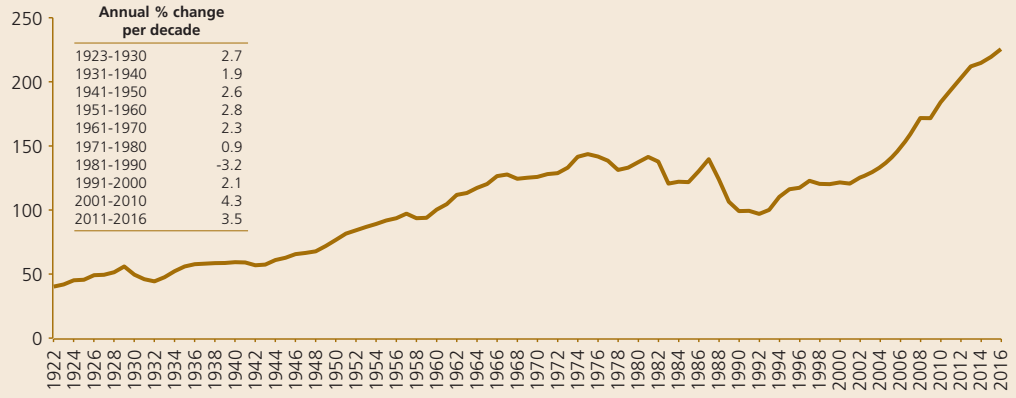
PRODUCTION AND EMPLOYMENT

The gross domestic product (GDP) showed a higher growth rate in 2016 than in the previous year (3.9 percent versus 3.3 percent), driven by the growth of primary sectors, particularly metal mining, which boosted the growth of exports (9.5 percent). Domestic demand registered a slight expansion (0.9 percent), supported by the performance of private consumption which offset the impact of falling private investment and public expenditure.

With these results, per capita GDP grew 2.8 percent, less than the average rate in the last ten years (3.5 percent).

Graph 1
REAL GROSS DOMESTIC PRODUCT PER CAPITA
(Index 1960=100)



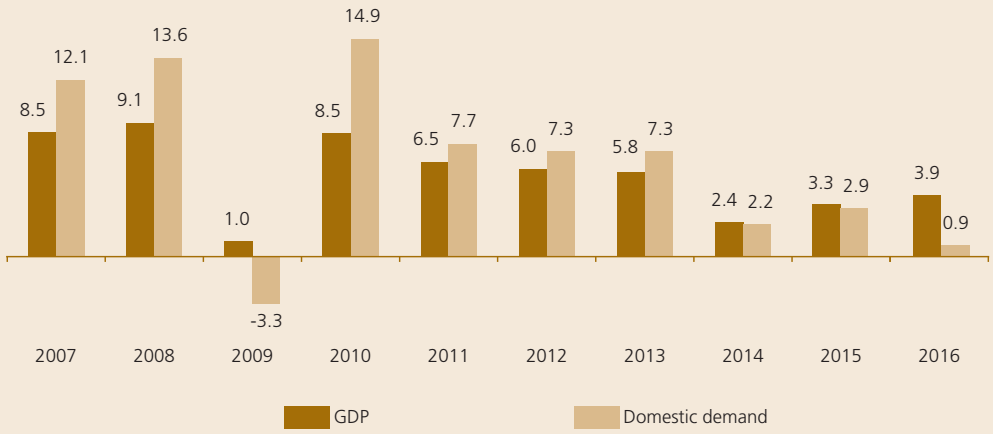
Source: INEI and BCRP.

1. Domestic Demand

The annual growth of domestic demand dropped from 2.9 in 2015 to 0.9 percent in 2016 since public spending and private investment recorded negative growth rates (0.2 and 6.1 percent,

respectively), offset in part by private consumption which maintained the same growth rates as in 2015.

Graph 2
GDP AND DOMESTIC DEMAND
(Real % change)



Source: INEI and BCRP.

Table 1
GROSS DOMESTIC PRODUCT BY TYPE OF EXPENDITURE
(Real % change)

	2014	2015	2016	2007-2016
Domestic demand	**2.2**	**2.9**	**0.9**	**6.4**
a. Private consumption	3.9	3.4	3.4	6.1
b. Public consumption	6.0	9.8	-0.5	6.3
c. Gross fixed investment	-2.1	-5.4	-4.5	8.0
- Private	-2.3	-4.4	-5.7	7.7
- Public	-1.1	-9.5	0.6	9.2
Change on inventories (% nominal GDP)	-0.9	0.1	0.2	0.1
Exports	-0.8	4.1	9.5	3.8
Minus: Imports	-1.4	2.4	-2.2	7.2
GDP	**2.4**	**3.3**	**3.9**	**5.5**
Memo: Total public expenditure	3.6	3.6	-0.2	7.0

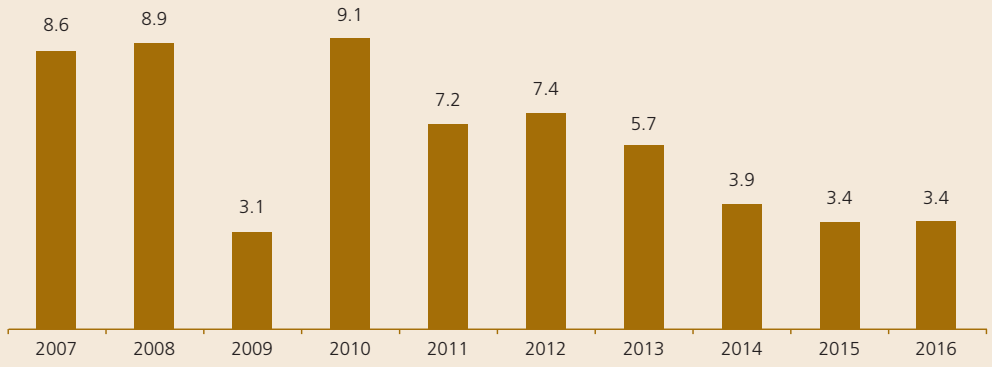
Source: INEI and BCRP.

1.1 Private Consumption

Consumption indicators showed a mixed behavior during the year. On the one hand, real incomes, wages, and the consumer confidence index showed a positive evolution whereas, on the other hand,

indicators such as the rates of employment and unemployment, imports of non-durable consumer goods, consumer credit, and retail sales deteriorated. The consumer confidence index rose during the year and remained on the optimistic side. In this context, private consumption expenditure grew 3.4 percent.

Graph 3
PRIVATE CONSUMPTION
(Real % change)



Source: INEI and BCRP.

Table 2
INDICATORS OF PRIVATE CONSUMPTION
(% change respect to the similar month of previous year)

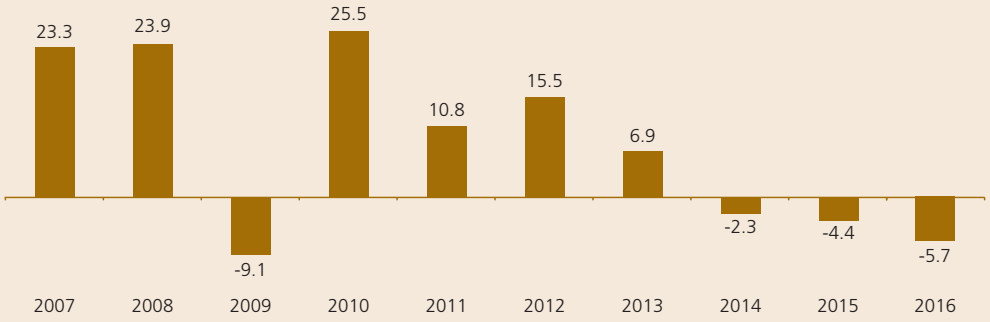
	2015	2016	Evolution
Real main income	1.3	1.6	↑
Real wage bill	2.4	3.5	↑
Consumer Confidence Index Apoyo	60.5	63.7	↑
Consumer Confidence Index GfK	46.0	54.0	↑
Metropolitan Lima unemployment rate	6.5	6.7	↑
National urban employment	0.9	0.4	↓
Consumer loans	14.8	8.5	↓
Retail sales	3.5	2.1	↓
Imports of consumer goods	-0.2	-3.6	↓
Non-durable	4.4	-4.1	↓
Durable	-5.2	-3.0	↑

Source: BCRP, INEI, GfK, and Apoyo.

1.2 Private Investment

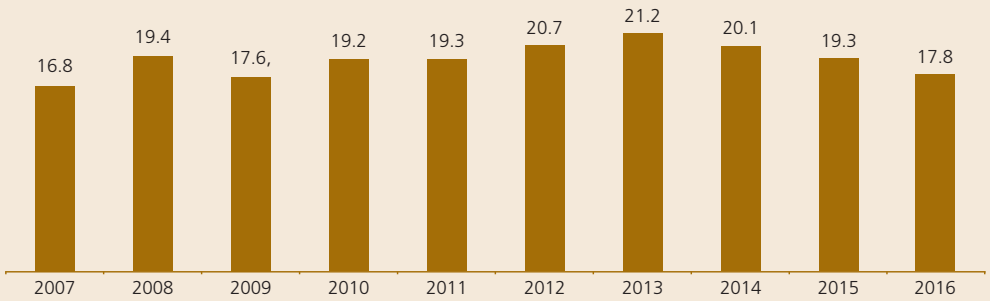
Private investment dropped 5.7 percent –the largest fall observed since the 2009 crisis– as a result of the contraction of mining investment (-43.5 percent) after the completion of major mining projects that started their production phases and also as a result of problems associated with the implementation of infrastructure projects.

Graph 4
GROSS PRIVATE FIXED INVESTMENT
(Real % change)



Source: INEI and BCRP.

Graph 5
GROSS PRIVATE FIXED INVESTMENT
(% GDP)



Source: INEI and BCRP.

Table 3
MINING INVESTMENT BY COMPANIES
(Million US$)

	2014	2015	2016
Southern Peru Copper Corp.	329	303	582
Compañía Minera Anyapaccay	570	569	542
Minera Las Bambas	1,636	1,504	299
Compañía Minera Antamina	328	281	248
Consorcio Minero Horizonte	208	240	209
Compañía de Minas Buenaventura	196	144	176
Sociedad Minera Cerro Verde	1,744	1,617	155
Minera Chinalco	449	397	146
La Arena	173	149	146
Anglo American Quellaveco	215	201	138
Hudbay Peru	736	305	136
Minera Yanacocha	104	142	81
Compañía Minera Milpo	61	18	17
Rest	2,124	1,655	1,376
Total	**8,873**	**7,525**	**4,251**

Source: MINEM.

In 2016, investment in the mining sector amounted to US$ 4.3 billion. Southern Peru invested US$ 582 million, focusing its investment in the completion of the expansion of its copper mine in Tacna and in additional projects. As of December 2016, the company had invested US$ 550 million in the expansion of Toquepala. This project, which is estimated to culminate in the second quarter of 2018, shows a level of implementation of 53 percent. Additional projects being developed by the company include the implementation of a high pressure roller grinding system in Toquepala, optimizing the management of heavy mineral in Cuajone, and implementing tailings thickeners in the concentrator in Cuajone, all of which are expected to be completed in 2017. Moreover, Antapaccay invested US$ 542 million mainly in the processes of exploitation and tailings.

In the hydrocarbons sector, Repsol invested US$ 176 million which were mainly allocated to the project "Modernization of La Pampilla Refinery" (RLP-21).

In the electricity sector, the implementation of projects such as the of Santo Domingo of Olleros (combined turbine to vapor cycle) continued, while the implementation of the Power Plant 200 Kv. Moyobamba-Iquitos transmission line remained interrupted by conflicts with some communities. At end 2016, these projects showed a level of implementation of 54 and 17 percent, respectively. It should be pointed out that the projects Cerro del Aguila, Nodo Energético del Sur, and the Wind Power Plant Tres Hermanas, which together represented a total investment of US$ 1.8 billion, started operations during 2016. Moreover, Luz del Sur invested US$ 461 million to enlarge the capacity and improve the electric power grid, while Edelnor invested US$ 217 million in enhancing the electricity distribution grids (expansion and reinforcement of grids to meet the needs of residential, commercial, and industrial clients), US$ 121 million in sub-transmission of electricity (expansion and security of power substations and transmission lines), US$ 25 million in electrification infrastructure in various settlements, and US$ 6 million in the improvement of street lighting.

Investment in the industrial sector during 2016 included Gloria's investment of US$ 110 million to enhance its production plant of dairy products located in Huachipa.

1.3 Public Expenditure

After growing 3.6 percent in 2015, public spending fell 0.2 percent in 2016 reflecting a decrease of 0.5 percent in consumption spending as a result of the fiscal consolidation policy implemented in the last quarter of the year. The latter was in part offset by the slight growth in investment (0.6 percent) after two years of consecutive decline.

By government levels, the investment of the national government and regional governments dropped 13.1 and 2.7 percent, respectively, while the investment of public enterprises, on the other hand, continued increasing mainly due to investment in the Talara Refinery project. Public investment as a percentage of GDP represented 4.8 percent in 2016, the lowest level recorded since 2008.

1.4 Exports and Imports

Exports of goods and services grew 9.5 percent in 2016 (4.1 percent in 2015), driven by the greater dynamism of traditional exports associated mostly with increased copper production in mines such as Las Bambas and Cerro Verde. Exports of gold, coffee, and oil derivatives also contributed to this growth of exports. It is worth mentioning that exports of coffee recovered from the second half of the year after recording four years of consecutive drops as a result of pests and climatic factors.

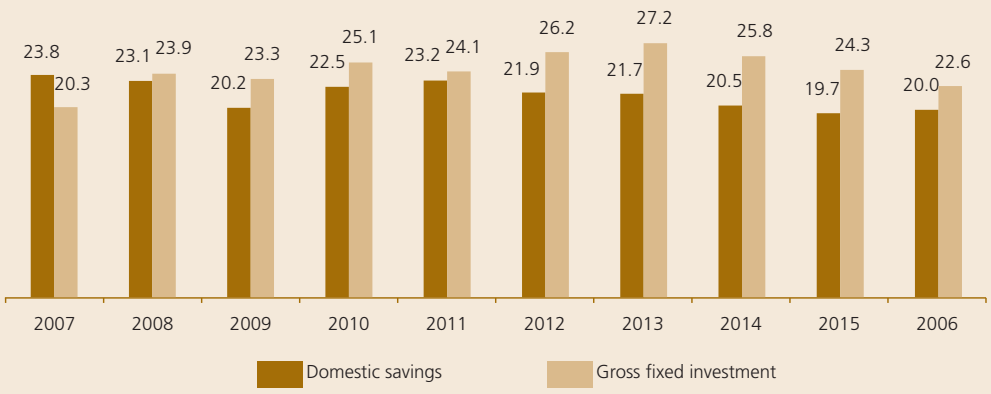
On the other hand, after growing 2.4 percent in 2015, imports of goods and services dropped 2.2 percent in 2016 in a context characterized by a slowdown of domestic demand associated with the fall of private investment and a lower demand for consumer goods.

1.5 Saving and Investment

In 2016, gross fixed investment fell by 1.7 percentage points of nominal GDP (from 24.3 to 22.6 percent of GDP) due to the contraction of private investment by 1.5 percentage points of GDP (from 19.3 to 17.8 percent of GDP) and to the drop of public investment (from 5.0 to 4.8 percentage points of GDP).

On the other hand, domestic spending increased from 19.7 to 20.0 percent of GDP due to the increase registered in private saving. Moreover, the decrease in domestic investment and the increase in domestic savings reflected in lower requirements of foreign savings, which declined from 4.8 percent of GDP in 2015 to 2.7 percent of GDP in 2016.

Graph 6
SAVINGS AND INVESTMENT
(% GDP)



Source: BCRP.

Table 4
SAVINGS AND INVESTMENT
(% GDP)

	2014	2015	2016
I. Domestic invesment (=II+III)	**24.9**	**24.4**	**22.8**
Gross fixed investment	25.8	24.3	22.6
Public investment	5.6	5.0	4.8
Private fixed investment	20.1	19.3	17.8
Change on inventories	-0.9	0.1	0.1
II. Domestic savings	**20.5**	**19.7**	**20.0**
Public sector	5.9	3.7	2.7
Private sector	14.6	15.9	17.4
III. External savings	**4.4**	**4.8**	**2.7**

Source: BCRP.

2. Economic Sectors

GDP growth in 2016 (3.9 percent) was driven by the primary sectors (9.8 percent), especially by metal mining which grew 21.2 percent in the year, the main source of growth being the increased production of copper in mines such as Las Bambas and Cerro Verde.

Non-primary sectors continued to be affected by weak domestic demand and grew 2.3 percent. Sectors such as construction and non-primary manufacturing showed negative growth rates, while the sectors of trade and services registered a slowdown.

Table 5
GROSS DOMESTIC PRODUCT [1/]
(Real % change)

	2014	2015	2016	2007-2016
Agriculture and livestock[2/]	**1.9**	**3.2**	**2.0**	**3.5**
Agriculture	0.7	2.0	0.7	1.9
Livestock	5.8	5.2	3.9	3.7
Fishing	**-27.9**	**15.9**	**-10.1**	**-1.6**
Mining and hydrocarbons [3/]	**-0.9**	**9.5**	**16.3**	**4.7**
Metallic mining	-2.2	15.7	21.2	4.3
Hydrocarbons	4.0	-11.5	-5.1	3.8
Manufacturing [4/]	**-3.6**	**-1.5**	**-1.5**	**3.0**
Manufacturing based on raw materials	-9.3	1.8	-0.5	-0.2
Non-primary manufacturing	-1.5	-2.6	-2.0	4.1
Electricity and water	**4.9**	**5.9**	**7.3**	**6.3**
Construction	**1.9**	**-5.8**	**-3.1**	**7.6**
Commerce	**4.4**	**3.9**	**1.8**	**6.5**
Services	**5.0**	**4.2**	**3.9**	**6.3**
GDP	**2.4**	**3.3**	**3.9**	**5.5**
Memo:				
Primary	-2.2	6.8	9.8	3.5
Non-primary	3.6	2.4	2.3	6.1

1/ Preliminary data.
2/ Includes the forestry sector.
3/ Includes non-metallic mining and secondary production.
4/ Includes secondary production.

2.1 Agriculture sector

Output in the agricultural sector grew less in 2016 than in the previous year (2.0 percent in 2016 vs. 3.2 percent) mainly because the contribution of agricultural products oriented to the domestic market was negative by 0.7 percentage points. Farming production in 2016 was carried out in a context of a water deficit that affected the production of Andean crops, such as potatoes, amylaceous maize, and wheat. On the other hand, export-oriented crops and agro-industrial products showed greater growth than in previous five years and contributed with 1.1 percentage points to the growth of the sector. This was reflected in higher exported volumes of coffee (which recovered from the rust plague), grapes, cocoa, avocadoes, and paprika, as well as in an increased production of asparagus and olives.

Table 6
AGRICULTURE AND LIVESTOCK PRODUCTION [1/]
(Real % change)

	2014	2015	2016	Average [3/] 2007-2016
1. Agricultural production	**0.7**	**2.0**	**0.7**	**2.9**
a. For the domestic market	-0.8	3.2	-1.8	2.8
Potato	2.8	0.2	-4.3	3.3
Rice	-4.9	8.8	0.5	3.0
Banana	0.7	-3.3	0.9	1.6
Cassava	0.9	2.9	-4.0	0.4
Amilaceous maize	-1.9	1.9	-9.9	1.1
Garlic	0.1	10.1	-12.9	0.6
Onion	1.4	0.3	-7.2	2.0
Lemon	15.5	1.6	0.9	0.7
Mandarine	8.2	5.4	12.8	8.0
Orange	2.7	1.3	7.6	3.3
Alfalfa	-5.3	3.3	-2.7	1.6
Tomato	5.5	-11.2	-1.4	3.2
Others	-1.2	3.6	-1.8	3.4
b. For export and industry	3.6	-0.2	5.3	3.2
Coffee	-13.2	13.5	10.2	0.2
Sugar cane	3.6	-10.3	-3.7	3.1
Yellow hard maize	-10.1	17.2	-14.3	1.9
Asparagus	-1.7	-1.8	2.0	3.8
Grapes	15.6	17.9	15.4	13.7
Olive	163.0	-74.7	46.1	0.7
Mango	-18.0	-8.0	8.0	1.5
Cocoa	14.2	13.4	16.6	13.1
Oil palm	9.2	10.8	7.6	12.0
Quinoa	124.0	-7.9	-25.0	10.7
Avocado	20.9	7.8	20.9	15.8
2. Livestock production	**5.8**	**5.2**	**3.9**	**5.0**
Poultry	9.5	8.1	6.1	7.8
Bovine	3.0	-0.1	-3.0	1.6
Eggs	2.5	7.7	3.8	5.0
Pork	5.3	5.6	4.5	3.2
Milk	1.7	3.4	2.7	2.8
Others	-0.4	-4.3	2.6	1.4
3. Total [2/]	**1.9**	**3.2**	**2.0**	**3.5**

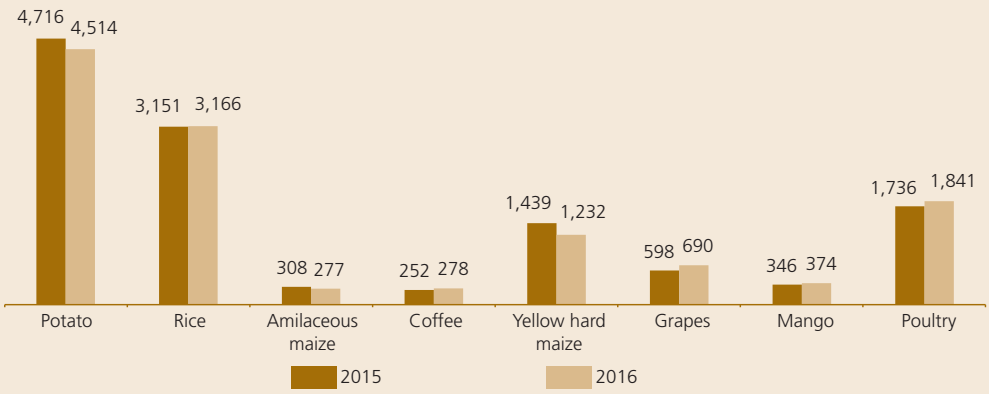
1/ Preliminary.
2/ Includes the forestry sector.
3/ For quinoa and avocados considers the average 2008-2016.
Source: MINAGRI.

Showing a slowdown compared to 2015 due to the negative impact of the water shortage that affected production in Piura, Lambayeque, and La Libertad, the production of rice grew 0.5 percent. The water deficit also affected the production of potatoes, especially in Puno, Huánuco, La Libertad, and Junín, and thus reached 4,514 thousand tons –down 4.3 percent compared to the previous year.

On the contrary, the production of export-oriented crops such as coffee, grapes, and mangos increased, favored by higher sales to markets such as the United States and the European Union.

The production of hard yellow maize decreased due to the reduction of sown areas and lower yields.

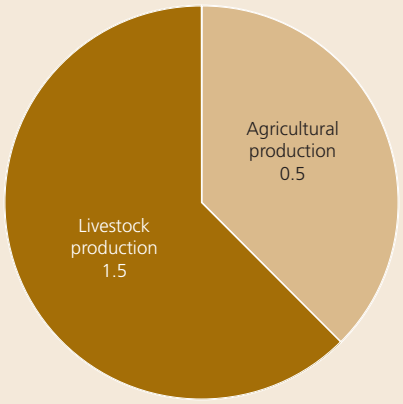
Graph 7
AGRICULTURE AND LIVESTOCK PRODUCTION BY MAIN PRODUCTS
(Thousand tons)



Source: MINAGRI.

Activity in the livestock sub-sector grew 3.9 percent after growing 5.2 percent in the previous year. This lower output is explained mainly by a slower pace of growth in the production of poultry –down from 8.1 percent in 2015 to 6.1 percent in 2016–, particularly in the production of baby chickens in poultry farms in Lima and La Libertad.

Graph 8
AGRICULTURE AND LIVESTOCK SECTOR
Contribution to the growth 2016



2.2 Fishing Sector

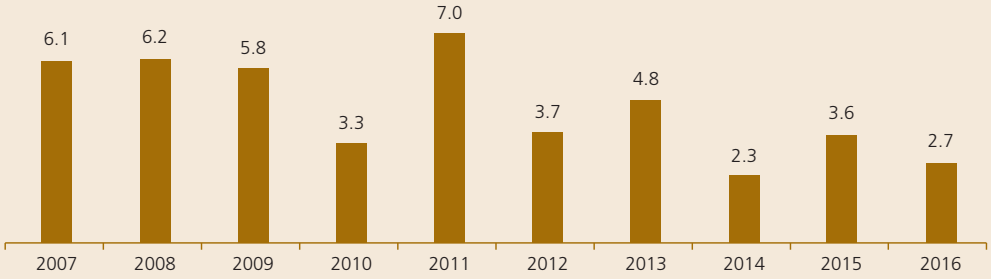
In 2016, fish production dropped 10.1 percent as a result of lower landings of anchovy. The volume of anchovy catch associated with industrial consumption decreased from 3.6 to 2.7 million metric tons between 2015 and 2016 due to sea salinity anomalies that remained as lag effects of El Niño 2015-2016. The latter not only affected the availability of anchovy and its spawning cycle, but also led to the premature closing of the first fishing season in the North-Central fishing area.

Table 7
FISHING SEASONS - QUOTATION
(Thousand tons)

	2015		2016	
	South	North-Central	South	North-Central
First season	375	2,580	382	1,800
Second season	450	1,110	382	2,000
Total year	**4,515**		**4,564**	

Source: Ministry of Production.

Graph 9
ANCHOVY EXTRACTION FOR INDUSTRIAL CONSUMPTION
(Million tons)



Source: Ministry of Production.

Fisheries for direct human consumption, on the other hand, fell 0.5 percent due to the lower catch of parrot, squid, scallops to produce frozen products and bonito, mackerel for canning and fresh consumption. This was in part offset by an increased catch of mackerel for direct human consumption due to a greater availability of this species, which benefited from anomalous sea conditions.

Table 8
FISH CATCH BY MAIN SPECIES
(% change)

Species	2014	2015	2016	Average 2007-2016
Anchovy	-52.6	60.3	-24.4	-7.4
Jack mackerel	-14.9	-62.2	-28.9	-21.3
Prawns	13.9	23.0	9.3	10.0
Giant Squid	13.2	-8.2	-42.4	-3.9
Mackerel	11.2	-48.2	276.6	-0.1
Tuna fish	-33.7	134.1	-1.8	-0.4
Scallops	-41.5	-71.6	-32.0	-3.7

Source: Ministry of Production.

2.3 Mining and Hydrocarbons Sector

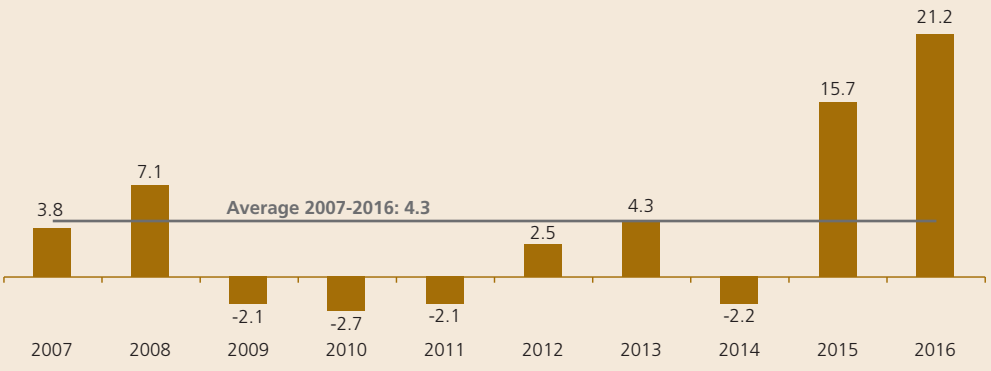
Production in the sector of mining and hydrocarbons registered a growth rate of 16.3 percent in 2016, the highest rate since 1980. This result is explained mainly by copper production, which grew 40.1 percent in the year as a result of the start of operations at Las Bambas and the expansion of Cerro Verde.

Table 9
PRODUCTION IN THE MINING AND HYDROCARBONS SECTOR [1/]
(Real % change)

	2014	2015	2016	Average 2007-2016
METALLIC MINING	**-2.2**	**15.7**	**21.2**	**4.3**
Copper	0.6	25.8	40.1	10.1
Iron	7.7	1.8	4.7	4.8
Gold	-10.3	4.5	4.2	-2.8
Silver	2.5	8.9	6.7	2.4
Lead	4.1	13.8	-0.4	0.1
Zinc	-2.6	8.0	-6.1	1.0
Molybdenum	-6.2	18.4	27.8	4.1
Tin	-2.4	-15.6	-3.7	-6.9
HYDROCARBONS	**4.0**	**-11.5**	**-5.1**	**3.8**
Oil	10.2	-16.3	-30.1	-6.3
Liquid of natural gas	-1.1	-11.6	3.9	9.6
Natural gas	6.0	-3.3	12.0	22.8
TOTAL [2/]	**-0.9**	**9.5**	**16.3**	**4.7**

1/ Preliminary.
2/ Includes non-metallic mining and secondary production.
Source: MINEM.

Graph 10
PRODUCTION OF THE METALLIC MINING SUB SECTOR
(Real % change)



Source: INEI and MINEM.

Table 10
VOLUME OF MINING PRODUCTION

	2007	2015	2016
Production of gold (Thousand troy ounces)	**5,473**	**4,720**	**4,919**
Largest mining	*3,535*	*1,750*	*1,405*
Minera Yanacocha	1,564	918	668
Minera Barrick Misquichilca	1,606	614	547
Compañía de Minas Buenaventura	365	218	190
Rest [1/]	*1,938*	*2,211*	*2,618*
New projects	*759*	*896*	
La Arena - Rio Alto		229	204
Tantahuatay - Buenaventura		145	149
La Zanja - Buenaventura		133	140
Pucamarca - Minsur		118	106
Anama -Aruntani		74	87
Inmaculada - Hochschild		59	163
Production of copper (Thousand fine metric tons)	**1,018**	**1,628**	**2,280**
Largest mining	*930*	*1,121*	*1,426*
Compañía Minera Antamina	341	412	444
Southern Peru Copper Corporation	323	298	288
Sociedad Minera Cerro Verde	182	208	473
Antapaccay	84	203	221
Rest	*88*	*212*	*223*
New projects	*295*	*631*	
Toromocho - Chinalco		182	168
Constancia - Hudbay		106	133
Las Bambas - Mmg		7	329
Production of zinc (Thousand fine metric tons)	**1,444**	**1,421**	**1,334**
Largest mining	*1,050*	*985*	*872*
Compañía Minera Antamina	322	298	261
Compañía Minera Milpo	90	247	245
Volcan Compañía Minera	276	180	169
Empresa Minera Los Quenuales	201	103	29
Sociedad Minera El Brocal	91	56	59
Empresa Administradora Chungar	69	100	109
Rest	*394*	*437*	*464*
Production of Silver (Thousand fine troy ounces)	**113**	**132**	**141**
Largest mining	*53*	*60*	*63*
Compañía Minera Antamina	11	19	21
Compañía de Minas Buenaventura	12	18	22
Volcan Compañía Minera	16	13	11
Compañía Minera Ares	13	10	9
Rest	*60*	*72*	*78*
Production of Lead (Thousand fine metric tons)	**329**	**316**	**314**
Largest mining	*194*	*129*	*112*
Compañía Minera Milpo	18	36	37
Volcan Compañía Minera	86	27	26
Empresa Administradora Chungar	29	28	24
Sociedad Minera El Brocal	39	23	16
Empresa Minera Los Quenuales	23	15	9
Rest	*135*	*187*	*201*

1/ Includes Madre de Dios.

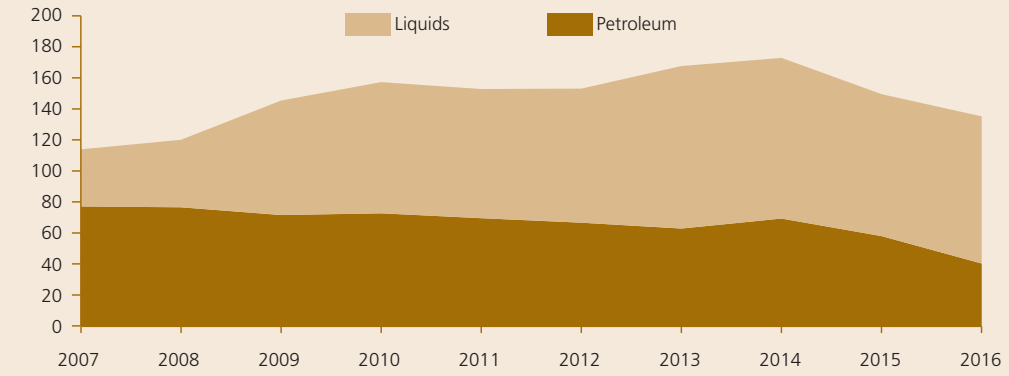
Gold production grew 4.2 percent in 2016, rising from 4.7 to 4.9 thousand troy ounces. The increase is explained by a base effect resulting from incorporating the artisanal gold production of Puno, Arequipa, and Piura, as well as the more informal production of Madre de Dios and mine Inmaculada since February.

The **production of copper** (2.3 million metric tons fine, TMF) grew 40.1 percent in 2016 due to increased production in Las Bambas and Cerro Verde. It is worth mentioning that Las Bambas started operations at end 2015 and reached the level of commercial production in 2016, while Cerro Verde raised its production of copper by 127 percent between 2015 and 2016 after the completion of its expansion project.

The production of **zinc** fell 6.1 percent due to the lower production of Los Quenuales, associated with the closure of its mining unit Iscaycruz, and due to Antamina's lower production due the lower grades of ore obtained in this mine. **Lead** production showed a slight fall of 0.4 percent (314 tons in 2016), while **silver** production grew 6.7 percent (141 million ounces in 2016) due to the greater output of Buenaventura.

Moreover, the **hydrocarbon** sub-sector continued to show negative growth rates in the year (-5.1 percent), although this rate was lower than in the previous year (-11.5 percent). The contraction of this subsector is explained mostly by the lower production of the oil industry (-30.1 percent), the main factors contributing to this contraction including, first of all, the rupture of the Nor-Peruvian Pipeline, which caused the closing of operations in two oil lots: Lot 192, concession operated by Pacific Stratus and Lot 67, operated by Perenco. In addition to this, Pluspetrol was forced to halt the production of Lot 8 between September and December due to the protests of the communities that live in the area.

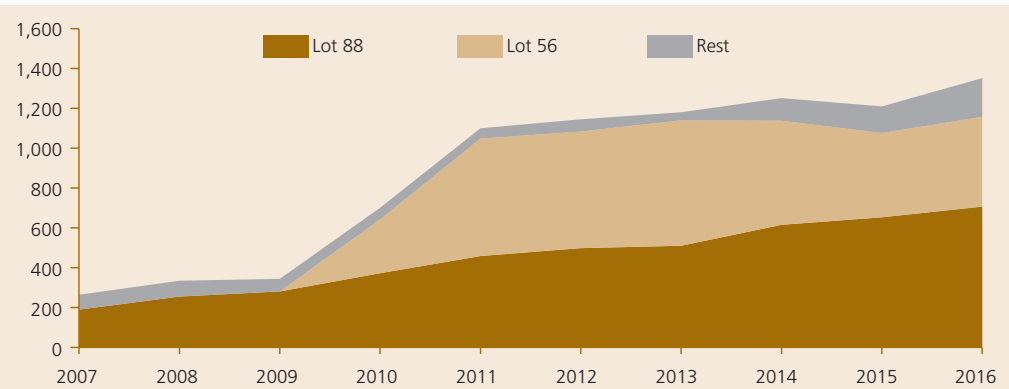
Graph 11
PRODUCTION OF LIQUID HYDROCARBONS
(Thousand barrels per day)



Source: Perupetro.

This lower oil production was offset in part by an increased production of natural gas in lots 88 and 56 of Camisea, managed by Pluspetrol, and Lot 57, managed by Repsol. This higher production is explained by the start-up of the compressor used for gas transportation, as well as by a base effect resulting from the fact that the pipeline interrupted operations in the third quarter of 2015 due to maintenance.

Graph 12
PRODUCTION OF NATURAL GAS
(Million cubic feet per day)

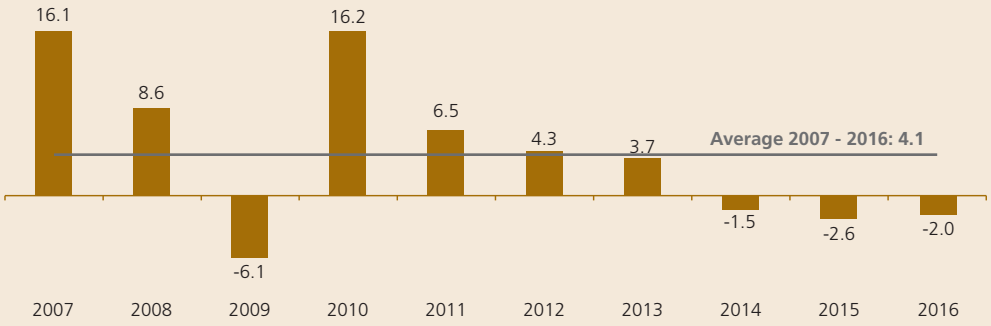


Source: Perupetro.

2.4 Manufacturing Sector

Manufacturing activity fell 1.5 percent in 2016 due mainly to the contraction of growth in non-primary manufacturing resulting from lower output in the branches oriented to investment, exports, and inputs. The latter were affected by the lower dynamism of domestic demand (especially due to the drop of investment) and by lower growth in our trading partners (especially our trading partners in the Latin American region). Moreover, in contrast with the previous year, primary manufacturing also recorded a negative growth rate in 2016 (-0.5 percent) due mainly to a lower output in the processing of fishmeal and fish oil as a result of lower fishing activity.

Graph 13
NON-PRIMARY MANUFACTURING
(Real % change)



Source: INEI and PRODUCE.

Table 11
MANUFACTURING BASED ON RAW MATERIALS
(Real % change)

	2014	2015	2016	Average 2007-2016
Manufacturing based on raw materials	**-9.3**	**1.8**	**-0.5**	**-0.2**
Rice	-4.9	8.8	0.5	3.0
Sugar	2.5	-9.6	5.1	3.6
Meat products	7.2	5.8	4.4	5.2
Fishmeal and fish oil	-52.0	53.0	-19.3	-7.2
Canned and frozen fish products	1.9	-17.4	-6.1	0.4
Refining of non-ferrous metal	-5.1	-5.5	1.3	-2.5
Refining of crude	3.3	0.4	5.3	4.6

Source: Ministry of Production and INEI.

Lower activity in non-primary manufacturing branches oriented to investment (-5.1 percent) was due to the lower production of transportation material (-16.2 percent), metal products (-10.2 percent), and machinery and equipment (-9.2 percent), which was associated to a lower demand for parts for motor vehicles, for metal products for structural uses, and for centrifugal pumps, respectively.

Similarly, the output in export-oriented industries continued showing lower growth rates (-3.3 percent) as a result of the lower demand for textile products of our trading partners. The input manufacturing branches that fell the most were the branch of rubber (-10.5 percent) due to lower exports of rubber products, and the branch of basic chemicals (-6.4 percent), due to a lower production of caustic soda, zinc oxide, and zinc sulfate.

On the other hand, the consumer-oriented industries grew 0.9 percent, growth in the branches of pharmaceutical products (10.1 percent) and toiletries and cleaning products (9.8 percent) standing out. These higher rates are explained by the restart of operations of a pharmaceutical company in the case of the former and by increased demand in the case of the latter.

Table 12
GROWTH OF NON-PRIMARY MANUFACTURING BY TYPE OF GOODS
(Real % change)

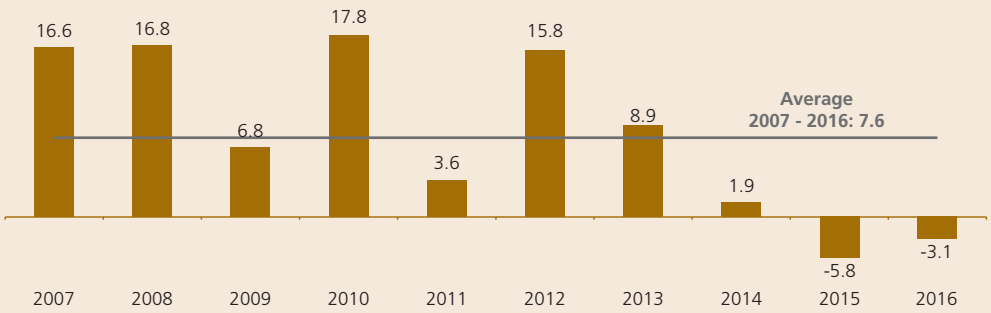
	2014	2015	2016	Average 2007-2016
Mass consumption goods	**-2.0**	**0.3**	**0.9**	**4.7**
Dairy products	1.4	3.1	-4.7	4.3
Bakery	-0.4	1.2	-1.9	1.3
Oils and fats	4.6	4.5	2.3	3.9
Miscellaneous food products	-5.5	-8.0	-6.2	4.6
Beer and malt	0.5	-0.4	-0.8	3.6
Soft drinks	1.7	9.1	7.2	6.9
Clothing	-9.0	-8.7	-4.2	-0.2
Furnitures	-6.3	7.8	5.7	11.5
Other paper and cardboard items	11.0	12.5	-7.0	7.1
Toiletries and cleaning products	2.0	-1.9	9.8	6.6
Pharmaceutical products	-1.7	-20.4	10.1	-0.4
Miscellaneous items	-7.2	-6.0	-9.9	0.3
Inputs	**-2.0**	**-4.4**	**-0.7**	**3.0**
Milling industry	2.0	0.6	-4.4	0.8
Othe textil items	-7.6	-7.0	-1.0	-1.6
Woods	-9.6	-11.0	-4.4	-4.8
Paper and cardboard	-20.1	-16.6	-5.5	2.3
Paper and cardboard containers	0.2	1.4	7.4	4.9
Publishing and printing	-0.3	-17.9	2.4	4.3
Basic chemicals	11.4	0.9	-6.4	2.7
Explosives, chemical and natural scents	-14.7	19.6	3.9	9.1
Rubber	-18.4	-5.2	-10.5	-1.9
Plastic	8.2	-1.7	-0.8	5.7
Glass	-2.3	0.2	9.5	12.6
Capital goods	**-2.1**	**-3.6**	**-5.1**	**6.6**
Paints, varnishes and lacquers	1.4	-2.4	-9.1	6.4
Cement	4.3	-1.9	1.5	6.1
Construction materials	-4.8	-3.1	-5.4	6.5
Iron and steel industry	5.5	-3.6	2.3	1.1
Metallic products	-2.2	2.8	-10.2	9.5
Machinery and equipment	0.0	-7.3	-9.2	-2.1
Electric machinery	-13.7	-30.5	15.6	1.8
Transport equipment	-8.5	-7.1	-16.2	11.9
Industrial services	-4.6	-7.0	-2.6	10.9
Exports	**1.3**	**-5.8**	**-3.3**	**0.6**
Canned food, chocolate and alcoholic beverages	9.3	-3.3	4.5	7.4
Synthetic fibers	12.7	-10.5	-4.0	-2.4
Yarns, fabrics and finished garments	1.7	-5.1	-7.7	-1.9
Knitted garments	7.8	-5.9	-10.2	-2.7
Clothing items	-9.0	-8.7	-4.2	-0.2
Total non-primary manufacturing	**-1.5**	**-2.6**	**-2.0**	**4.1**

Source: Ministry of Production.

2.5 Construction Sector

Activity in the construction sector decreased 3.1 percent in 2016, with growth in the sector accumulating a fall of 8.8 percent in the last two years after 13 years of continued growth. This is mainly explained by the decline in private investment –due to the completion of large projects–, the contraction of sales in the real estate market, and the significantly low growth of public investment. In line with this, the domestic consumption of cement fell 2.7 percent, from 11.2 to 10.9 million metric tons.

Graph 14
CONSTRUCTION
(Real % change)



Source: INEI and BCRP.

In the residential real estate market, the study on the buildings market in Metropolitan Lima and Callao –*Estudio del Mercado de Edificaciones en Lima Metropolitana y el Callao*– published by the Peruvian Chamber of Construction (CAPECO), reported that the number of apartments sold in 2016 dropped 2.3 percent. This trend was also reflected in credit for this segment, which showed a 7.5 percent reduction in new mortgage loans for housing as well as a decrease of 11.1 percent in the placement of new loans by Mivivienda.

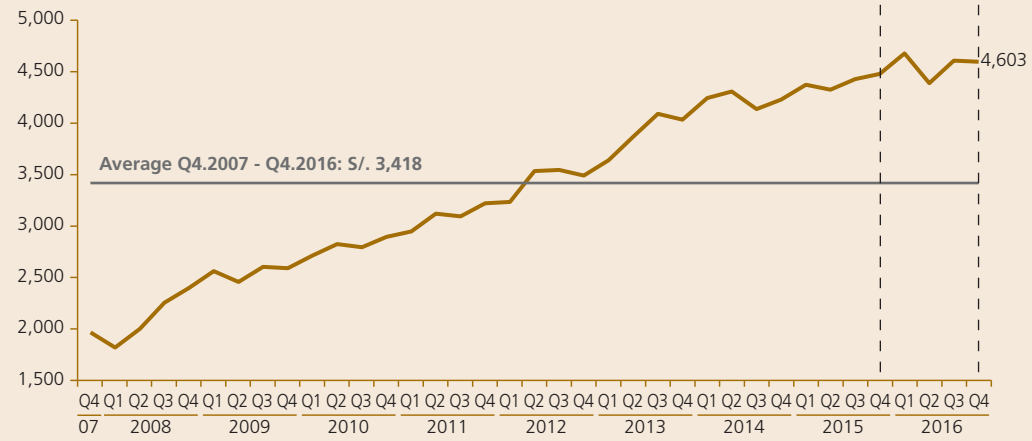
Table 13
REAL ESTATE SECTOR: EVOLUTION OF MAIN VARIABLES

INDICATOR	2014	2015	2016	Average 2007-2016
Apartments: Unit sold - CAPECO[1/]	16,337	10,889	10,643	-246
% Change	-22.7	-33.3	-2.3	31.1
Apartments: Unit sold- TINSA[2/]	11,049	12,901	10,865	-2,036
% Change	-30.0	16.8	-15.8	-32.5
Unmet demand - CAPECO[1/]	415,592	435,129	449,750	14,621
% Change	0.9	4.7	3.4	-1.3
New mortgage loans[3/]	32,915	30,358	28,088	-2,270
% Change	-6.5	-7.8	-7.5	0.3
New loans Mivivienda[4/]	10,777	9,090	8,082	-1,008
% Change	-18.1	-15.7	-11.1	4.6
Number of debtors of current mortgage borrowers[3/]	202,704	209,646	212,084	2,438
% Change	7.2	3.4	1.2	-2.3
Mortgages disbursed in S/ (mills.)[3/]	6,816	8,311	7,437	-874
% Change	1.2	21.9	-10.5	-32.4
Mortgages disbursed in US$ (mills.)[3/]	610	320	460	140
% Change	-3.8	-47.6	43.7	91.3
Average interest rate by mortgage loans in S/[5/]	9.2	9.0	8.9	-0.1
Average interest rate by mortgage loans in US$[5/]	8.3	8.2	7.8	-0.4
Ratio PER[6/]	16.2	17.0	17.7	0.7

1/ El Mercado de Edificaciones Urban areass en Lima Metropolitana y el Callao", CAPECO. A one-year period is considered (from July to June in the next year).
2/ Informe de Coyuntura Inmobiliaria", TINSA PERU SAC.
3/ Commercial banks. Source: SBS.
4/ "Nuevo Credit Mi Vivienda". Source: Fondo Mi Vivienda.
5/ Average lending interest rates by commercial banks. Source: SBS.
6/ Data as of Q4 of the year. Price to earning ratio.

Moreover, the rising trend of sale prices of property per square meter in constant soles observed since late 2007 continued to be observed in 2016. The PER ratio, which shows the number of years a property would have to be rented to recover the acquisition value of the property, rose from 17.0 in 2015 to 17.7 in 2016.

Graph 15
WEIGHTED MEDIAN OF QUARTERLY SALE PRICES
(Per square meter at constant soles of 2009)

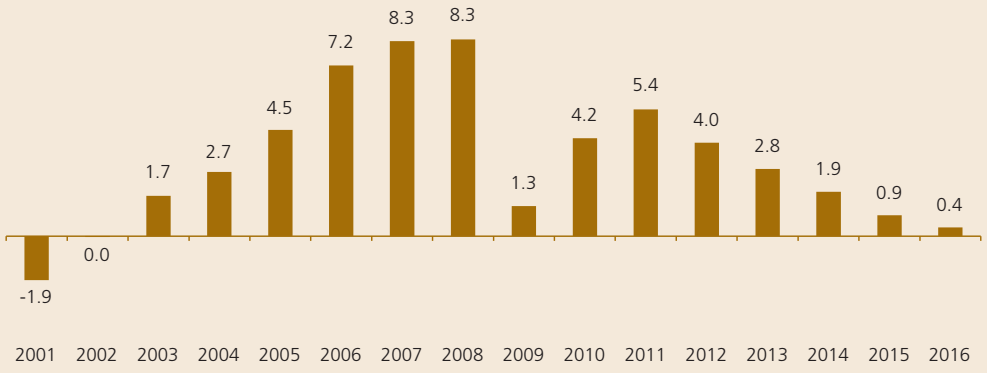


Source: BCRP.

3. Labor

The Ministry of Labor reported that urban employment in formal enterprises with 10 and more workers grew 0.4 percent in 2016. This low rate is explained by the lower dynamism of labor-intensive sectors, such as manufacturing, in which the output dropped 1.9 percent.

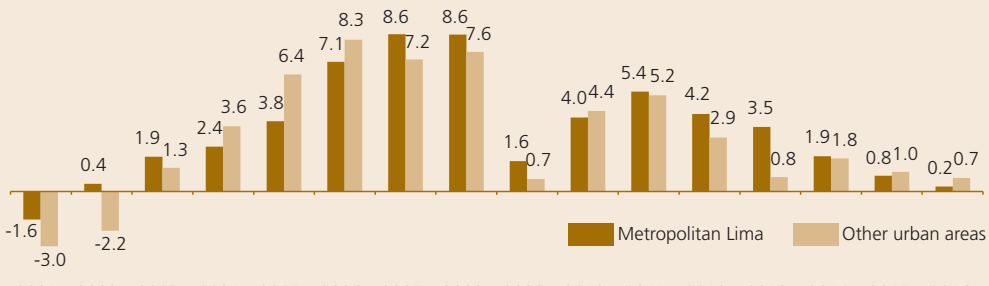
Graph 16
URBAN EMPLOYMENT
(% Change)



Source: MTPE.

By geographical area, job creation showed a slower pace of growth not only in Metropolitan Lima (down from 0.8 to 0.2 percent), but also in the major cities in the rest of the country (down from 1.0 percent in 2015 to 0.7 percent in 2016).

Graph 17
EMPLOYMENT IN FIRMS WITH 10 TO MORE WORKERS
(% change)

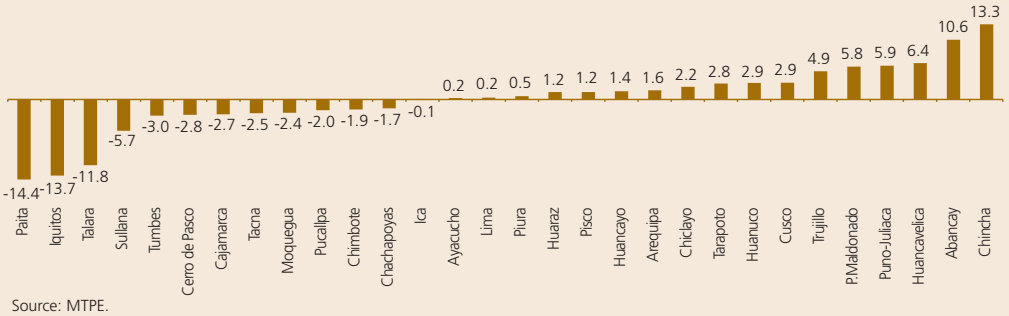


Source: MTPE.

Moreover, by production sectors, the slower pace of growth of employment in 2016 reflected the decline of activity in the manufacturing sector (-1.9 percent) due to lower manufacturing activity in Metropolitan Lima (-2.4 percent), in line with the decline of textile exports in 2016 (10.2 percent). In contrast, employment showed a positive evolution in the sectors of trade, services, and transportation and storage.

At the regional level, employment showed a positive trend in 17 of the 30 cities included in the sample of the Ministry of Labor.

Graph 18
EMPLOYMENT BY CITY
(% Change 2016/2015)



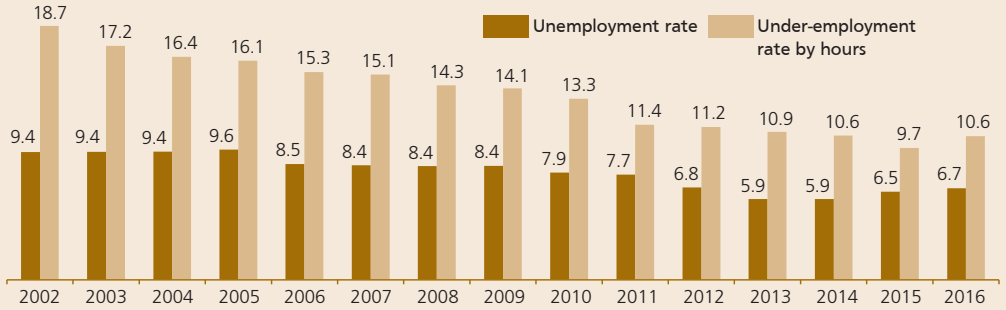
Source: MTPE.

The highest growth rates of employment were observed in Chincha (13.3 percent), where the dynamism of the manufacturing sector was noteworthy, and in Abancay (10.6 percent), which recorded high rates of growth of employment in the sectors of transportation, storage, and communications. In contrast, the highest declines of employment rates were observed in Paita (-14.4 percent), due mainly to the reduction of employment in the manufacturing sector, and in Iquitos (-13.7 percent) due to the further decline of employment in the primary and manufacturing sectors.

According to INEI's survey on employment –*Encuesta Permanente de Empleo*–, the labor market in Metropolitan Lima continued showing a positive trend in 2016. The employed population grew 1.8 percent (vs. 1.0 percent in 2015). By production sectors, employment grew only in the sector of services (4.8 percent), offsetting the decline of employment in the sectors of manufacturing, trade, and construction, where employment fell 2.8, 2.5, and 0.6 percent, respectively. This decline took place amid a falling trend observed also in the output of the manufacturing sector (-1.6 percent) and construction (-3.1 percent) as well as amid a slowdown in the pace of growth of trade (down from 3.9 percent in 2015 to 1.8 percent in 2016).

The rate of unemployment, which measures the percentage of the economically active population (EAP) who is actively searching for a job and is unable to find work, increased from 6.5 percent to 6.7 percent between 2015 and 2016, while the rate of underemployment –in terms of the number of hours worked– fell from 9.7 percent in 2015 to 10.6 percent.

Graph 19
UNEMPLOYMENT AND UNDER-EMPLOYMENT RATE BY HOURS IN METROPOLITAN LIMA (%)



Source: INEI.

Table 14
WORKFORCE BY LEVELS OF EMPLOYMENT IN METROPOLITAN LIMA[1/]
(Thousand people)

	2014	2015	2016	% chg. 2016/2015
I. ECONOMICALLY ACTIVE POPULATION (EAP): 1+2	**4,917**	**5,019**	**5,124**	**2.1**
1. EMPLOYED	**4,643**	**4,694**	**4,779**	**1.8**
By economic activity				
Manufacturing	731	707	687	-2.8
Construction	340	364	362	-0.6
Commerce	966	977	953	-2.4
Services	2,550	2,595	2,719	4.8
Others	56	51	57	11.6
By educational level				
Primary school [2/]	395	374	380	1.6
Complete high school [3/]	2,185	2,289	2,271	-0.8
Higher education	932	898	905	0.8
University higher education	1,131	1,133	1,222	7.9
By occupation				
Salaried workers [4/]	2,958	2,966	2,986	0.7
Non-salaried workers	1,685	1,727	1,792	3.7
By size of business				
Independent [5/]	1,162	1,516	1,583	4.5
From 2 to 10 workers	1,569	1,257	1,244	-1.1
From 11 to 50 workers	455	482	483	0.3
More than 50 workers	1,456	1,439	1,468	2.0
By number of hours worked per week				
Employed workers working 20 or more hours	4,249	4,286	4,339	1.2
Salaried workers working 20 or more hours	2,769	2,777	2,801	0.8
1A. UNDER-EMPLOYED	**1,589**	**1,647**	**1,678**	**1.9**
Visible under-employment (by hours) [6/]	487	487	542	11.3
Invisible under-employment (by income) [7/]	1,102	1,160	1,136	-2.1
1B. PROPERLY EMPLOYED	**3,054**	**3,046**	**3,101**	**1.8**
2. UNEMPLOYED	**274**	**325**	**345**	**6.0**
II. INACTIVE POPULATION	**2,300**	**2,334**	**2,361**	**1.2**
III. WORKING-AGE POPULATION (PWA)	**7,216**	**7,353**	**7,485**	**1.8**
RATES (%)				
Activity rate (EAP / PWA)	68.1	68.3	68.5	0.4
Employment/population (Employed EAP/PWA)	64.3	63.8	63.8	-0.1
Unemployment rate (Unemployed EAP/EAP)	5.6	6.5	6.7	3.3
Under-employment by hours	9.9	9.7	11.3	16.5

1/ Annual average.
2/ Includes individuals with no school education or with elementary school education.
3/ Incomplete and complete secondary school.
4/ Includes employees, workers and housekeepers.
5/ Includes also employers.
6/ Includes workers unwillingly working less than 35 hours per week.
7/ Workers working 35 or more hours a week who earn less than the minimum salary estimated as benchmark by INEI.
Source: INEI. Encuesta Permanente de Empleo.

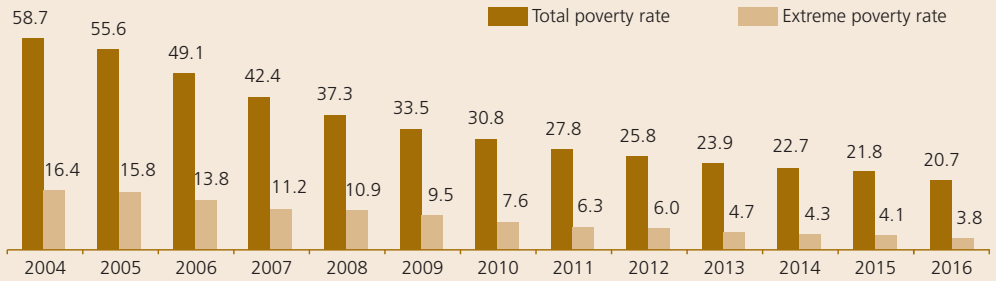
Box 1
INCIDENCE OF MONETARY POVERTY 2016

In 2016, 20.7 percent of the Peruvian population –that is, 6.5 million people, in absolute terms– was affected by monetary poverty[1], according to the population projections of INEI.

The incidence of poverty decreased by 1.1 percentage points in comparison with 2015 (21.8 percent), which means that a little over 264 thousand people left poverty behind. In the same period, the number of people living in conditions of extreme poverty (1.2 million) decreased from 4.1 to 3.8 percent.

In the past twelve years monetary poverty has dropped by 38 percentage points, from 58.7 percent in 2004 to 20.7 percent in 2016, while extreme poverty has fallen by 12.6 points, from 16.4 percent in 2004 to 3.8 percent in 2016.

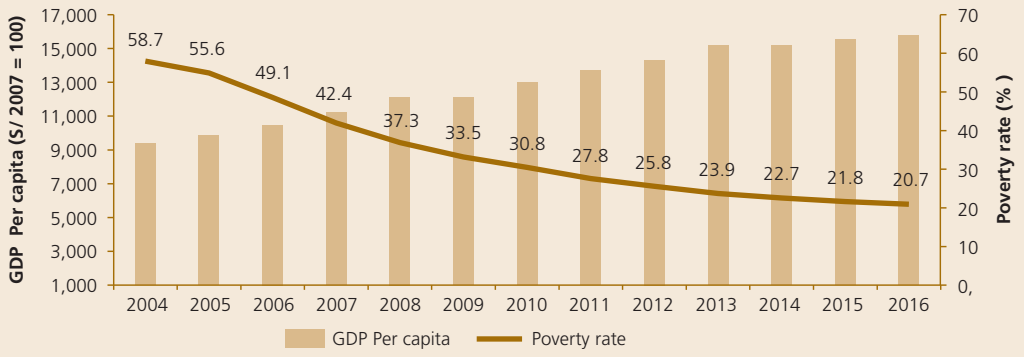
EVOLUTION OF TOTAL POVERTY AND EXTREME POVERTY, 2004 - 2016
(%)



Source: INEI-ENAHO 2004-2016.

The sustained growth of GDP would have had a significant impact on poverty reduction, as the following graph shows.

EVOLUTION OF POVERTY AND GDP PER CAPITA



Source: INEI - ENAHO 2004-2016.

1 The rate of monetary poverty, as an indicator of well-being, measures the proportion of the population that can meet both food and non-food basic needs through their spending. The needs expressed in poverty lines allow us to establish a divide between the population that live in conditions of extreme poverty –whose monthly spending is less than the value per capita of a basic food basket (S/ 176 in 2016)– and the population living in conditions of poverty, whose spending is less than the value per capita of a total basket of goods that includes both the value of basic food and non-food goods (S/ 328 in 2016).

Incidence of total poverty by geographical area

The incidence of poverty in 2016 is lower in urban areas (13.9 percent), particularly in Metropolitan Lima (11.0 percent), as well as in the urban areas of the Coast (13.7 percent). In the rural areas (43.8 percent), poverty is lower in the rural Coast (28.9 percent) than in the Selva (39.3 percent) and Sierra (47.80 percent). It is worth highlighting that there are no statistically significant changes in the rates of incidence of poverty by geographical areas or domains between 2015 and 2016, except for the reduction of poverty observed in the urban areas of the Coast.

When we compare the poverty data in 2004 and in 2016, we see a significant reduction of poverty in all the geographical areas, this reduction ranging between 30 points (urban Sierra) and 42 points (rural Selva).

INCIDENCE OF TOTAL POVERTY BY GEOGRAPHICAL AREAS 2004 - 2016
(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Differences 2016/2015 1/	Differences 2016/2004 1/
National	**58.7**	**55.6**	**49.1**	**42.4**	**37.3**	**33.5**	**30.8**	**27.8**	**25.8**	**23.9**	**22.7**	**21.8**	**20.7**	**-1.1**	**-38.0**
Urban areas	48.2	44.5	37.0	30.1	25.4	21.3	20.0	18.0	16.6	16.1	15.3	14.5	13.9	-0.6	-34.3
Rural areas	83.4	82.5	79.3	74.0	68.8	66.7	61.0	56.1	53.0	48.0	46.0	45.2	43.8	-1.4	-39.6
Natural region															
Coast area	48.6	44.4	36.4	29.3	25.3	20.7	19.8	17.8	16.5	15.7	14.3	13.8	12.8	-1.0	-35.8
Sierra area	70.0	67.7	63.0	58.1	53.0	48.9	45.2	41.5	38.5	34.7	33.8	32.5	31.7	-0.8	-38.3
Selva area	70.4	70.1	65.5	55.8	46.4	47.1	39.8	35.2	32.5	31.2	30.4	28.9	27.4	-1.5	-43.0
Domains															
Urban coast areas	50.8	43.2	37.6	31.7	27.4	23.7	23.0	18.2	17.5	18.4	16.3	16.1	13.7	-2.4	-37.1
Rural coast areas	69.3	66.9	62.3	53.8	46.6	46.5	38.3	37.1	31.6	29.0	29.2	30.6	28.9	-1.7	-40.4
Urban sierra areas	46.9	44.0	37.1	31.8	26.7	23.2	21.0	18.7	17.0	16.2	17.5	16.6	16.9	0.3	-30.0
Rural sierra areas	86.7	85.4	83.1	79.2	74.9	71.0	66.7	62.3	58.8	52.9	50.4	49.0	47.8	-1.2	-38.9
Urban selva areas	59.4	58.4	54.6	44.0	32.7	32.7	27.2	26.0	22.4	22.9	22.6	20.7	19.6	-1.1	-39.8
Rural selva areas	81.5	82.4	77.3	69.2	62.5	64.4	55.5	47.0	46.1	42.6	41.5	41.1	39.3	-1.8	-42.2
Metropolitan Lima	44.6	42.4	32.7	25.1	21.7	16.1	15.8	15.6	14.5	12.8	11.8	11.0	11.0	0.0	-33.6

1/ In % points.
Source: INEI - ENAHO 2004-2016.

Incidence of total poverty by departments

The INEI groups the data of different departments by ranges of poverty lines (showing the upper and lower confidence intervals) because greater statistical accuracy is required due to the size of the sample and the heterogeneous characteristics of each region. The poorest population groups are concentrated in Group 1, while the least poor population groups are found in Group 6 or Group 7.

In 2016, Group 1 –the departments with the poorest population groups–, with poverty levels between 43.8 to 50.9 percent, included the departments of Cajamarca and Huancavelica, while the department of Amazonas (which in 2015 was part of Group 1) moved to Group 2, joining Apurímac, Ayacucho, Huánuco, Loreto, Pasco, Piura, and Puno which show poverty levels between 32.4 and 36.1 percent. Most departments are concentrated in Group 5, which has relatively low levels of poverty (between 9.6 and 12 percent), while Ica, which registers the lowest poverty level in 2016, is located in Group 6. All of the poverty groups show lower rates of poverty in 2016 than those observed in 2015 (both in the lower band and in the upper band).

Moreover, the magnitude of poverty recorded as the highest level in 2007 (89.1 percent) decreased significantly in 2016 (50.9 percent).

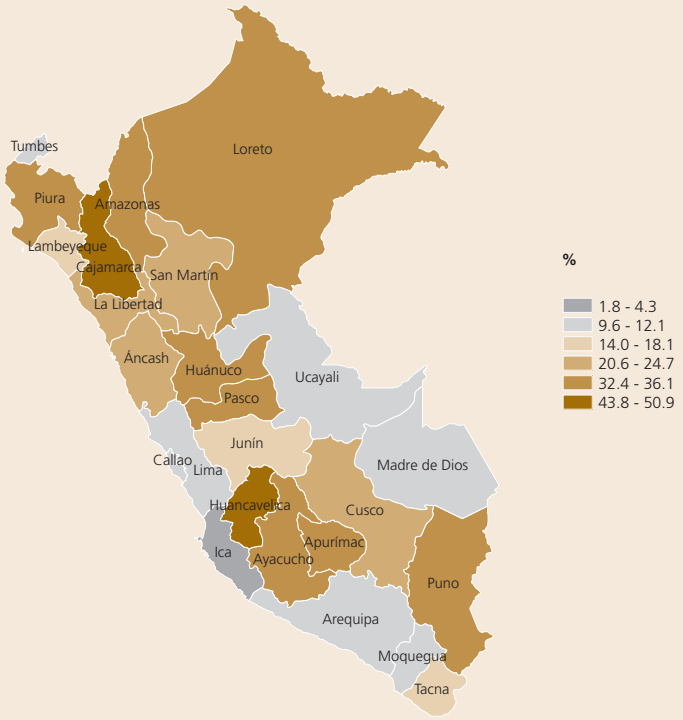
GROUP OF DEPARTMENTS WITH LEVELS OF POVERTY STATISTICALLY SIMILAR

Year	Group	Departments	Poverty rate (%)	
			95 % confidence intervals	
			Lower	Upper
2007	Group 1	Huancavelica	80.9	89.1
	Group 2	Apurimac, Ayacucho, Cajamarca, Huánuco	65.2	71.1
	Group 3	Amazonas, Cusco, Loreto, Pasco, Piura, Puno and San Martín	54.1	59.0
	Group 4	Áncash, Junín, La Libertad, Lambayeque, Ucayali	40.7	46.6
	Group 5	Arequipa, Ica, Lima[1/], Moquegua, Tacna, Tumbes	23.5	27.2
	Group 6	Madre de Dios	10.1	17.6
2013	Group 1	Amazonas, Ayacucho, Cajamarca, Huancavelica, Pasco	47.8	53.3
	Group 2	Apurímac, Huánuco, Loreto, Piura	35.1	40.1
	Group 3	La Libertad, Puno, San Martín	28.0	33.2
	Group 4	Áncash, Cusco, Junín, Lambayeque	19.5	23.4
	Group 5	Provincia del Callao, Provincia de Lima, Región Lima, Tacna, Tumbes, Ucayali	11.7	14.5
	Group 6	Arequipa, Moquegua	7.0	11.0
	Group 7	Ica, Madre de Dios	3.1	6.0
2014	Group 1	Amazonas, Ayacucho, Cajamarca, Huancavelica	47.5	53.1
	Group 2	Apurímac, Huánuco, Loreto, Pasco	35.7	41.2
	Group 3	La Libertad, Piura, Puno, San Martín	27.3	31.8
	Group 4	Áncash, Cusco, Junín, Lambayeque	19.2	23.2
	Group 5	Provincia del Callao, Provincia de Lima, Región Lima, Moquegua, Tacna, Tumbes, Ucayali	10.8	13.4
	Group 6	Arequipa, Madre de Dios	5.8	9.7
	Group 7	Ica	2.5	5.7
2015	Group 1	Amazonas, Cajamarca, Huancavelica	44.7	51.7
	Group 2	Apurímac, Ayacucho, Huánuco, Loreto, Pasco, Puno	34.3	38.6
	Group 3	Áncash, La Libertad, Piura, San Martín	24.8	29.0
	Group 4	Cusco, Junín, Lambayeque, Región Lima	16.8	20.8
	Group 5	Provincia del Callao, Provincia de Lima, Tacna, Tumbes, Ucayali	9.8	12.6
	Group 6	Arequipa, Madre de Dios, Moquegua	6.7	9.8
	Group 7	Ica	3.2	6.7
2016	Group 1	Cajamarca, Huancavelica	43.8	50.9
	Group 2	Amazonas, Apurímac, Ayacucho, Huánuco, Loreto, Pasco, Piura, Puno	32.4	36.1
	Group 3	Áncash, Cusco, La Libertad, San Martín	20.6	24.7
	Group 4	Junín, Lambayeque, Tacna	14.0	18.1
	Group 5	Arequipa, Madre de Dios, Moquegua, Provincia del Callao, Provincia de Lima Región Lima, Tumbes, Ucayali	9.6	12.0
	Group 6	Ica	1.8	4.3

1/ Includes Provincia Constitucional del Callao.
Fuente: INEI - ENAHO. May 2017.

The map below shows the range of poverty levels by departments in 2016.

DEPARTMENTS BY POVERTY RANGES STATISTICALLY SIMILAR, 2016



Box 2
GROWTH, MONETARY POVERTY, AND INEQUALITY IN THE LAST DECADE

Both monetary poverty and inequality decreased from 2004 to 2016. Although poverty showed a significant decrease in this period (-38 percentage points), the decrease recorded in the level of inequality was also important. The following table shows the evolution of inequality in this period, measured with different indicators (interquartile ratios, Coefficient of Variation, and Theil[2], Gini[3], and Atkinson[4] indicators).

EVOLUTION OF INEQUALITY INDICATORS PER SPENDING PER CAPITA: 2004 - 2016
(Base constant soles=2015 to Metropolitan Lima prices)

Year	Gini	Theil	Atkinson*	Coefficient of Variation	Interdecile ratio	Interquintile ratio
2004	0.41	0.31	0.42	0.99	14.14	8.19
2005	0.41	0.31	0.42	0.99	14.41	8.30
2006	0.41	0.32	0.43	1.03	14.93	8.54
2007	0.41	0.30	0.43	0.96	14.59	8.40
2008	0.38	0.26	0.40	0.84	12.98	7.57
2009	0.39	0.26	0.40	0.86	12.87	7.54
2010	0.37	0.24	0.38	0.81	11.60	6.98
2011	0.36	0.23	0.36	0.78	10.83	6.55
2012	0.36	0.23	0.36	0.81	10.84	6.52
2013	0.35	0.22	0.34	0.79	10.13	6.17
2014	0.35	0.21	0.33	0.76	9.69	6.01
2015	0.35	0.21	0.32	0.76	9.50	5.90
2016	0.34	0.20	0.32	0.76	9.16	5.74
Chg. 2016/2004(%)	**-16.50**	**-34.07**	**-24.31**	**-23.54**	**-35.20**	**-29.93**

* Considers an aversion coefficient iqual to 2.
Source: INEI-ENAHO 2004-2016.

Considering the evolution of the interdecile ratio, in 2006 the per capita spending of a person in the group of the 10 percent richest people in the country was equivalent to 15 times the spending per capita of a person in the group of the poorest 10 percent. In 2016, this difference had dropped to almost 9 times, which implied a significant reduction in comparison to the average level in Latin America, where this indicator shows an average of 14 times.

How much has already been achieved in poverty reduction and how much more is needed to reduce poverty in the country?

First of all, an increase in people's spending capacity not only allows many households to leave poverty behind, but also shortens the distance between the level of spending and the poverty line[5].

In 2016, a group of households that had not yet achieved to escape poverty came closer to the threshold that separates them from the non-poor. In other words, in 2016, 47.5 percent of poor people are at a distance 20 percent below the poverty line, whereas in 2004 only 24.5 percent of the poor were at this distance below the poverty line.

2 The Theil index is a special case of the generalized index of entropy (family of inequality indices). This index assesses the differences between average spending and higher-income individuals spending. A reduction in the index rate means a lower degree of inequality.

3 The Gini index measures differences between the values of the distribution of per capita spending and a uniform distribution that represents perfect equality in spending. A Gini coefficient of zero expresses perfect equality, while a Gini coefficient of 1 expresses maximum inequality of values.

4 The Atkinson index employs a CES-type welfare function, which includes a parameter of inequality aversion. When the value of the parameter is higher, the index becomes more sensitive to changes in the per capita spending of low-income people. A parameter equal to 2 is considered in the Atkinson index in the analysis discussed in this box.

5 This distance is known as the poverty gap. The distribution of the population according to the distance that separates them from the poverty line considers the spending capacity of the members of a household and the percentage distance (the gap that separates them from the poverty line in percentage terms). A shorter (longer) distance implies that less (greater) effort is required to escape poverty).

DISTRIBUTION OF PEOPLE ACCORDING TO THE DISTANCE FROM THE POVERTY LINE: 2004 - 2016

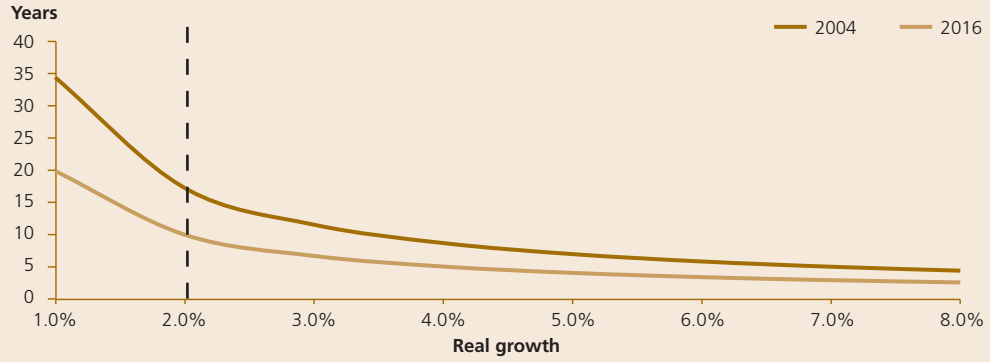
Distance below the poverty line (%)	Poverty people		Relative distribution (%)		Cumulative distribution (%)	
	2004	2016	2004	2016	2004	2016
5.0%	835,157	869,982	5.2%	13.2%	5.2%	13.2%
10.0%	964,357	829,782	6.0%	12.5%	11.1%	25.7%
15.0%	1,024,779	727,221	6.3%	11.0%	17.5%	36.7%
20.0%	1,126,988	715,754	7.0%	10.8%	24.5%	47.5%
25.0%	1,179,875	662,403	7.3%	10.0%	31.8%	57.5%
30.0%	1,167,875	571,298	7.2%	8.6%	39.0%	66.2%
35.0%	1,200,863	487,284	7.4%	7.4%	46.4%	73.5%
40.0%	1,297,605	488,695	8.0%	7.4%	54.5%	80.9%
45.0%	1,069,553	405,076	6.6%	6.1%	61.1%	87.0%
50.0%	1,266,531	319,344	7.8%	4.8%	68.9%	91.9%
55.0%	1,077,032	198,378	6.7%	3.0%	75.6%	94.9%
60.0%	1,089,497	148,546	6.7%	2.2%	82.3%	97.1%
65.0%	982,510	102,381	6.1%	1.5%	88.4%	98.6%
70.0%	791,003	45,439	4.9%	0.7%	93.3%	99.3%
75.0%	531,892	35,018	3.3%	0.5%	96.6%	99.9%
80.0%	331,988	5,296	2.1%	0.1%	98.7%	99.9%
85.0%	132,219	2,542	0.8%	0.0%	99.5%	100.0%
90.0%	56,157	680	0.3%	0.0%	99.8%	100.0%
95.0%	23,048	453	0.1%	0.0%	100.0%	100.0%
100.0%	1,997	-	0.0%	0.0%	100.0%	100.0%
-	**16,150,926**	**6,615,571**	**100.0%**	**100.0%**	**-**	**-**

Source: INEI-ENAHO 2004-2016.

Secondly, it is clear that a shorter distance from the poverty line decreases in fact the increase required in spending to be able to escape poverty. Therefore, if we know the percentage distance between the spending of the poor and the poverty line, we can estimate the approximate timeframe required to move out of poverty[6] dividing the percentage distance by the potential growth in families' real expenditure. According to estimates, reducing poverty by 50 percent in the next 10 years would require per capita real expenditure to grow around 2 percent annually.

Therefore, based on the ideas presented above, the country's economic growth in recent years has not only contributed to reduce the levels of poverty and inequality, but has also decreased the efforts required to reduce poverty as well.

EVOLUTION OF TIME EFFORTS REQUIRED TO REDUCE POVERTY BY 50 PERCENT: 2004-2016



Source: INEI, ENAHO 2004-2016.

6 For estimation purposes, it is assumed that the rate of real growth will be constant in the following years and that inequality will be invariant.