FM-OLS estimates of PC and CCI for our six emerging economies individually and for the panel group. We have statistical significance for PC except for the case of Brazil, Hungary and Turkey. We fail to reject the null of no significance for only Brazil in the case of CCI. The signs of significant coefficients are against our *a priori* theoretical expectations for two countries in the cases of both PC and CCI. Our results show the dynamic nature of household spending and consumer confidence in emerging economies when each country is analyzed itself. Income is close to subsistence and consumption is the major determinant for tax revenues. Moreover, consumers view the government as creating benefits for its own sake rather than the public. This in turn leads to an inverse relationship between consumer confidence and government spending. Nevertheless, panel group estimates of FM-OLS are both statistically significant and result in theoretical support for our empirical analysis.

Table 5 FM-OLS Test for Coefficient Estimations for PC and CCI

Normalized Variable: GS COUNTRY	PC	CCI
Brazil	2.16 (0.99)	-0.27 (-1.72)
Czech Republic	0.23* (-1.83)	-0.18* (-16.95)
Hungary	1.67 (2.07)	0.26* (-12.88)
Poland	-0.39* (-8.41)	-0.07* (-13.07)
South Africa	-2.72* (-12.22)	0.01* (-6.48)
Turkey	0.90 (-0.18)	-0.39* (-8.31)
Panel Group	**0.31*** **(-7.99)**	**-0.11*** **(-24.25)**

Note: The values in the brackets are the t-ratios. FM-OLS test includes a constant and a trend. (*) denotes significance at 5% level.

Source: Authors' estimations.

A 1% increase in PC leads to a 0.31% increase in government spending, showing the effect of an increase in tax revenue on government spending. Moreover, a 1% increase in consumer confidence decreases government spending about 0.11%, signaling a tightening of the government budget when the private sector is leading the economic cycle. The sentiment seems to lack the magnitude of response by private consumption. This is not surprising for a group of emerging economies with high tax rates for almost any good or service and the existence of a large public sector with many relatively inefficient workers depending on government revenue. Moreover, the consumer confidence in such economies should cause a positive response from the budget side as government should feel free to expand when public confidence is high. Although this is true for two countries in our panel, our empirical results show support for an inverse relationship overall. This seems to be the response of monetary

policy and fiscal policy combination seeking to cool the economy when private consumption peaks due to fears of inflation and higher rates of interest.

3. Conlusion

The deregulation efforts of recent decades, including massive privatizations and restrictive laws on governments and monetary authorities have led to tremendous amounts of risk taking in many parts of the economies with no real value created in return. Recently, this unsustainable system has collapsed, leading to major implications for the revision of the orthodoxy that has dominated the economics literature since the Great Depression. One of the important relationships still intact in this chaotic environment is the one between government spending and private consumption. However, this rather superior theoretical proposition has lacked an important aspect that has probably been the reason for its long standing. In such a dynamic world of information flows, it is hard to imagine economic agents fail to incorporate expectations of the future economic outlook into consumption decisions. Hence, the driving force for the relationship between government spending and private consumption is consumer behavior, or the state of consumer confidence in an economy.

This paper attempts to designate consumer confidence the role it deserves in the existence of a relationship between government expenditure and consumer spending. In this sense, we prefer to use a group of emerging market countries where the expectation formation reacts very fast to the general economic outlook and seems to affect the future economic outlook. Hence, we assess whether a change in consumer confidence leads to any changes in government spending. Furthermore, we examine the existence of feedback from government spending and private consumption to consumer confidence. Our empirical findings show the presence of a long-run relationship between the three variables. Moreover, we demonstrate the important role of consumer confidence on government spending which could probably be used as a proxy for private consumption expenditures.

Consequently, we believe consumer confidence should be incorporated into different functional forms studying the relationship between public and private sectors. The information content of consumer sentiment should provide valuable links between these studies and reflect the important role the sensitivity of economic agents has on the future path of an economy.

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Appendix: Bilateral Causality Analysis

Table A Pairwise Granger Causality Tests

Pairwise Granger Causality Tests	F-Statistic (k=4)	F-Statistic (k=6)
GS does not Granger cause CCI	1.98042 (0.1013)	0.60498 (0.7259)
CCI does not Granger cause GS	2.96061* (0.0223)	2.32667* (0.0372)
PC does not Granger cause CCI	0.81875 (0.5154)	0.73143 (0.6253)
CCI does not Granger cause PC	4.39035* (0.0023)	2.77447* (0.0149)

Note: k stands for the number of lags used and the values in the brackets are the p-values. (*) denotes significance at 5% level.

Source: Authors' estimations.