

The negative effects of food price inflation on pupils' attainment and performance at school in Algeria

الآثار السلبية لتضخم أسعار المواد الغذائية على تحصيل التلاميذ وأدائهم في المدارس في الجزائر

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Abstract:

This study attempts to assess the impact of food price inflation on the loss of human capital mainly through school wastage in Algeria.

The results obtained by means of both a theoretical investigation, and by means of a field work conducted in many parts of the country clearly indicate:

- (i) For a significant percentage of families, more than half of the overall income is spent on food products.
- (ii) Food price inflation engenders on behalf of poor families considerable cuts on educational spending which negatively affect learners' school performance.
- (iii) In the context of lack of financial support, vulnerable families have serious difficulty in keeping their children at school, and learners encounter severe handicaps in their learning acquisition process and school attainment.

These very facts in turn induce high school wastage and high inefficiency of the public sector performance. The solution to such a problem requires (i) a better understanding of both parents and learners' difficulty, and (ii) the definition of a sound scheme of material, financial help, and moral support in favor of vulnerable families and pupils.

Keywords: human capital; food price inflation; Algeria

ملخص:

تحاول هذه الدراسة تقييم أثر تضخم أسعار الغذاء على فقدان رأس المال البشري بشكل رئيسي من خلال الهدر المدرسي في الجزائر. تشير النتائج التي تم الحصول عليها عن طريق تحقيق نظري وعن طريق عمل ميداني تم إجراؤه في أجزاء عديدة من البلاد بوضوح إلى: (ط) بالنسبة لنسبة كبيرة من الأسر، ينفق أكثر من نصف الدخل الإجمالي على المنتجات الغذائية.

(2) يؤدي تضخم أسعار المواد الغذائية نيابة عن الأسر الفقيرة إلى تخفيضات كبيرة في الإنفاق على التعليم مما يؤثر سلبًا على الأداء المدرسي للطلاب. في سياق نقص الدعم المالي، تواجه الأسر الضعيفة صعوبة كبيرة في إبقاء أطفالها في المدرسة، ويواجه المتعلمون إعاقات شديدة في عملية اكتسابهم للتعلم وحصولهم على المدرسة.

وتؤدي هذه الحقائق بالذات إلى إهدار المدارس الثانوية وعدم كفاءة أداء القطاع العام. يتطلب حل هذه المشكلة ما يلي: (1) فهم أفضل لصعوبات الآباء والمتعلمين على حد سواء، و (2) تحديد مخطط سليم للمواد والمساعدة المالية والدعم المعنوي لصالح الأسر والتلاميذ الضعفاء.

الكلمات المفتاحية: رأس المال البشري. تضخم أسعار الغذاء، الجزائر

1. Subject matter

This study seeks to investigate the negative effect of food price inflation which has been increasing since 2006 on (i) repeat rates and (ii) dropout rates of pupils at primary, mid-secondary and secondary level on education in Algeria.

These two features (repeat and dropout) of school inefficiency represent an important aspect of wastage, in terms of both:

- (i) A loss of job and higher income opportunities especially for learners from poor milieus and rural areas.
- (ii) A mediocre level of performance of the public sector.

2. Methodology

This study is based on two main parts:

- (i) An insight into the research background on the subject, as well as the collection of a set of factual data.
- (ii) A field work carried out in two wilayate (counties) where school wastage rate has been reported to be the highest in the country. The field work is aimed at collecting a set of objective data from people who are more and directly concerned with the problem of educational wastage.

2.1- Overview on the research background

This work can be summarized as:

➤ **A brief inquiry** in some recent research works, especially those carried out by the United Nations specialized organizations, namely FAO, UNICEF, UNESCO, WHO WF... The aim of such a research is to give to the reader a quick overview on the efforts being deployed in this field of interest, and more importantly to treat the subject far beyond mere local frontiers.

However, to avoid aberrant research findings, the author keeps throughout the study, clear in mind, the constant need for conducting an original and adapted approach when tackling specific problems.

➤ **An attempt to put forward some definitions** of the main concepts used in the study with the view to avoid confusion and misunderstanding in the discussion to come.

- **Deschooling** has often been defined by sociologists as, on the one hand, **a reduction** in the number school enrollments of children who have reached school age (non schooling),

and on the other hand, by an **increase in the number of school-leavers** (dropout) from school circuit before the age of sixteen (Lange, 1991).

- **Non schooling** is more frequently encountered in economically poor social milieus. The high number of children to raise and the high cost of living very frequently push poor parents to sacrifice some of their children by depriving them from educational benefits (G. Doumandji and S. Ziane 2006)¹. In recent years, this phenomenon seems to grow very rapidly in Algeria, but owing to the lack of reliable data, it is somehow premature to tackle it on credible grounds.²

- **Dropout** (school rupture - abandons). Its manifestation often takes the form of a slow and progressive detachment (aloofness/separation through lack concern) of learners from school interest. Dropout is often due to either family disorganization, or to some difficulty in the pupil's educational acquisition process. In either case, the rupture in question often ends up in delinquency, truancy, violence (B. Geay and A. Meunier 2003) and jail (Lochner and Moretti 2004).

The long term individual and social financial costs of school rupture are very important. Those who acquire little education can hardly find jobs on the labor market. When employed, they can only earn mediocre wages due to their low level of competence, ability and skills.³ On the other hand, school rupture is synonymous with a loss in the stock of human capital. Moreover, school dropout often constitute a real social burden as it induces the need for more financial help, more health care, and more infancy protection and security.⁴

In Algeria, substantial percentage of school dropout is not solely attributable to family disorganization but rather to the financial parent's inability to meet the highly demanding material and financial school needs of their children.

¹ -The Algerian economic crisis that took place between 1986 and 1996 following the drastic fall in oil prices, led the government to make significant budget cuts in the education sector. At the same time, the National Economic Council (CNES) reported that the educational goods could not escape from the negative effects of inflation. The cost index of educational goods climbed in the time span 1993-1996 from 245 to 551 AD, and the registration fees from 181 à 254 AD. This high rate of inflation caused not only a degradation in the quality of education but a high rate of school rupture and early working age of pupils from vulnerable families, as well.

² - In spite of the overwhelming belief that in developing countries, the female population is more concerned by the will of parents to deprive it from the benefit of education, the field work carried out in nine wilaya of the country couldn't confirm this belief. On the contrary, in many primary schools and secondary schools, male versus female population proportion is by and large in favour of the latter.

³ - In fact, rising skills demands imply the necessity of the completion of at least upper secondary education for successful labour market entry and for further participation in lifelong learning (see OECD, 2000).

⁴ - Regional Conference of Elected from Montreal ("Conférence régionale des élus de Montréal"), Regional Forum on Social Development of Montreal Island – Report on poverty in Montreal, 2004.

- **Repeat** is the result of low grades obtained by the learner which ends up by an extension of the study duration.⁵ The problems linked with the benefits of repeating a course will not be discussed in this paper.⁶

School failure, in the light of recent study findings is a widespread phenomenon.⁷ It does not concern one specific region more than another. Nonetheless, it penalizes more severely learners from poor families.⁸

School repeat is costly. In the OCDE countries, the financial cost of one year extension of the study duration is as high as 20 000 dollars par head.⁹

Dropout and repeat are, in the terms of this study, the main ingredients of school wastage and an important source of inefficiency in the use of social resources.

➤ **A collection of a set of factual data.**

In this study it is made intensive use of quantitative data in order to explain a situation, to emphasize the relative importance of certain facts such that they are perceived by people who are more concerned with school wastage, to compare certain characteristic figures, and to take statistical decisions.

The data used mainly stem from official documents from the Algerian National Statistical Organization (Organisme national des statistiques: ONS) and from the Algerian Ministry of Education (Ministère de l'éducation nationale : MEN).

2.2- The empirical research (data from questionnaires)

The empirical research is a field work aimed at collecting a set of information directly from the "mouth" of those people concerned with school performance and school

⁵- Repeat ends up by an extension of one additional school year duration. Repeat is both useless and costly. It is useless, since it is scarcely followed by a real improvement in school quality formation. It is costly since it creates a bigger tension on the demand for education in a context of a rigid supply.

⁶- The inefficacy of repeat has been proved by many research works. In an Iredu publication, Thierry Troncin judged repeat as an unjust solution, inefficacious on pedagogic grounds and costly. He showed that repeat pupils will remain weaker than their pairs all along their school life. However, in the absence of repeating a course in case of bad grades, teachers complain from lack of motivation on behalf of learners. In such a context it becomes, difficult to make pupils work! http://www.girsef.ucl.ac.be/Cahiers_CREF/052cahier.pdf

⁷- Both failure at school and dropout are so widespread that about a third of young men and more than one-in-five young women enrolled in upper secondary school do not obtain the "diploma"; Niall O'Higgins, Marcello D'Amato, Floro, Ernesto Caroleo & Adriana Barone, Gone for Good? Determinants of School Dropout in Southern Italy, Discussion Paper No. 3 292, January 2008.

⁸- F. Jarraud, 2006, « Le Café Pédagogique », <http://www.oecd.org>, 23-03-2006 édition.

⁹- In spite of this alarming situation, educational managers seem to be little inclined to put an end to this outrageous resource wastage (Gérard, 1997).

wastage. The field work was carried out in two wilayate of the country during the period May-December 2009.¹⁰

The objective of both the research background and the empirical research is to provide enough evidence to allow:

- to check on objective grounds four main research hypotheses, and;
- to put forward a workable platform of recommendations capable of both (i) helping learners from poor families to cope with the ongoing sharp food inflation, and (ii) enhancing a better performance in the public sector through a sound help scheme in favor of vulnerable learners.

2.2.1- Research hypotheses

Four research hypotheses were formulated and these are:

H1: There exists in Algeria a marked upward trend in food price increase.

H2: Food spending is largely preponderant in the family budget structure.

H3: School wastage (repeat and dropout) as a consequence of food price increase has reached an alarming boundary.

H4: A better understanding of the difficulties met by (i) poor families in their effort to keep their children at school and (ii) the difficulties met by pupils in their learning acquisition process, allows define a more efficient help policy scheme on behalf of the public authority.

2.2.2- Field work design

The general framework of the field work is as summarized in the following table.

Table 1 includes (i) the five different types of populations questioned, (ii) the three levels of education on which the study was focused as well as the nature and number of educational establishments (schools), and (iii) the two main features of school wastage: dropout, and repeat in commune 1 and 2, respectively.

¹⁰- The wilayate visited for the purpose of the field work are respectively: Laghouat and Tindouf.

Table 1: General framework of the field work inquiry

Communes Types of populations	Wilaya	
	Commune 1 (D) ¹¹	Commune 2 (R) ¹⁰
- Education directors - School headmasters - School teachers - Pupils' parents - Pupils	- two primary schools - two mid-secondary schools - one secondary school	- two primary schools - two mid-secondary schools - one secondary school

Source: Table established by the author

The number of respondents per wilaya, per commune, and per type of population is given in Table 2.

Table 2: Number of respondents per wilaya, per commune and per type of population.

Wilaya	Commune for dropout « D »						Commune for repeat « R »					
	Populations						Populations					
	Pupils			Parents	Teachers	Head masters	Pupils			Parents	Teachers	Head masters
	Sec	Mid- sec	Pri m				Sec	Mi dSe c	Pri m			
Lagh	62	42	68	60	37	4	41	53	51	22	37	5
Tind	47	59	74	35	34	4	33	64	37	13	24	3

Source: Questionnaires from the different respondents

- The questionnaires for pupils and parents were structured on five basic rubrics: (i) personal data, (ii) environmental data, (iii) behavioral data, (iv) financial difficulty and quality of the help measures carried out by the public authority, (v) attitudes and motivation.

- The questionnaires for teachers and headmasters were structured around three basic rubrics: (i) a set of personal data (ii) a set of data referring to the hindrance situations for school progress for learners and for parents to keep their children at school, and (iii) the quality (efficacy) of the government's implemented help policy measures.

3- Context of the study

The overall context in which this study was conducted can be better apprehended through the following main socio-economic important facts:

3.1- The steep increase of food price.¹²

The ongoing increase of food price that began in the year 2006 led many researchers to investigate on the causes and effects of such push on poor populations and on individuals, (IFPRI 2008a). The importance of such research stems from the fact that countries which import more food than they export are precisely those countries that fall under the poverty boundary. It has been clearly established (Ivanic & Martin 2008), that for nine developing countries, the impact of food price increase is almost always negative.¹³ For the African continent, the majority of the countries fall within the negative effects of food price increase (FAO 2008 ; Aksoy & Isik-Dikmelik 2008). More worrying is the fact that, the developments that are taking place worldwide are showing clear signs of a situation that is more likely to worsen even further, for the poorest (Poulton & al. 2006 ; FAO 2008).¹⁴

3.2- Price increase risks for a country

The negative repercussions of an increase in food price for a country depend on (i) its degree of exposure to those prices and (ii) to its degree of vulnerability.

- ***The degree of exposure*** as defined by World Food Program (WFP) of a particular country depends on (i) the ratio import/export of food products, (ii) the transportation costs,

¹¹ - *D and R stand for Dropout and Repeat, respectively.*

¹² - *The increase in food products has begun to have serious repercussion on vulnerable groups of population in all low income countries and countries exposed to economic crisis. Its impact on the nutritional situation and on the health state of the poor populations put at risk the perspectives of realization of the millennium development objectives (MDO). The increase of food price caused not only the fight against poverty and hunger to resume (MDO 1) but complicated even further the realization of the educational objectives (MDO 2), the reduction of mother and infant mortality (MDO 4 and OMD 5) and the propagation of certain serious infectious and mortal diseases (OMD 6).*

According to World Bank estimations, the increase in food product could make bascule 100 millions of people in a state of deep misery. Source: United Nations, Information Brochure, World Food Program (WFP), June, 2008.

¹³ - *Except the case of Vietnam and Peru, where, the welfare state of rural populations was positive. For these two countries, on average, the advantages outweighed the disadvantages of food price increase.*

¹⁴ - *The most likely remaining increase in food prices is largely justified by the following main facts:*

(i) *The subsidy policy geared at encouraging the production of ethanol. This switch in activity provokes more tension on demand for food products and exacerbates poverty for vulnerable populations.*

(ii) *The changes in climate due to CO₂ emissions from industrialist countries.*

(iii) *The population increase and the rigid supply of food production in developing countries.*

(iv) *The switch to free market economy (globalization) which shows a net deterioration of the situation for most developing countries.*

(iii) the commercial barriers, (iv) the exchange rates, (v) the internal taxation and subsidy of food products, (vi) the free market regulations, and (ii) the State capacity to intervene on the market.

- ***The degree of vulnerability*** as defined by WFP depends on (i) the level of intervention capacity, food, nutrition and poverty of the country, (ii) the volume of imported food products as compared to total imported goods, exported food products, and the stock of foreign currencies (iii) the relative importance of urban population, (iv) the level of already existing rates of inflation, and (vi) the proportion of populations which spend a significant percentage of their overall income on food products.¹⁵

The analyses made by WFP led to the identification of the countries that are more likely to be severely hit by food price inflation. The groups of population more subject to a negative impact of food price increase are those populations who:

- (i) buy more food than they sell (net buyers), and
- (ii) spend a substantial percentage of their income on food products.

Finally, the impact of food inflation depends on (i) the magnitude (intensity) of the price increase, and (ii) the degree of vulnerability of the country.

If till fairly recently, almost solely urban populations used to complain from the negative effect of food price push, the poor rural populations who buy more food products than they sell seem no longer at shelter from the effects of food price inflation.

Recent research findings stress the fact, that food price inflation often induces on behalf of poor populations a large span of sequential reactions such as (i) a mere attempt to find an extra job to help cope with the situation, (ii) an effort to reduce less vital expenditures, and (iii) get involved in prohibited and/or immoral activities.¹⁶

3.3- The importance of material and financial means in education

Material and financial means play an important role in pupils' learning process. In recent past, material conditions were thought to be completely alien to pupil's school attainment. For the French sociologist Bourdieu (P. Bourdieu 1960), material means are neutral and money has little to do in pupils' school performance. According to him, the factor that really determines school attainment is the "natural connivance" by which successful learners come necessarily from families whose parents are highly educated. This excludes all

¹⁵ - Look up: United Nations, Information Brochure, World Food Program (WFP), June, 2008.

¹⁶ - Look up: D. Maxwell, R. Caldwell, "The Coping Strategies Index: Field Methods Manual", Second edition (January 2008).

pupils from working class who can by no means have the necessary "cultural capital" that warrants school performance.

This belief is also found in some Anglo-Saxon authors who showed through empirical works that random shocks on parents' income had had no significant impact on pupil's school attainment.¹⁷

Many studies came to progressively put an end to these beliefs which often wrongly attribute the destiny of pupils in a monist fashion to either money or individual merits of learners.¹⁸

Nowadays, the importance of material means is more and more frequently put onto the scene by many researchers. The incapacity of parents to cater for their children's basic school needs in terms of books, copybooks, cloths, food, medical care, rest... constitutes a serious handicap in pupils' learning process and school progression. Fairly recently a study came to put the emphasis on the negative influence of problematic housing conditions on pupils' school performance.¹⁹

The majority of developing countries populations do not possess the necessary resources to meet their children school needs. For example, a significant proportion of the Algerian population live difficult month ends. A study carried out by the Algerian trade union for civil servants (SNAPAP) indicate that 76.71% of civil servants are constrained to contract debts to make ends meet.²⁰

¹⁷- S. John, 2000, "Does Parents' money matter?" *Journal of Public Economics*, 177, pp. 155-184.

¹⁸- Recent research works indicate, that school performance, is in fact a multifactoriel causality problem: « To understand the phenomenon of school success and failure, one has to take into account all dimensions that may intervene in the process : social dimension, cultural, economic, family, affective, medical, biologique, cognitive, pedagogic,... B. Geay and A. Meunier, *Cahiers de la recherche sur l'éducation et les savoirs*, n°2, 2003, pp. 7-19.

¹⁹- It is fairly reasonable to assume the existence of a negative effect of bad housing on pupils' capability of concentrating and grasping particularly during the afternoon classes. In fact, the influence of a high level of noise, damp overcrowded bedrooms, lack of toilets, etc.

There exists a substantial medical literature on the conditions of developing pulmonary disease Cuijpers & al. [1995] or Williamson & al. [1997], who strongly emphasize the role of bad housing on the development of asthma pathology. High level of noise hampers the ability of children to concentrate, grasp and memorize Larson & Petersen [1978].

²⁰- The study carried out by the trade union « Snapap » used an overall sample of 22 482 civil servants, 17 248 among them declared to have difficulty to make ends meet. Owing to the high cost of living and to the stagflation of their income, they are bound to spend more than they earn.

3.4- The heavy weight of food spending: Spectre of serious social and political difficulty.²¹

In most developing countries food spending largely outweighs all other expenses. Because of this fact and owing to the large number of children to grow, any increase in food price has dramatic consequence on vulnerable populations.²²

The United Nations index for Food and Agriculture shows that the price of food products increased by 7% in 2006, by 17% in 2007 and by 50% during the third trimester 2007 to the third trimester.²³

When taking into account, on the one hand, the data relating to the heavy weight of food spending in the budget structure, and on the other hand, the intensity of the ongoing food price increase, one may easily realize that we are facing a situation where in most developing countries all ingredients for malnutrition, health deficiency (Smith & al. 2006; Alderman et al. 2006; Pongou & al. 2005; Cornia et Deotti 2008; FAO 2008; Jensen et Miller 2008), bad school performance (Escobal et al. 2005), high populations migrations,²⁴ and social and political instability are present.²⁵

3.5- Poverty, exclusion and schooling

Poverty concerns all fragile social categories. These include those who:

- (i) live on social pensions;
- (ii) are seeking for a job, and;
- (iii) are "poor workers."²⁶

²¹ - Food price increase has already caused much social trouble in several developing countries. These last weeks, many spots trouble of rebellious groups were reported in Burkina Faso, in Cameroun, in Senegal, and in Morocco.

Source : AFP, Information Internationales : la hausse des prix alimentaires menace l'éducation des plus pauvres 15 April, 2008.

²² - A large family size has a negative impact on social destiny. This affirmation would have appeared most astonishing if it were not from Dominique Merllié and Olivier Monso for Insee studies. Their research findings clearly indicate that, the fact of having more than two brothers (or sisters), has a negative impact on social success. http://www.insee.fr/fr/ffc/docs_ffc/ref/FPORSOC07f.PDF

²³ - Look up « L'impact de la hausse des prix des denrées alimentaires sur la pauvreté des enfants au Mali », 13-14 novembre 2008, Bamako, Mali.

²⁴ - The works of the 14th conference of the occidental Mediterranean home ministers (CIMO or 5+5) held in Italy on 24 november 2009 emphasize the importance and the dangers of the illegal immigration and the extreme difficulty of developing countries to put an end to such alarming phenomenon.

²⁵ - These last years, most developing countries are witnessing a steep increase of hooliganism, violence and illegal immigration with all the risks and dangers for both, the settlers and for the host counties.

²⁶ - « Compte Rendu de la Mission Parlementaire sur la Pauvreté et l'Exclusion », B. Seillier, <http://www.Senat.fr>, 2nd July 2008.

Nowadays, to be regularly employed is by no mean an absolute guarantee against poverty and precariousness. In developing countries, a big jump or an even moderate increase in food price may push large groups of workers fall in the circle of poverty and misery.

Several studies came to the conclusion that the school system whose initial role was to fight inequality of chances and exclusion tends, on the contrary, to reproduce them and does not allow learners from poor families to aspire, according to their competence and their individual merits, to reach higher levels in the professional and social hierarchy ladder.²⁷ Very often the inequality of chances begins at primary level and it is quasi-irremediable. Further, all discriminative policies implemented at subsequent levels of education were vain (turned out unsuccessful).²⁸

3.6- First victims of food price inflation: The young children²⁹

The bulk of the studies carried out till now mainly insist on the financial incidence of food price inflation on macro-economic grounds. However, the induced poverty due to food price inflation has a negative impact on schooling conditions for the large majority of children from poor milieus. This in turn results in school difficulty (i.e. high rates of drop-out and repeat) and gloomy working life perspectives (for more details on the diverse impacts, read World Bank 2008).

4- Main study findings

The theoretical and the field work investigation led to the following main research findings:

4.1- Inflation process, low income families' financial conditions, and resource wastage

- The available and collected data clearly indicate the existence of a high degree of exposure of the country to any food inflation process. This stems mainly from the considerable negative disequilibrium between the level of the supply and the demand for food

²⁷ - The parliament report give some surprising data as it affirms that :

- 50 % of French children who leave school (dropout) are from 20 % of poor milieus;

- It is almost eight times more likely that a child whose parents fall within the 10 % of the poorest milieus lags behind (repeat) than a child whose parents fall within the first 10 % of the richest families;

- and nearly 60 % of the pupils whose parents are unqualified workers or idle are not « A level » diploma holders, versus only 13 % of children whose parents are teachers. <http://www.Senat.fr>, 2nd July 2008.

²⁸ - This means that any policy geared at enhancing the principle of equality of chances should be guaranteed and implemented at primary level of education.

²⁹ - In the context of food inflation, poor families are bound to reduce all expenditures. Since food spending is very often at its lowest level (incompressible), the only alternative is to try to reduce the other spending. Any cut in educational means is synonymous with school difficulty, bad performance, and hence, high rates of repeat and dropout.

products. The significant lack of balance between these two aggregates constitutes a serious index for a high degree of vulnerability of the country with respect to any food price increase in the world market (imported inflation).

- The numerous Tables (Tables 1 to 5) which refer to the « family financial situation » in the nine wilayate investigated show that the overwhelming majority of the families have considerable difficulty to make ends meet. This goes without saying that learning conditions for pupils can only be most deplorable on both (i) learning process and (ii) school attainment.

- Extra jobs of parents and children, social help, social loans, financial help from the government... seem to be insufficient to meet the needs of the majority of a large number of families in their efforts to keep all their children at school. This very alarming fact clearly appears from the handicapping (hindrance) set of situations lived by learners in their everyday school life (look up tables 6.1 up to 6.8). The lack material means doesn't only concern the pedagogic means, but it goes far beyond this. It includes a large span of vital needs such as nourishment, clothing, sleeping, health conditions...).

Hence, not only are children penalized on their daily food ration, on adequate clothing with respect to weather conditions, on transportation, on leisure..., they are as well very often deprived from their inalienable right to education. This state of affairs is both socially intolerable and morally unacceptable.

- The application of Student tests and Khi-squared tests on the collected data via the questionnaires clearly show that (i) in spite of slight (insignificant) differences in opinions, we are in most cases dealing with samples from the same population, and that (ii) answers from different types of population are independent from each other.³⁰

These statistical results clearly corroborate the idea that the poor financial condition is at the origin of the major difficulties for a large number of families to keep their children at school, and a serious difficulty for the children in their quest for educational benefits. In other words food price inflation is at the very root of a school wastage and public sector inefficiency.³¹

³⁰- Regarding to whether the financial constraint is really binding in the pupils' school difficulty, a large majority of respondents confirmed the vital importance of financial means in school achievement. The application of Student test to the answers from the different populations questioned indicated, in spite of some slight differences in opinions that the samples were from the same population. Moreover, the answers from the school heads masters, and teachers seem to be highly correlated ($cor = .9224$). Finally, the Khi-squared calculated value in most cases turned out very small and never reached 0.4.

³¹- The field work revealed a significant rate of children who lag one year behind compared to normal school age at primary level and two up to three years at the end of secondary school. This is indicative of the importance of school wastage.

4.2- Test of hypotheses

4.2.1- Hypothesis 1:

- According to the United Nations index for Food and Agriculture which shows that the price of food products increased by 7% in 2006, by 17% in 2007 and by 50% during the third trimester 2007 to the third trimester of the year 2008.
- According to the available data in the time span 1968 up to 2008 as shown in Tables and Graphs 1 and 2 referring to the consumption index as reported by World Bank (World Bank, 2008).
- According to the ONS statistics, the average rhythm of inflation in Algeria is 5, 7% for the first nine months of year the 2009.³²
- According to Pr Mebtoul in his article in the Algerian daily « Le Quotidien », quoting data from ONS, affirms that the rate of inflation is in constant increase. From 1, 6% in the year 2005, it climbed to the successive levels 3% in 2006, 3,5% in 2007, 4,5% in 2008 and was greater than 5,7% for the 10 first months of the year 2009.³³

In the light of the above data, it is safe to say that there is sufficient evidence that Algeria is going through a marked inflation upward trend, hence, hypothesis 1 should not be rejected.

4.2.2- Hypothesis 2:

- From the remarks formulated in the research background. Remarks which clearly indicate on the basis of many research findings that in most developing countries the overall income is devoted to food spending in a proportion that very often largely exceeds 50%.
- From the data collected in the nine wilayate investigated via the questionnaires for parents, 54, 52% of the respondents affirm spending more than 50% of their total income in food expenditure (look up Table 2 in the main study).

In the light of the above remarks, there is enough evidence that for an overwhelming majority of families, food spending is largely preponderant. Thus, one cannot reject hypothesis 2.

4.2.3- Hypothesis 3: The rate of repeat and dropout for the three consecutive years 2006 to 2009 as reported in the official documents of the Ministry of Education are indicative of (i) a substantial rate of repeat and dropout and (ii) an increasing phenomenon of school wastage. These figures can be summarize in the following table:

³²- Read the daily "Horizon" dated 24th, October 009.

Table 3: Overall rate of school failure.

School year	Repeat		dropout		Total	
	Number	%	Number	%	Number	%
2006/2007	907 316	11,95	425 692	5,61	1333008	17.65
2007/2008	1017814	13,57	501508	7,48	1519322	21.05
2008/2009	-	-	-	-	2488682	25.22

Source: Data from the Ministry of Education official documents (from Table 9 of the main study)

Data of Table 3 indicate a fairly high rate of school wastage and that this phenomenon is constantly increasing over time. From these aggregate, one may objectively figure out, that wastage rate would certainly be higher in poor regions of the country and particularly in rural milieus.³⁴

In the light of the data in figure 3, one may be inclined to accept the fact that there exists nationwide a high rate of school wastage, hence, hypothesis 3 should not be rejected.

4.2.4- Hypothesis 4 :

- The review of the research literature showed the importance of both material and immaterial means in school performance and pupils' attainment. In spite of confirming the above statement, the field work however, indicates on the basis of the opinions of all the populations concerned with school performance and educational management (pupils, parents, teachers, school headmasters, and education directors at wilaya level) that materials and financial means are in fact, determinant in learners' will to study and learners' school performance.

The incontestability of the vital importance of material and financial means in pupils' school performance stem from the set of Tables 6.1 up to 6.8³⁵ which refer to the "frequency of handicapping situations for pupils" throughout the nine investigated wilayate (look up these tables in the main study).

- Table 6-1- Pupils arriving at school without the necessary means to do their school work..
- Table 6-2- Pupils arriving at school without adequate clothes to take part in sports activity.
- Table 6-3- Pupils arriving at school without adequate clothes with regard to climate conditions.

³³- A. Mebtoul, University professor, international expert in economics, in the daily "Le Quotidien" dated 12th December 2009.

³⁴- Many research findings stress the fact that in most developing countries, it is poor rural milieus that are the main victims of the scarcity of resources in education

³⁵- The numbers of the tables correspond to the numbers of the tables in the study.

- Table 6-4 - Pupils too tired to perform school work.
- Table 6-5 - Pupils arriving at school without having breakfast.
- Table 6-6 - Pupils arriving at school without having lunch and who are hungry.
- Table 6-7- Pupils arriving at school without having done their homework.
- Table 6-8 - Pupils arriving late at school.

Further, the field work brought significant evidence which indicate that the solution to families and learners' school difficulty passes unquestionably by a significant and efficient help scheme with the view, if not to achieve equality of chances; at least reduce the hindrance gap between rich and poor learners.

- The data in Table 8.4 (main study) relating to the difficulty encountered by the pupils indicate that owing to lack of material and financial means, 52% of learners have serious difficulty in their day to day school life.

In the light of all these evidence, one is objectively inclined to accept hypothesis 4.

5. Conclusion

The study on the basis of both a theoretical investigation and a field work was able to produce enough evidence which establish a tight link between the recent steep inflation in food prices and a large span of school difficulties for learners especially those from poor milieus and rural areas. The negative incidence of the effect of the increase in food prices observable since 2006 seems, in the light of the evidence produced, to be incontestably at the very root of a considerable school wastage via repeat and school dropout rates at primary, mid-secondary and secondary level of education.

The public authority intervened with a set of financial and social measures to try to help needy families and pupils cope with the increasingly difficult economic situation. But, on the grounds, the implemented help measures (as they are perceived and appreciated by the beneficiaries themselves, by teachers and school masters) turned out insufficient and inadequate. These measures need therefore reconsidering to be more efficient and really helpful to those populations that desperately need help.

6. Recommendations

To be efficient any investment project should make sure that money is well spent. Well spent means in our context the imperative need to devise a discriminative help scheme. Such scheme should be geared to help those people who really need help first. In so doing the investment scheme is likely to produce maximum effect. If it is true that because the low level of income of the majority of the populations, all youngsters who attend school in developing countries deserve to be helped, nonetheless, in the context of scarcity of resources one should observe some pre-set priorities.

6.1- Recommendation 1: Equality of chances.

As we pointed out earlier in the research background, the inequality of chances begins at primary school and it is quasi-irremediable afterwards, and all remedy policies that were implemented at subsequent levels of education to put things on the right track, were unsuccessful. We should therefore, put the emphasis on helping with more acuity pupils at primary level of education.

6.2- Recommendation 2: The necessity to devise a set of preventive actions through a “veil cell”

A pupil who repeats a course and/or drops out is a learner who has difficulty. This can be detected before the process reaches a critical boundary. It is therefore worthwhile to develop and implement a scheme through a “veil cell” capable of scanning and detecting fairly early pupils weaknesses and try to remedy the situation casuistically (case per case) whenever possible. In our case, the field work indicated that repeats and dropouts were in most cases due to the inability of parents to meet the ever increasing cost of their children school needs. The suggested veil cell would precisely be in charge of identifying those parents and pupils who can no longer cope with the situation and try to remedy the situation using all adequate means.

6.3- Recommendation 3: Generalization of preschool system

Many research findings stress the fact that children who fail in their studies very often belong to those families with low financial income and/or from popular origin. The C.R.E.S.A.S ³⁶ firmly affirms that poor school performance is very often attributable to poor spoken language level of pupils from disadvantaged socio-economic milieus (use of incorrect

³⁶- Study carried out over ten years by the French « Centre de Recherche de l'Education Spécialisée et de l'Adaptation Scolaire (C.R.E.S.A.S.). The study findings titled « l'échec scolaire n'est pas une fatalité » Author : [C.R.E.S.A.S.](#), 1982, p. 72.

language forms, weakness of vocabulary, use of wrong syntaxes, inability to properly use certain language functions). The introduction and generalization of a preschool system with the mission to help those children with poor language acquisitions compensate their language deficit will be a significant step towards educational equality of chances. With such new educational mission, pupils from families suffering from the severity of the ongoing food price inflation will have the opportunity to compensate their language handicap and will be better prepared in their quest the acquisition of knowledge.

6.4- Recommendation 4: More dynamistic (vigorous) role for parents' association

Totally absent on the grounds, the parents' association should play a more dynamistic role. The importance of this organization need not be discussed. Parents who live a substantial time with their children are in a better position to find appropriate solutions to many of pupils' difficulty.

6.5- Recommendation 5: Creating a help networks

Whatever, the form or the importance of the government's helps, this can by no means be a miracle solution to all problems of poor families. It is wiser and more constructive to think of a set of specific alternative actions that constitute a more reliable and durable shield against the negative effects of inflation or the constant rise in the cost of living. The creation of a network of help actions is most suitable under the circumstances. The help measures that can be deployed could take the form of a series of material and immaterial actions. It would be worth regenerating the "Touiza"³⁷ spirit that played a versatile and efficient role in the recent past years.

³⁷ - Touiza is a form of social solidarity between the populations. Solidarity, in helping one another in case of difficulty (death, illness, economic difficulty; natural cataclysm...).

7. References

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