ABDI
Agência Brasileira de Desenvolvimento Industrial

BULLETIN

OF INDUSTRIAL CONJUNCTURE

DECEMBER 2012



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PRESENTATION

The Brazilian Industrial Development Agency (*Agência Brasileira de Desenvolvimento Industrial – ABDI*), entity linked to the Ministry of Development, Industry, and Foreign Trade (*Ministério de Desenvolvimento, Indústria e Comércio – MDIC*), was created in December 2004 with the mission of promoting the implementation of the Brazilian Industrial Policy in accordance with the Foreign Trade, and Science and Technology policies (Law 11.080/2004). It is mainly focused on programs and projects established by the Brazilian industrial policy. The Agency (ABDI) is also an integral part of *Plano Brasil Maior* Executive Group, being responsible for articulating and consolidating its programs and actions, as well as its monitoring.

Aiming at following the Brazilian industry evolution, ABDI develops a set of industrial intelligence studies and researches that guide its work and help the Brazilian government define and develop actions within the industrial policy. One of these studies is the Bulletin of Industrial Conjuncture, which provides information and analysis on the Brazilian industry evolution, highlighting the main difficulties faced and the acceleration opportunities of its development.

The Bulletin, released on a quarterly basis, has been developed in a partnership with the Industrial Economics and Technology Center (*Núcleo de Economia Industrial e da Tecnologia – NEIT*) of the State University of Campinas Economics Institute. Its first part shows the Brazilian economy modest growth and the gross fixed capital formation in the third quarter of 2012. The importance of families and the government's consumption expansion for the positive behavior – despite being timid – of the Brazilian economy activity during the analyzed period was confirmed. A reduction/stagnation of the industrial physical production is also observed in all activities (categories of use) and in a wide set of industrial subsectors, as well as deceleration of industrial employment generation, in the third quarter of 2012. Regarding the Brazilian foreign trade, despite the favorable currency exchange rate, exports difficulties are maintained with the loss of dynamism of the foreign demand. This situation is, however, followed by moderation of imports drive, reducing pressure over the trade balance.

The second part of the Bulletin concerns the recent evolution of the gross fixed capital formation and the investment rate in Brazil and all around the world. It highlights that the Brazilian investment rate's moving average in twelve months presented a descendant path as of the second quarter of 2011. Post-2010 growth, a deceleration of investment rates in all regions was noticed, leading to deceleration of the global investment rate. It can be concluded that downturn persistence in developed economies hampers private investment decisions and commitment of public expenditures with infrastructure demand or production exoneration.

Finally, the fact that Brazilian gross fixed capital formation reacted in a positive way to anti-cyclical measures adopted to face the global downturn was highlighted; but it did not keep its recovery path over time. Reduction of gross fixed capital formation in Brazil is related to the behavior of one of its components: acquisition of machinery and equipment. It can be observed that Brazilian machinery and equipment producers suffer with both the industrial

sector's demand contraction as a whole and the competition of foreign producers who can provide machinery and equipment in more favorable conditions. The document elucidates that the Brazilian government has tried to stimulate demand, as well as adopted several measures aimed at strengthening the offer of local machinery and equipment producers. The importance of maintaining investment incentives of the actual economy sector to assure future growth of production and employment in Brazil is emphasized.

BRAZILIAN ECONOMY AND INDUSTRY DEVELOPMENT IN THE THIRD QUARTER OF 2012

Brazilian economy and industry presented a modest growth in the third quarter of 2012. The Gross Domestic Product (GDP) at market prices grew only 0.6% compared to the second quarter of 2012, in seasonal effects-free series (Table 1). There was an increase of 0.9% compared to the same quarter in 2011, indicating a timid acceleration of Brazilian product growth, compared to what was noted in the first two quarters of the current year, when compared to the same periods of the previous year. On the other hand, cumulative growth in the last four quarters (ended in September 2012) narrowed to 0.9%, reaffirming the loss of dynamism of the Brazilian economy that became evident in the number of data accumulated in 12 months since the fourth quarter of 2010.

Table 1 – GDP Variation Rate by Activity and by Demand Component (2T12 and 3T12) (in %)

	Quarterly rate against immediately preceding quarter (*)		Quarterly rate against the same quarter of previous year		Cumulative rate in the last four quarters	
	2T12	3T12	2T12	3T12	2T12	3T12
Agriculture	6.8	2.5	1.7	3.6	1.5	0.8
Industry	(1.8)	1.1	(2.4)	(1.0)	(0.4)	(0.9)
Mineral Extraction	-	-	(1.8)	(2.8)	1.7	0.3
Transformation	-	-	(5.3)	(1.8)	(2.9)	(3.2)
Civil Construction	-	-	1.5	1.2	2.9	2.3
Energy, gas, and water	-	-	4.3	2.1	3.7	3.3
Services	0.5	0.0	1.5	1.4	1.6	1.5
GDP at base price	0.3	0.5	0.4	0.8	1.1	0.8
GDP at market prices	0.2	0.6	0.5	0.9	1.2	0.9
Families' consumption expenditure	0.7	0.9	2.4	3.4	2.5	2.6
Public administration's consumption expenditure	1.0	0.2	3.1	3.2	2.2	2.7
Gross fixed capital formation	(1.6)	(1.9)	(3.7)	(5.6)	(0.3)	(2.4)
Goods and services exports	(3.5)	0.2	(2.5)	(3.2)	2.8	0.9
Goods and services imports (-)	(1.5)	(6.5)	1.6	(6.4)	5.0	1.7

(*) With seasonal adjustment. Note: Data include the analysis of the historical series conducted and disclosed by IBGE. Therefore, there may be differences regarding data analyzed in the previous bulletins. Data from the third quarter of 2012 are preliminary.
Source: NEIT/IE/UNICAMP, based on National Accounts System (SCN)/IBGE.

The Brazilian industry showed a growth in the third quarter again, compared to the second quarter of 2012 (1.1%), after undergoing a reduction in the second quarter, compared to the first quarter of the year (1.8%), in deseasonalized series (Table 1). However, its development remained negative when comparing the

third quarter of 2012 to the same period in 2011 (-1.0%), and in the four quarters ended in September 2012 (-0.9%) accrual. In the comparison with the same quarter last year, the mineral extraction industry (-2.8%) and the transformation industry (-1.8%) contributed to the negative result, overshadowing the modest growth of civil construction in the same period (1.2%). The extraction industry also deepened the reduction presented in the second quarter of 2012, compared to the same period in 2011 (-1.8%), while the transformation industry mitigated its negative behavior presented in the same period (-5.3%). As to data accumulated in 12 months ended this September, the transformation industry was negatively highlighted (-3.2%) among other industrial activities, leading the Brazilian industry's downturn, while mineral extraction remained practically stagnant (0.3%) and civil construction kept a relatively more promising, though modest, accumulated growth (2.3%).

The Brazilian government concern with the industry development has been reinforced, to which the investments' recovery difficulty and domestic consumption's expansion difficulty contributed, as well as the uncertainty scenario in the global economy, especially in the European region, followed by intensification of competition among foreign producers, increasingly aggressive in the fight for foreign markets. As highlighted in the Bulletin of September 2012, the government is still adopting and reinforcing a set of incentives to investments and to the Brazilian industry, given its positive impacts on the other economic activities.

There was an agricultural activity deceleration, when comparing the third and second quarters of 2012 (to 2.5%) (Table 1). Agricultural product deceleration can also be observed in the number of data accumulated in twelve months, since the rate accumulated in four quarters ended in September 2012 decreased to 0.8%. However, the agriculture stood out among the other economic activities in terms of its growth in the third quarter of 2012 against the same period in 2011 (3.6%), offsetting the industry contraction (-1.0%) and reinforcing the modest growth of services (1.4%).

When the domestic demand's components are observed, the limited consumption growth of families (0.9%) and the government (0.2%) against the contraction of gross fixed capital formation (-1.9%) is highlighted, allowing the shy increase of the Brazilian product (0.6%) in the third quarter, compared to the second quarter of 2012, in seasonal influences-free series (Table 1). The same movement may be noted in the comparison with the same period last year in the number of variations accumulated in 12 months. Families' consumption has also stood out in supporting domestic demand in the third quarter of the current year, both in marginal terms and in the comparison with last year, outpacing the government's consumption growth in both situations. On the other hand, in the accumulated data series, families' consumption growth, that had outpaced the government's during the period after the international financial downturn, was slightly outpaced by the government in the last available data.

As mentioned in the Bulletin of September 2012, investments behavior is still the Brazilian government and entrepreneurs' core concern. Gross fixed capital formation (GFCF) was, once again, the negative highlight among the domestic demand's components in the third quarter of the year. Investments contracted for the fifth consecutive quarter compared to immediately previous quarters, in diseasonalized series, as well as showed retraction for the third consecutive quarter, when the basis for comparison is found in the same periods last year (Table 1). There was an intensification of investment contraction (to -2.4%) in the 12-month accrual ended in September 2012.

Due to the recent behavior of gross fixed capital formation, the Brazilian investment rate (GFCF over the GDP) of the third quarter returned to the same level of the first quarter of 2012 (18.7%), resulting in an average level of 18.5%, considering the four last quarters ended in September 2012. As it will be detailed in the second part of this document, the investments have faced difficulties to leave the ground in the uncertainty environment of domestic growth and international downturn

persistence. Some governmental policies and measures have been systematically delayed and renewed aiming at setting an environment that stimulates consumption and investment[1]. For example, gradual contraction policy of basic interests and national currency devaluation policy; taxes exempt or reduction's measures on credit operations and specific products; payroll exoneration extension measures for a larger number of sectors, including, recently, civil construction; Investment Support Program (PSI) renewal; measures aimed at accelerating investments in infrastructure – such as the creation of the Planning and Logistics Company (EPL) and of the Investments in Logistics Program –; and electricity costs reduction. It is expected that this set of stimuli to consumption and investment should leverage the Brazilian economy and industry's recovery in the near future.

Still considering the domestic demand's components, it is worth noting the change in the Brazilian imports' behavior in the third quarter of 2012. Imports have undergone retraction in the third quarter of the current year, compared to the second quarter (-6.5%), in diseasonalized series, and the third quarter last year (-6.4%) (Table 1). This meant, in the first case, an import contraction deepening observed in the second quarter against the first quarter of the year, with seasonal adjustment, and, in the second case, a reversal of its positive behavior that was highlighted in the second quarter against the same period last year. This change of imports' behavior relieved the negative pressure on production and the Brazilian trade balance, which cannot serve as an endorsement to decrease attention with the international competition intensification, and, in this context, with the persistent danger of deleterious effects of imported products' entry in the Brazilian market on the country's domestic production and trade balance.

In order to complement the analysis of the Brazilian product performance, the foreign demand behavior should be highlighted, expressed by Brazilian exports. There was a small growth in Brazilian exports in the third quarter compared to the second quarter of 2012 (0.2%, excluding the seasonal effects). As to the third quarter of 2011, a drop in exports (-3.2%) was observed, deepening the contraction noted in the second quarter, compared to the same period last year (-2.5%) (Table 1). In the 12-month accumulated data ended in September 2012, there was a deceleration of exports growth (to 0.9%), confirming the trend launched in the first quarter of 2011. As highlighted in previous bulletins, the difficulty of recovery of demand from the main developed markets and the international competition intensification among trade partners persist, hampering a more virtuous performance of Brazilian exports, even with the domestic currency a little more devaluated in comparison to previous periods.

The Brazilian industry behavior in the third quarter of 2012 may be detailed from the data analysis of the *Pesquisa Industrial Mensal-Produção Física* (PIM-PF/IBGE). Comparing data of the third quarter of 2012 with data of the same period in 2011, it was possible to observe the mitigation of physical production retraction of the transformation industry (to -2.9%) and of the general industry (to -2.8%), followed by extraction production contraction (-2.1%) after two consecutive quarters of small variations, in this last case (Table 2). In the 12-month accrual ended in June 2012, it was possible to observe an intensification of the production shrinkage of the transformation industry (-3.2%) and of the general industry (-3.1%), and near stagnation of the extraction industry (0.1%).

However, comparing data of the third and second quarters of 2012, in seasonal influences-free series, there was a glimpse of a modest recovery of the physical production of the transformation industry (1.1%) and, as a result, of the general industry (1.0%). This result is more important for it is the first positive result after four consecutive quarters of retraction, both in general and transformation industries. There is a great expectation regarding confirmation of this recovery of the Brazilian industrial production in the last quarter of 2012, especially from the effects of the newly

1. For a more complete listing of measures, see the Industrial Conjuncture Bulletin of September 2012.

adopted measures of incentive to investment and to the Brazilian industry, which may represent indication of a real catchup of industrial activity from 2013 on.

Table 2 – Brazilian Industrial Production Variation Rate (3T11 to 3T12) (in %)

Activities	3T 2011	4T 2011	1T 2012	2T 2012	3T 2012
Quarterly variation rate compared to the immediately previous quarter (with seasonal adjustment)					
General Industry	**(0.9)**	**(1.7)**	**(1.0)**	**(0.9)**	**1.0**
Extraction Industry	0.6	1.7	(3.5)	1.7	(1.9)
Transformation Industry	(1.1)	(1.8)	(0.6)	(1.2)	1.1
Quarterly variation rate compared to the same quarter in the previous year					
General Industry	**0.1**	**(1.9)**	**(3.1)**	**(4.5)**	**(2.8)**
Extraction Industry	0.2	2.4	(0.2)	0.3	(2.1)
Transformation Industry	0.1	(2.1)	(3.3)	(4.7)	(2.9)
Accumulated variation rate in the last four quarters					
General Industry	**2.5**	**0.4**	**(1.0)**	**(2.3)**	**(3.1)**
Extraction Industry	5.1	2.1	1.3	0.7	0.1
Transformation Industry	2.4	0.2	(1.2)	(2.5)	(3.2)

Note: The data incorporate the eventual review of figures previously disclosed by IBGE. Therefore, there may be differences regarding data contained in the previous bulletins.
Source: NEIT/IE/UNICAMP, based on *Pesquisa Industrial Mensal-Produção Física* (PIM-PF)/IBGE.

The analysis of the industrial production performance by activities (categories of use) enables emphasizing the significant retraction of capital goods' physical production in the third quarter of 2012 against the same quarter in 2011 (-12.2%), totaling four consecutive quarters of the production's descendant path of this category of use (Table 3). Monthly decline of capital goods production observed in August (-13.1%) and September (-14.0%) of 2012, compared to the same months of the previous year, was responsible for the contraction in the third quarter (PIM-PF/IBGE). Capital goods production's retraction was enhanced in the number of data accumulated in 12 months. In the four quarters ended in September 2012, an intensification of the capital goods production's drop (to 9.6%) was observed. Repeating the Industrial Conjuncture Bulletin's finding, September 2012, the capital goods production left the positive and differentiated behavior presented when faced with the other activities in the past, especially in the last two quarters of 2010 and in the first three quarters of 2011.

Physical production of capital goods showed a slight growth in the third quarter, compared to the second quarter of 2012 (0.5%, after seasonal adjustment). Therefore, there was no confirmation of a steadier recovery pointed out in the second quarter compared to the first quarter of 2012 (3.1%), after two consecutive quarters of disturbing retraction (Table 3). In the marginal comparison, the capital goods production's behavior seemed more promising, which eventually did not become reality. It appears that difficulties faced by investments have contributed to the negative behavior of the capital goods' physical production. Therefore, their future seems to depend on the investment and domestic production's response to incentives adopted by the Brazilian government.

Table 3 – Industrial Production Variation Rate by Category of Use (3T11 to 3T12) (in %)

Categories of use	3T 2011	4T 2011	1T 2012	2T 2012	3T 2012
Quarterly variation rate compared to the immediately previous quarter (with seasonal adjustment)					
Capital goods	0.6	(3.8)	(11.6)	3.1	0.5
Intermediate goods	(1.1)	(0.5)	(1.1)	(0.7)	1.1
Durable consumer goods	(3.1)	(3.4)	(1.2)	0.5	5.2
Non-durable and semi-durable consumer goods	0.5	(1.0)	1.7	(2.7)	0.8
Quarterly variation rate compared to the same quarter in the previous year					
Capital goods	4.0	(1.5)	(13.3)	(11.7)	(12.2)
Intermediate goods	(0.4)	(0.8)	(1.5)	(3.4)	(1.7)
Durable consumer goods	(2.2)	(9.5)	(11.6)	(7.1)	0.0
Non-durable and semi-durable consumer goods	0.3	(1.0)	1.4	(1.6)	(1.6)
Accumulated variation rate in the last four quarters					
Capital goods	5.4	3.2	(2.0)	(5.5)	(9.6)
Intermediate goods	1.4	0.3	(0.5)	(1.5)	(1.9)
Durable consumer goods	0.8	(2.0)	(6.1)	(7.6)	(7.0)
Non-durable and semi-durable consumer goods	0.7	0.0	0.1	(0.3)	(0.7)

Note: The data incorporate the eventual review of figures previously disclosed by IBGE. Therefore, there may be differences regarding data contained in the previous bulletins.
Source: NEIT/IE/UNICAMP, based on *Pesquisa Industrial Mensal-Produção Física* (PIM-PF)/IBGE.

On the other hand, there was stagnation of durable consumer goods' physical production in the third quarter of 2012, compared to the same quarter in 2011 (0.0%), after five consecutive quarters of contraction (Table 3). When we observe the data accumulated in 12 months ended in the last month of each quarter of the year, it is possible to note the reduction of durable goods production from the 12-month accrual ended in December 2011, reaching a significant contraction of durable consumer goods production in the 12-month accrual ended in June 2012 (-7.6%) and in September (-7.0%). This last accumulated performance of durable consumer goods' physical production resulted from difficulties faced by non-industrial equipment manufacturers with probable contribution from trucks and buses subsector, which suffered a significant decrease in production (-12.3% and -24.2%, respectively) in the four-quarter accrual ended in September 2012 (PIM-PF/IBGE).

Notwithstanding, it is worth highlighting the major expansion of durable consumer goods' physical production in the third quarter, compared to the second quarter of 2012 (5.2%, in diseasonalized series), after four consecutive quarters of retraction, followed by one quarter of low marginal growth (Table 3). Performance of automobiles production in the same period (6.2%, with seasonal adjustment), leaving the significant marginal contraction observed in the first quarter of the current year behind, compared to the last quarter last year (-19.2%, after seasonal adjustment) (PIM-PF/IBGE), certainly contributed to the positive behavior of durable consumer goods in the last analyzed quarter. In this sense, the record production of vehicles (329.3 thousand units), including automobiles, light commercial vehicles, trucks and buses, stands out in August 2012, as disclosed by *Associação Nacional dos Fabricantes de Veículos Automotores* (ANFAVEA, October 2012).

As highlighted in the Industrial Conjuncture Bulletin, September 2012, automobiles and white-good appliances sales benefited from tax and credit measures adopted and delayed by the Brazilian government, like the reduction of Excise Tax (IPI) and the cut on

Tax on Financial Operations (IOF) for consumer credit transactions, influencing durable consumer goods production's performance. Durable goods production perspectives for next year, however, remain uncertain, due to the effects of the extinction of some production stimuli of certain durable goods, like the end of the IPI reduction charged on automobiles and white-good appliances, announced to December 2012.

The performance of the Brazilian production of intermediate goods has been hampered both by the adverse international economic scenario, including the loss of dynamism of developing economies, like China, and by the modest growth of the Brazilian economy. In this sense, the reduction of intermediate goods' physical production remained in the third quarter of 2012, compared to the same period in 2011 (-1.7%), following the performance observed for four consecutive quarters, always comparing with the same periods of previous years. Contraction of intermediate goods production was also confirmed in the 12-month accrual ended in September 2012 (-1.9%) (Table 3). In seasonal fluctuations-free series, there was a modest growth in production of intermediate goods in the third quarter, compared to the second quarter of 2012 (1.1%), reverting, however, the marginal contractionary behavior in the previous quarters. In view of the difficulties faced by foreign markets, future behavior of intermediate goods production becomes more clearly dependent on the domestic activity direction.

There was a reduction of semi-durable and non-durable consumer goods in the third quarter of the current year, compared to the same period last year (-1.6%) and in the 12-month accrual ended in September 2012 (-0.7%) (Table 3). The production of semi-durable and non-durable goods, however, showed a growth in the third quarter, compared to the second quarter of 2012 (0.8%, in seasonal effects-free series), following the behavior, even modestly, of the other categories of use. Production performance of semi-durable and non-durable goods has been influenced by the difficulty in supporting the Brazilian domestic demand. One should always remember that several sectors included in this category of use usually suffer directly from the effects of imported products input. As highlighted concerning other categories of use, some governmental measures have been adopted to increase sales and production of semi-durable and non-durable consumer goods, like expanding the reach of tax exoneration on payroll and postponing tax collection to some sectors which belong to the category of use, like textile and shoes sectors.

Data from *Pesquisa Industrial Mensal-Produção Física* (PIM-PF/IBGE), which are detailed by industrial subsector, indicate reduction or small increase (0.2% to 1.1%) of physical production to most sectors included in the sample (21 of the 27 sectors) in the third quarter of 2012, compared to the same period in 2011. The worst performance among the industrial sectors analyzed was the sector of office machines and computer equipment (-15.1%), followed by the productive sector of electronic material, devices, and communication equipment (-14.7%), by the recording edition, print, and reproduction sector (-12.0%), and by automobiles producers (-10.4%). The machines and equipment sector, in its turn, confirmed a contractionary movement of its physical production in the third quarter of 2012, compared to the same quarter in 2011 (-5.0%), repeating the behavior observed in the three previous quarters. The most significant growth of physical production in the third quarter of 2012, compared to the same period in 2011, can only be observed in six (6) industrial sectors included in IBGE research (of the 27 sectors analyzed): wood (9.3%); other transportation equipment (9.1%); pharmaceutics (8.3%); perfumery, soaps, detergents, and cleaning products (5.6%); oil and ethanol refining (5.6%); and other chemical products (4.5%) (PIM-PF/IBGE).

A generalized retraction/stagnation of physical production by category of use and industrial subsector was observed in the third quarter of 2012, compared to the same period in 2011. Meanwhile, comparison with the immediately previous quarter indicates a somewhat more favorable situation, with positive growth

rates in all categories of use, especially in durable consumer goods. It is still too early to conclude about a sustained recovery of the industrial activity, but marginal data enable at least to expect with slightly more optimism information regarding the last quarter of 2012 and, mainly, the industry performance throughout 2013.

With respect to formal employment in the Brazilian industry, the acceleration of job creation was maintained in the third quarter of 2012, compared to the same period in the previous year, in spite of a better result, compared to the two first quarters of the year. Employment and Unemployment General Database (CAGED/MTE) data showed net generation of 110,499 formal workstations between July and September 2012, i.e. there were 15% less industrial jobs created in this third quarter than in the same period last year. However, the number of formal jobs created in the third quarter reached the sum of the first six months of the year – just over 116 thousand jobs were generated between January and July this year. Therefore, although it keeps decelerating, formal employment generation in the industry showed mild improvement in the third quarter of 2012, compared to the two first quarters of the same year (Table 4).

Table 4 – Job Creation and Net Hires Payroll in the Brazilian Industry (1T09 to 3T12)

Year	Job Creation					Net Hires Payroll (in thousands of R$, Dec/10*)				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Total	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
2009	(146,761)	2,578	203,323	(52,009)	**7,131**	(308,501)	(153,828)	37,893	(105,773)	**(530,209)**
2010	199,187	186,139	203,873	(111,408)	**477,791**	104,290	76,794	92,038	(147,372)	**125,750**
2011	127,798	117,211	128,704	(188,217)	**185,496**	46,400	41,794	26,054	(228,229)	**(113,981)**
2012	53,742	62,892	110,499	-	**-**	(28,420)	(22,893)	(15,274)	-	**-**

*Data deflated by IPCA (IBGE).
Source: NEIT/IE/UNICAMP, based on CAGED/MTE.

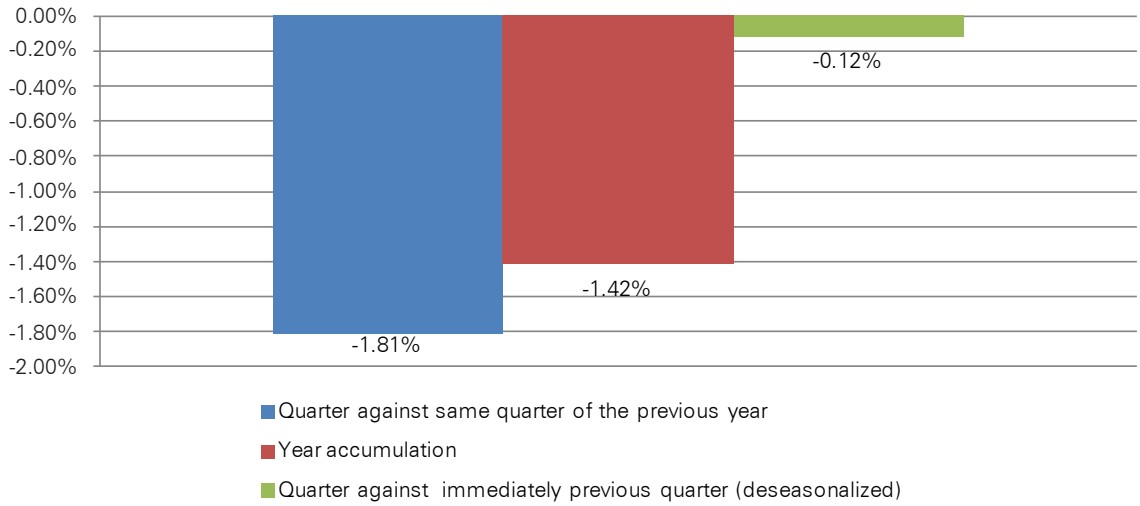
Performing a comparative analysis of the years from 2009 to 2012, it is possible to observe that the third quarter always represents the largest generation of formal jobs in the Brazilian industry. The comparison with the third quarters from the last few years indicates, however, that the period from July to September 2012 showed the worst performance in terms of industrial employment generation after the process of downturn recovery in 2008/2009. Considering the accrual from January to September, there was a generation of just over 227 thousand jobs in 2012, 40% less than the amount presented in the same period in 2011.

The fact that draws more attention, however, is not the deceleration of employment generation, but the successive losses of payroll in the Brazilian industry, as it was already underlined in the last Industrial Conjuncture Bulletins (July and September 2012). There was net loss of more than R$ 15 million payroll of formal employees in the Brazilian industry in the third quarter of 2012, repeating the movement of the two first quarter of the year, and totaling a net loss of more than R$ 66 million from January to September 2012 (Table 4). This accumulated loss in the year was not just more negative than the one presented in 2009, which had its first semester significantly affected by the global downturn. Over the last four years, this is the first time there is net payroll loss in four consecutive quarters (the fourth quarter of 2011 and the first three this year). Thus, it is possible to observe that the rationale to fire workers with higher salaries and hire employees with lower remunerations as a strategy to reduce costs is strongly present in Brazilian industrial companies.

In order to complement the analysis, data from *Pesquisa Industrial Mensal de*

Empregos e Salários (PIMES/IBGE)[2] also point to a deceleration of employment generation in the Brazilian industry in the third quarter of 2012. Chart 1 shows this trend in the three variations that were calculated. Comparing to the same quarter of 2011, there was reduction of 1.81%. In the accumulated rate from January to September 2012, compared to the same period in 2011, there was contraction of 1.42% in the Brazilian industrial employment. The most relevant and disturbing data, however, is the loss of 0.12% of dynamism in the employment generation, related to the second semester of the current year. As this data is free of seasonal influences, it seems wise to relativize the positive results previously presented by CAGED formal employment creation data.

Chart 1 – Brazilian Industrial Employment Variations in the Third Quarter of 2012 (in %)



Source: NEIT/IE/UNICAMP, based on PIMES/IBGE.

In a nutshell, in spite of the difference between data from CAGED and from PIMES, both verified the continuity of the deceleration trend in Brazilian industry employment generation in the third quarter of 2012, although it is still possible to observe the creation of formal workstations. However, in terms of payroll, significant and disturbing losses still occur. Resumption of a more virtuous employment and salary path depends on the future behavior of investments and of the Brazilian industrial production.

Previously analyzed information indicated that the Brazilian economy presented a modest growth in the third quarter of 2012, led by the expansion of families and the government's consumption in a gross fixed capital formation retraction scenario. From the industrial point of view, there was contraction/stagnation of physical production in all categories of use and in a wide set of industrial subsectors, as well as deceleration of industrial employment generation, in the analyzed period. Difficulties related to the Brazilian foreign trade's performance were also found, which deserves, therefore, being analyzed in more detail.

The Brazilian trade surplus was of US$ 6.6 billion in the third quarter of 2012, result that was lower than the one reached in the same period in 2011 (US$ 10.1 billion), but higher than the one reached in the second quarter of 2012 (US$ 4.6 billion) (FUNCEX).

Comparing to the third quarter of 2011, the Brazilian surplus reduction resulted from the descendant behavior's superiority of the exports amount (-11.3%), compared to the imports value movement (-7.6%) (Table 5). This Brazilian

2. PIMES/IBGE has a sampling coverage, including companies with five or more employees, while CAGED/MTE presents the results of all companies which have performed employment/off-boarding of formal employees in the researched period, thus, having census coverage. Therefore, it is possible to find divergent trends in both data sources used, especially in sectors with predominance of small businesses.

exports value behavior resulted from the combination between the decrease of exported products prices (-6.8%) and the contraction of the exported *quantum* (-4.9%) in the analyzed period, which may have been caused by the lack of dynamism of the foreign demand, the intensification of the international competition and the competitive problems faced by several Brazilian industrial sectors, in spite of a slightly more favorable exchange rate. On the other hand, the decline of Brazilian imports' value in the same period was especially caused by the imported *quantum* retraction (-6.2%), probably associated to the modest growth of the domestic demand, with less participation of imported products prices shrinkage (-1.5%).

Table 5 – Exports Variation Rates by Aggregated Value and Imports Variation Rates by Category of Use (in %)

		3T12/3T11			3T12/2T12		
		Value	Price	*Quantum*	Value	Price	*Quantum*
Exports	**Total**	(11.3)	(6.8)	(4.9)	2.3	(1.2)	3.6
	Basics	(10.3)	(9.8)	(0.7)	(0.3)	(1.1)	0.9
	Semi-manufactured products	(20.8)	(8.1)	(13.9)	11.0	(1.3)	12.5
	Manufactured products	(9.4)	(2.1)	(7.4)	3.1	(1.0)	4.2
Imports	**Total**	(7.6)	(1.5)	(6.2)	(1.0)	(1.6)	0.6
	Capital Goods	0.1	1.4	(1.8)	(1.4)	(0.8)	(0.7)
	Intermediate Goods	(11.0)	(2.9)	(8.4)	5.1	(0.7)	5.7
	Durable Consumer Goods	(17.5)	3.2	(20.3)	1.1	0.8	0.3
	Non-Durable Consumer Goods	(9.2)	(3.4)	(6.5)	0.2	(4.1)	4.4
	Fuels	1.7	(0.6)	1.6	(16.0)	(4.9)	(12.2)

Source: NEIT/IE/UNICAMP, based on FUNCEX.

A different movement may be observed in the comparison with the second quarter of 2012, since the Brazilian trade surplus increase resulted from the combination between the elevation of exports value (2.3%) and the contraction, though timid, of imports value (-1.0%) (Table 5). The growth of Brazilian exports value in the aforementioned period was due to the expansion of exported amounts (3.6%), considering the decline of exports prices (-1.2%). Unlike exports, the retraction of Brazilian imports in the same period was determined by the decline in imported products prices (-1.6%), given the rise, though modest, of imported amounts (0.6%). This Brazilian exports and imports movement observed from the second to the third quarter indicates a small improvement – in the margin – of the Brazilian foreign trade insertion, but it does not dispel the concern with the adverse effects of the difficulty in developed economies' recovering and of the developing countries' growth deceleration, as well as with the greater aggressiveness of the international competition.

In this context, it is worth underlining that the undervalued currency exchange and the lack of dynamism of major foreign consumer markets have contributed to reducing exported products prices in the analyzed periods. A decline in imported products prices was also observed – especially in intermediate and non-durable consumer goods – possibly indicating a combination between the excessive supply of goods in the international market and the price renegotiation between the foreign supplier and the importer, who tried to share the disadvantage resulting from the devaluation of Real against Dollar. Decline in prices of products in the international market has been observed in the last few months, resulting from the economic growth's change of perspective regarding several developed and developing countries, like China (WATANABE, 2012b).

By detailing exports data by aggregated

factor, it is possible to observe that the Brazilian exports behavior in the third quarter of 2012, compared to the same period in 2011, was influenced by the contraction of semi-manufactured products' foreign sales (-20.8%), followed by basic products (-10.3%) and manufactured products (-9.4%) (Table 5). There was a significant reduction of the exports *quantum* of semi-manufactured products (-13.9%), manufactured products (-7.4%), and of basic products prices (-9.8%).

Changing the comparison basis to the second quarter of 2012, exports data by aggregated factor showed a different and more promising elevation movement of Brazilian foreign sales led by the increase in exports of semi-manufactured products (11.0%) and, to a lesser extent, manufactured products (3.1%), leveraged by the expansion of its exports quantities (12.5% and 4.2%, respectively), considering the contraction of its exporting prices, due to the aforementioned reasons (Table 5). Basic products were the only ones to present contraction of their foreign sales in the analyzed period, driven by the decline in exporting prices.

With respect to imports behavior by category of use, contraction of imported values is highlighted to most categories, led by the decline of imported quantities, in the third quarter of 2012, compared to the same period in 2011 (Table 5). The foreign demand's modest growth probably contributed to the performance of imports of different use categories, with less participation of the importing prices behavior.

The highlight was the reduction of durable consumer goods imports' value (-17.5%), driven by the retraction of imported quantities (-20.3%), in an importing prices increase scenario (3.2%). This loss of dynamism of durable consumer goods imports in the third quarter may be equally observed in the second and first quarters of the current year. In the case of capital goods, an increase in imported value was observed, even if in a timid way (0.1%), in the analyzed period, from the increase of the importing price (1.4%) that counterbalanced the decline of imported quantities (-1.8%). Fuels also presented greater imported values in the same period (1.7%), leveraged by the increase in imported quantities (1.6%), in an importing price decline context (-0.6%).

Comparing with the second quarter of 2012, importing data by category of use show an inversion of behavior. The reduced decline of importing value (-1.0%) was led by fuels (-16.0%) and, to a lesser extent, by capital goods (-1.4%), considering that the other use categories presented an increase of their imported values due to the increment of imported quantities (Table 5). In spite of the total imports' marginal decline movement, an increase of the imported quantity to some use categories, like intermediate and non-durable consumer goods, was observed.

In any case, importing data from the thirds quarter of the year showed some moderation in the elevation trend of Brazilian foreign purchases in the recent period, related to the lack of dynamism of the Brazilian production growth. As previously highlighted, however, the concern with the effects of the difficulty in recovering developed economies and in decelerating developing ones should not be underlined, as well as the cutthroat international competition, on Brazilian exports and imports, being possible to eliminate possible trade gains resulting from the national currency's devaluation.

Previously analyzed information showed the Brazilian economy's modest growth, which the expansion of families and the government's consumption contributed to, considering the disturbing investment contraction in the third quarter of 2012. It was also possible to highlight, in the same period, the physical production's retraction/stagnation to a wide set of industrial subsectors, as well as employment generation deceleration in the Brazilian industry. Analyzing the Brazilian foreign trade, the maintenance of exporting difficulties with the foreign demand's loss of dynamism was observed, in spite of the favorable currency exchange, notwithstanding, followed by the importing dynamism reduction, alleviating, in a certain way, the pressure on the trade balance.

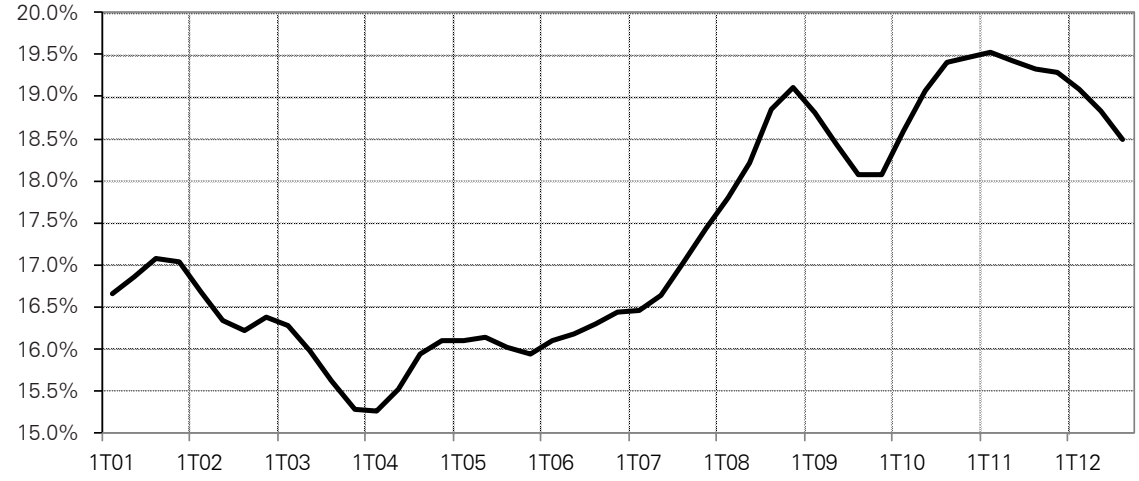
The set of policies and measures to encourage productive activity adopted by the Brazilian government may

contribute to boost the economic activity, and for such, the investment recovery is essential. The importance of the investment is found both in the creation of demand and in the ability to modify future supply conditions when enabling the incorporation of new products and processes, the removal of infrastructure bottlenecks, and the industrial facilities modernization, generating increases in productivity and competitiveness. Therefore, further investments and the enhancement Brazilian industrial and economic performance are needed in an uncertainty scenario as to the future development of the main global production and consumption centers and faced with the international competition intensification and with the entry of imported products input with adverse consequences on the domestic production. Due to its importance, in the following section, this issue will be treated in more detail.

RECENT EVOLUTION OF THE GROSS FIXED CAPITAL FORMATION AND OF THE INVESTMENT RATE IN BRAZIL, AS IN THE REST OF THE WORLD

Gross Fixed Capital Formation (GFCF) participation in the Brazilian Gross Domestic Product (GDP), or the investment rate (GFCF/GDP), has been systematically declining, quarter by quarter, when considering the recent evolution of its moving average in 12 months (Chart 1). The Brazilian investment rate recovery post-2009 lasted only five quarters, sequentially declining since then. The investment rate's 12-month moving average remained positive and increasing since the first quarter of 2010 until the first quarter of 2011, when it reached its highest level (19.5%), presenting a descendant path from the second quarter of 2011 until the third quarter of 2012 (18.5%), accumulating a descent of 5.1% from its peak quarter until the last considered quarter. This path has been causing concern, since the elevation of the investment rate is considered essential to recover a sustained growth cycle in the Brazilian economy.

Chart 1 – Investment Rate in Brazil
(1T01 to 3T12)
(moving average in four quarters – in %)



Source: NEIT/IE/UNICAMP, based on National Accounts System/IBGE.

The Brazilian situation is not isolated. A similar path is observed in the global investment rate, composed by the average of the rates observed in 186 countries (which, in this case, reflects the relation between GFCF and the Stock Variation with the GDP), estimated by the International Monetary Fund (IMF), as well as in specific regions, like "Developed economies"[3]; "Developing Asia"[4]; and "Latin America and the Caribbean"[5] (Chart 2).

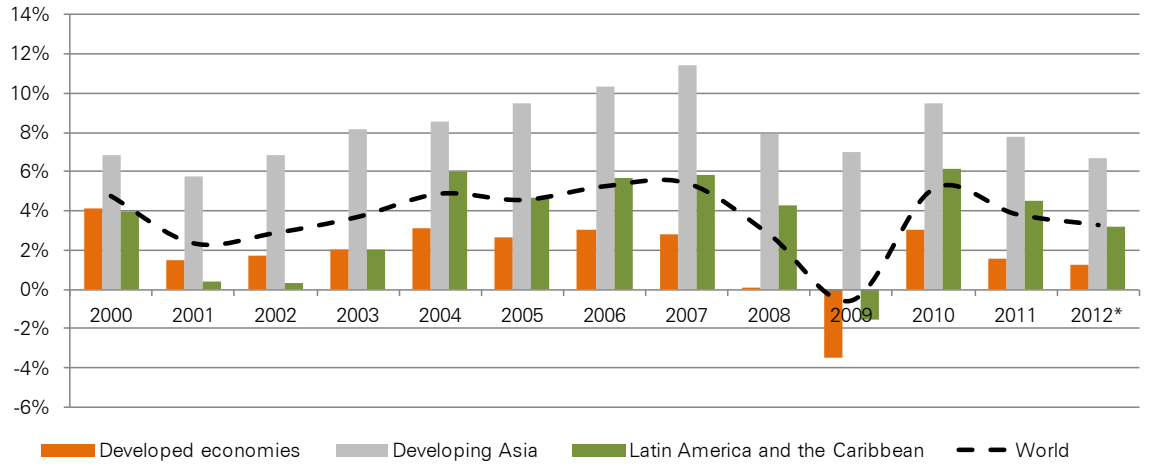
3. It includes 35 countries: Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, South Korea, Luxembourg, Malta, Holland, New Zealand, Norway, Portugal, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, Great Britain, and the United States.

4. It includes 27 countries: Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, Fiji, India, Indonesia, Kiribati, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, New Guinea, Philippines, Samoa, Salomon Islands, Sri Lanka, Thailand, Democratic Republic of Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam.

5. It includes 32 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Granada, Guatemala, Guiana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, Saint Lucia, Saint Vincent and Grenadines, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

It is possible to verify that Latin America and the Caribbean's investment rate begins the 2000s in a lower position in the set of economies, and becomes higher than the global average remaining that way until 2011. As widely explored by the academy and the media, the investment rates in developing Asia are significantly higher than the global average and also than the rate verified in Latin America and the Caribbean's. In conjunctural terms, growth deceleration of investment rates of all regions observed post-2010 stands out, causing deceleration of the global investment rate.

Chart 2 – Global and Selected Regions Investiment Rate Annual Variation (2000 a 2012*)

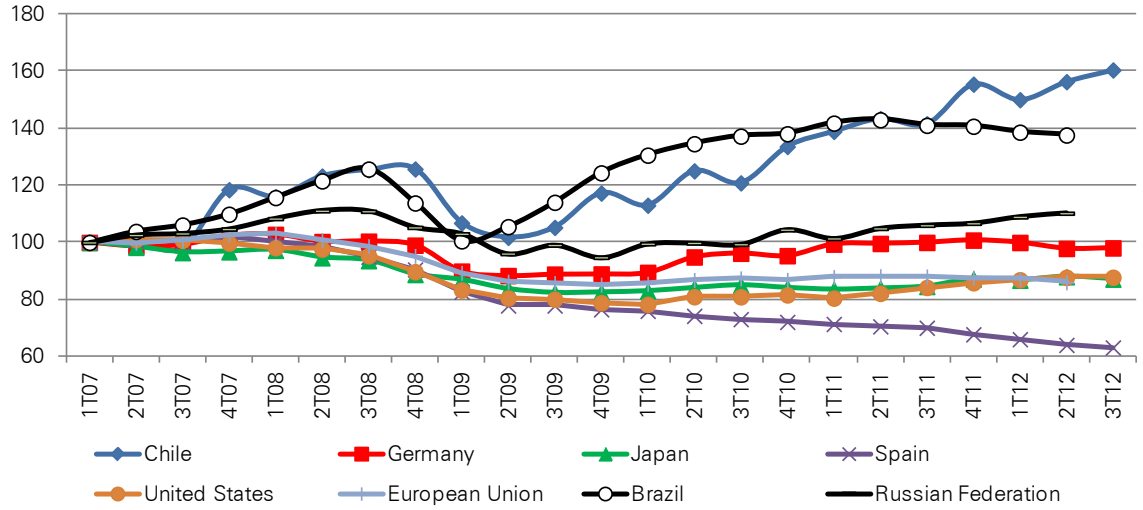


*October 2012 projections.
Source: NEIT/IE/UNICAMP, based on International Monetary Fund (FMI) data.

In several economies, including the ones classified as "developing", the deep confidence decline introduced by the emergence of the international downturn in the last quarter of 2008 drew anti-cyclical policies, which have also gone through investment incentives, and favored some GFCF recovery, as can be observed in certain countries presented in Chart 3, and even in the aggregated data of Chart 2. However, downturn prolongation in developed economies (especially Europe) is hampering private investment decisions resumption as well as the commitment of public expenditure to infrastructure demand or the production tax exemption, for example.

It is worth underlining that the Brazilian GFCF reacted in a positive way to the anti-cyclical measures against the Russian Federation, for example, or, in general, to the developed economies, but could not keep its recovery path over time, as it happened, for example, in the case of Chile (Chart 3).

Chart 3 – Gross Fixed Capital Formation Growth (1T07 to 3T12) (seasonally adjusted data – 1T07:100)

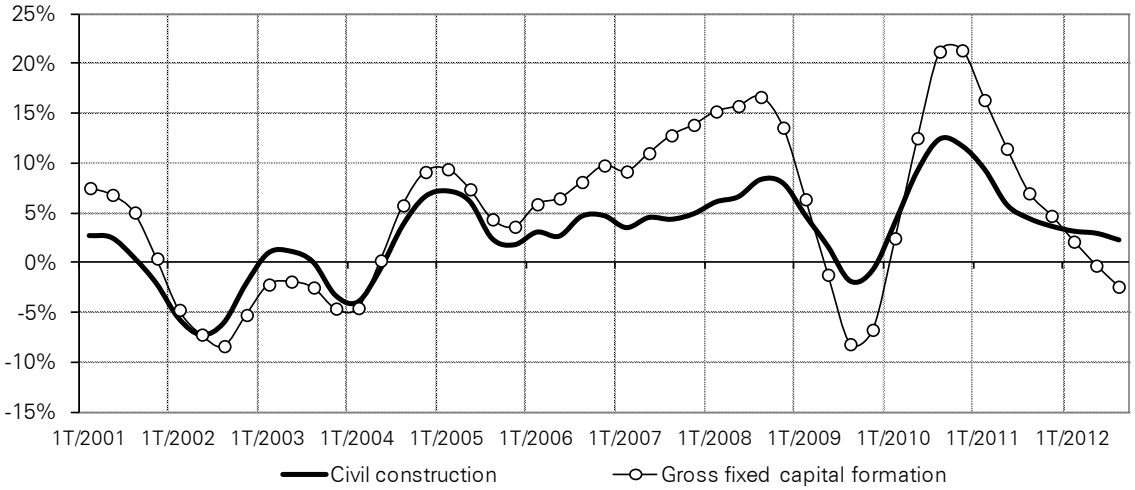


Source: NEIT/IE/UNICAMP, based on OCDE data.

GFCF decline in Brazil is related, in a special way, to one of its components' behavior: machines and equipment acquisition. It is worth noting that GFCF covers the construction activity (infrastructure and buildings) and a component that involves a set of other aggregated products under "others", besides machines and equipment acquisition. According to National Accounts (IBGE) data, from 2000 to 2009 (last available data), machines and equipment represented an average of 50% of GFCF in Brazil. From 2000 to 2007, its participation reached 57% of the aggregated data, but receded in 2008 and 2009. On the other hand, construction was responsible for 43% of GFCF and the "others" component, for around 8% throughout the analyzed time.

Chart 4 presents the GFCF and the added value evolution in the construction sector, between the first quarter of 2001 and the third quarter of 2012, last available data by the National Quarterly Accounts (IBGE). It can be verified that the construction has a much less volatile behavior than the other GFCF components and that, though it has decelerated since the last quarter of 2011, it actually mitigated GFCF's decline in 2012. Therefore, among the main components of the aggregated, the machines and equipment demand is the one that has been depressing, with more intensity, GFCF in Brazil – requiring, thus, better observation.

Chart 4 – Gross Fixed Capital Formation and Construction in Brazil (1T01 to 3T12)
(real variation rate accumulated in four quarters)



Source: NEIT/IE/UNICAMP, based on National Accounts System/IBGE.

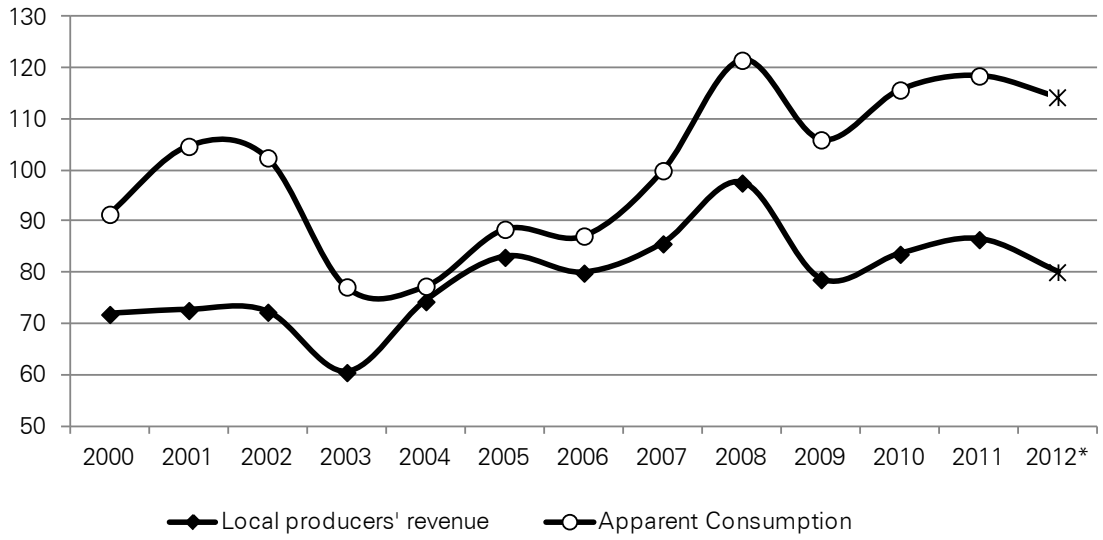
This differentiated impact certainly results less from domestic issues and more from the competition's international demand, which affects national productive structures, mainly tradable goods' production. Certainly, the industry especially resents this scenario, since its products are typically tradables, which is not the case of construction. Domestic stimuli to segments in which there is international exchange of goods may "leak out" to the rest of the world, what occurs in a lesser extent with services sectors, typically non tradable.

The worldwide low economic growth and high idle capacity environment intensified the international competition, weakening the competitive position of producer with smaller production scale, less favorable financing conditions and from countries with unfavorable macro economic prices – situation faced by several segments of the Brazilian industry, and particularly by Brazilian producers of machines and equipment, who suffer in double, either by the demand decline of the industrial sector as a whole or facing the competition from foreign producers of machines and equipment who can trade in more favorable conditions.

The growing importance of the foreign supply in the Brazilian market supply of machines and equipment is observed (Chart 5). Distancing between the local industry revenue and machines and equipment consumption, which could already be noted in 2007 and 2008, expanded from 2009 to 2012, showing a growing imports participation in the total supply[6]. Moreover, the relative stagnation of the apparent consumption of machines and equipment and of the local industry's revenue is observed. In other words, a situation in which machines and equipment demand in the Brazilian market is flowing back and local suppliers are appropriating smaller parts of this market is noted.

6. However, there is a movement that should be taken into consideration, which is the growing importation of pieces and parts by local producers themselves who, within FINAME, try to import cheaper and/or more updated components, in technological terms, extending their microeconomic competitiveness.

Chart 5 – Machines and Equipment Companies' Revenue and Apparent Consumption in Brazil (2000 to 2012*) (in billions of R$, from October 2012 – IGP-di)

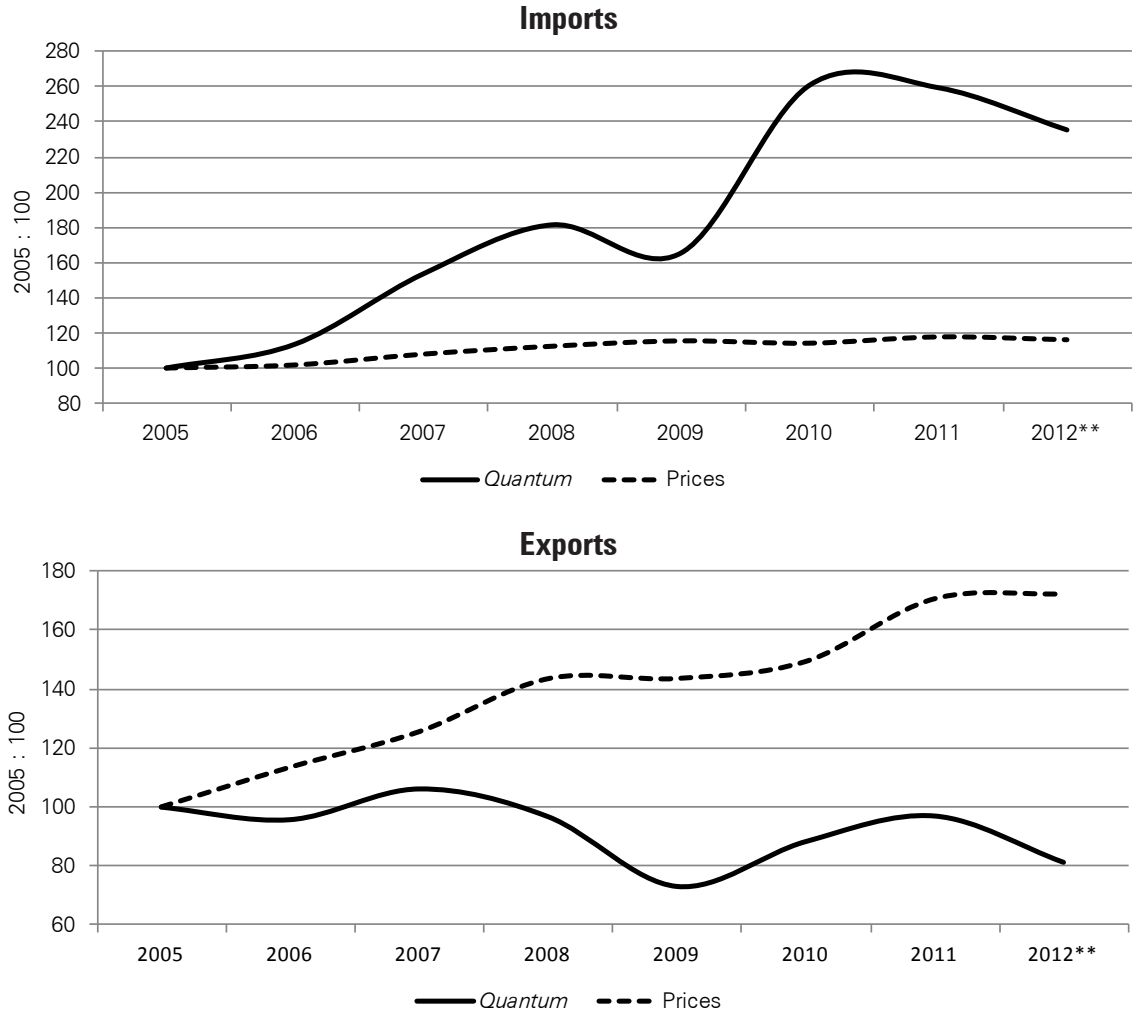


* Revenue and apparent consumption data from 2012 was estimated from the actual growth rate verified to the first eight months of the year (January to October) on the same period of the previous year.
Source: NEIT/IE/UNICAMP, based on *Associação Brasileira da Indústria de Máquinas e Equipamentos* (ABIMAQ) and *Fundação Getúlio Vargas* (FGV) data.

Foreign position fragility of the Brazilian machines and equipment sector may be confirmed by the *quantum* and exporting prices evolution of Brazilian producers, that remains opposed to to the Brazilian imports' evolution of machines and equipment (Chart 6). Even if a qualitative assessment of tradable machines and equipment is not possible, a strong increase of the imported quantity from the rest of the world and the decline of the exported quantity by Brazilian producers are verified. Moreover, imported goods prices slightly rose (16.7% from 2005 to September 2012), while the Brazilian exported product's prices grew sharply (72.2% in the same period).

The prices dynamic of these products, is also something to be investigated. Watanabe (2012a) points out the recent average price elevation of internationally traded Chinese capital goods – one of the greatest threats of the 2000s to producers (not only Brazilian, but from all nationalities). For a deeper discussion, it is necessary to investigate the qualitative evolution of products manufactured in that country and their prices path. The average price of products traded by the Chinese may be affected by an eventual technological intensification of products and by local production costs; howsoever, the Brazilian product's price disadvantage is still large, clearly affecting its competitiveness.

Chart 6 – Brazilian Foreign Trade of Machines and Equipment*: *quantum* and import and export prices evolution (2005 to September 2012 – 2005:100)



* CNAE 28.
** January to September 2012.
Source: NEIT/IE/UNICAMP, based on FUNCEX data.

This fact is not being observed without reaction by the Brazilian government, that besides stimulating demand in general, has been adopting several measures to enhance local producers' capacity to achieve a less vulnerable position in the domestic market, and even to increase exports.

Recent macroeconomic prices realignment is also worth noting. An historical reduction of the Brazilian reference interest rates (SELIC) has favored the economy as a whole. The Brazilian machines and equipment sector, such as the others, has also benefited from the Real devaluation. Additionally, given its importance, it was also contemplated by the extension and changes performed in the *Programa de Sustentação de Investimentos* (PSI), which started enabling claimants of those products to finance their acquisition in particularly favorable conditions. Machines and equipment financing by *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES) – which requires 60% of product nationalization – is now being performed with negative real interest rates since August 2012 – with a 2.5% nominal level per year, effective, *a priori*, until December 2013.

The sector was also contemplated with other measures: (i) payroll exemption, which will enable companies to replace payment of 20% of the payroll for a pension contribution, of 1% on gross revenue; (ii) reduced deadline to "accelerated depreciation" of some machines and equipment (until December 2012); (iii) *ex-tarifário* (temporary reduction of import duties) grant reformulation for machines and equipment.

Payroll exemption has two major impacts on the sector: it eases the companies accounts in low activity periods and promotes some equality with imported products, since the contribution will also be paid by them, while the payroll tax would penalize only the local producer. The reduced deadline for depreciation enables machines and equipment claimants to have a larger part of investments deductible from due income tax, providing resources to companies which may potentially invest again.

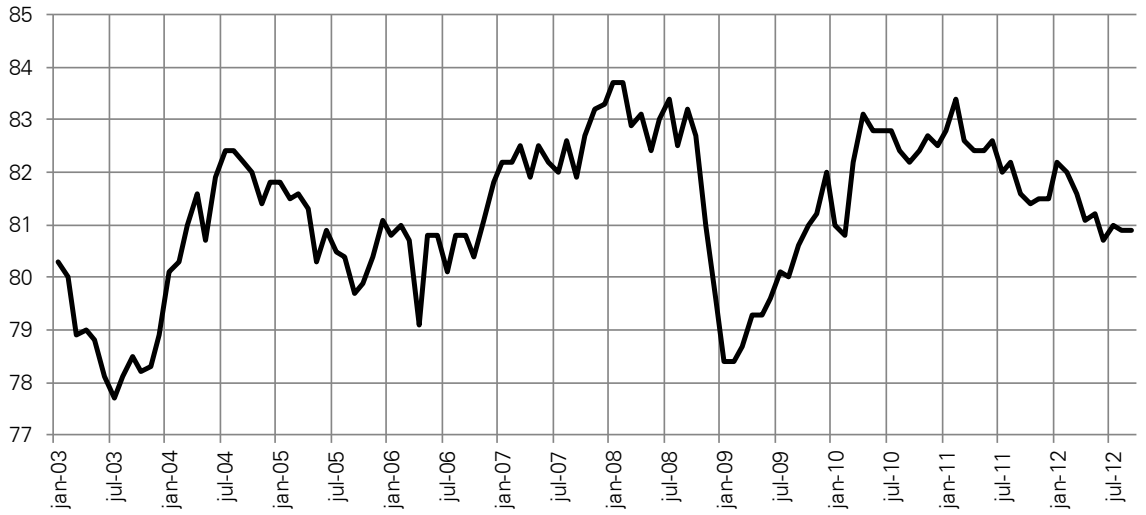
Ex-tarifário is a benefit granted to the machines and equipment importer – products without a national equivalent incur on reduced import tax aliquots. Local producers of Brazilian machines and equipment would complain about importers' practices to receive this benefit even when the national industry was able to produce the asset concerned. This year, BNDES was integrated to the tax incentive grant process, helping assess the existence of a national similar; the "machines composition" or integrated systems are no longer analyzed as a single equipment, but according to its parts. Thus, when there is a part of the set capable of local production, it will not obtain tax reduction. The sector will also benefit, from the demand and the supply sides, from the electricity tariff reduction, expected for 2013.

Within the panorama of special attention that the Brazilian machinery and equipment has been receiving, business entities have conducted studies to look at the cost of investment in Brazil. According to the *Associação Brasileira da Indústria de Máquinas e Equipamentos* (ABIMAQ), the country's exchange, interest, and tax conditions, effective in March 2010, led to an investment cost in Brazil (with machines and equipment produced in the country) 23.1% higher than the one observed in developed countries. In July 2012, this differential would have been reduced to 4.3%[7] (LAMUCCI, 2012), even before the new round of tax reduction charged under PSI or the communication of intention to reduce energy costs. In other words, the investment cost with domestically produced machines and equipment tends to become even more favorable in the near future.

Thus, an important set of incentives aiming at establishing a new investment cycle in the Brazilian industry is verified, which, however, has not taken place yet. On the one side, the level of use of the Brazilian industry's installed capacity reached its peak in early 2011; since then, it has receded, not indicating an (generalized) investment cycle (Chart 7). Understanding consultations on new financing by BNDES as a proxy for investment intentions, we can observe, on the other hand, a timid recovery of industrial investments in the near future (Chart 8).

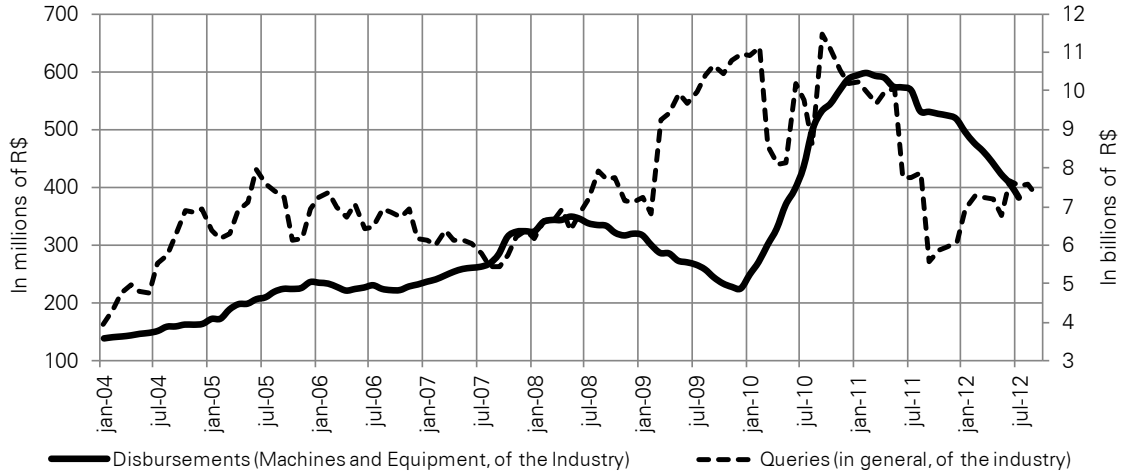
7. The entity's main complain is related to the ICMS compensation time for the companies' investment (48 months).

Chart 7 – Use of the Brazilian Industry Installed Capacity (2003 to September 2012) (diseasonalized data in %)



Source: NEIT/IE/UNICAMP, based on *Confederação Nacional da Indústria* (CNI) data.

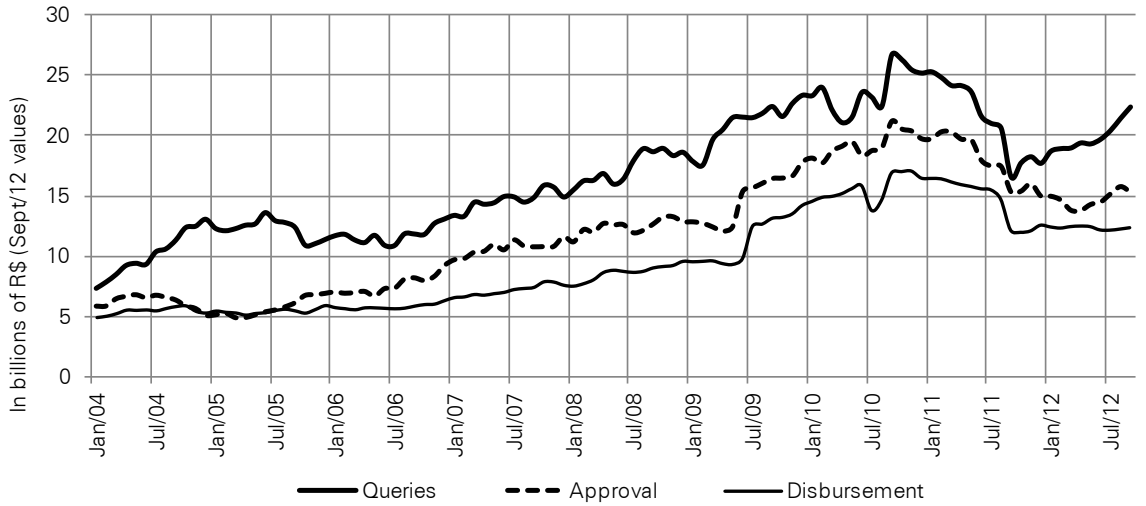
Chart 8 – BNDES Queries and Disbursement to Purchase Machines and Equipment (Jan 2004 to Jul 2012) (12-month moving average)



Source: NEIT/IE/UNICAMP, based on *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES) data.

BNDES queries, approval, and disbursement data of the entire economy and in all its financing lines show that the entrepreneur's confidence situation frayed over time (Chart 9). The decrease in the number of queries on new financings was less persistent and important in 2009 than the one that has been showing from the last quarter of 2010. The recovery at the margin, on the other hand, is a relief; however, it is not considered a quite safe indication that the low investment level period is ending. The lightest evolution movement of BNDES disbursements regarding queries, in its turn, shows the important role of this institution in maintaining the country's investment levels.

Chart 9 – BNDES Queries, Approval and Disbursements (Jan 2004 to Jul 2012) (12-month moving average) (in billions of R$ in 2012 – IGP-DI)



Source: NEIT/IE/UNICAMP, based on *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES) data.

Finally, it is important to highlight that the set of changes performed over the last few periods, both internationally and domestically, has resulted in a somewhat stormy environment, which hampers private investments' decision making. However, it is essential to note that the new currency exchange and interest rates levels should result in important effects on a great set of investment projects. It will take some time to readapt projects to this new changing scenario, but, combined with already announced incentives, they should result in a process of gradual recovery of investments.

The return of gross capital formation growth is essential to keep the families' consumption growth robust in the long term, as well as to increase the industrial sector's productivity, either directly, by modernizing and incorporating technical progress, or indirectly, by modernizing and increasing infrastructure quality.

Interest rate reduction, exchange rate in a more devaluated level, payroll exemption, the opening up for private investment in infrastructure area, and, finally, electricity cost reduction should become essential to mitigate risks imported from the international scenario, and convince the business sector to take advantage of the various opportunities available in the domestic market. Additionally, it will also be extremely important to speed the public investment recovery in strategic areas to provide greater strength to the investment growth.

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