Stavros Niarchos Foundation

“ΔΙΑΤΡΟΦΗ” Program Evaluation

23\textsuperscript{th} July 2014
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The management of the Stavros Niarchos Foundation (hereafter referred to as the “SNF” or the “Foundation”) appointed Deloitte to evaluate the performance of the “ΔΙΑΤΡΟΦΗ” program. The program was funded by the SNF, as part of the “Initiative Against the Crisis”, and run by Prolepsis. The Program has addressed students attending public schools located in socioeconomically vulnerable areas. The project’s scope was to perform an independent evaluation of the program’s performance and provide recommendations on the way-forward.

The program has been running from 2012 and so far includes a short pilot phase, and two full year Cycles. The assessment of the program has been performed through primary and secondary research and analysis. Meetings with Prolepsis team and SNF management were performed to understand the objectives and the rational behind the funding and structure of the program.

The analysis focused on five distinct evaluation criteria (Program Relevance, Effectiveness, Efficiency, Impact and Sustainability) and provided conclusions as to the program’s ability and the Prolepsis executional capacity to address the needs of the target population and make a difference in the lives of the beneficiaries. In addition, international best practices and benchmarks were used and combined with insights provided by the Deloitte global network, including the Monitor Institute.

The Program’s objectives appeared to be relevant to the needs of the society and largely met by its overall performance. Mandated by a dual objective (i.e. alleviate immediate needs of the economic crisis and promote healthy nutrition), the Program is addressing nutrition as a means to achieve better school performance and sustain a healthy living.

The school selection process, appears to be in line with the objectives of the grant, as it prioritizes them based on their eligibility on a number of criteria that are approximating food security status. Within the framework of a program running with limited funds, it seems that cost elements could be incorporated in the process, in order to increase its cost-effectiveness.

According to the design of the program, one of the main decisions made was to avoid students’ stigmatization. Prolepsis along with the SNF decided to apply a free-for-all approach. Although there are examples of other countries introducing more flexible approaches with tailored payment schemes, it can be advocated that any orientation towards partial payment or even partial distribution to children, would need a wider out-of-school collaboration with the appropriate mechanisms that could have access to the financial data of the served families.

In the short run, the identified beneficiaries’ willingness to pay can be used through a volunteer basis and a careful marketing approach. This can help the program identify acceptance of any payment scheme, while it will also recover part of the budget that was directed to better off students within vulnerable environments.

The program has exceeded the initially planned goals in terms of school admissions, in both cycles, but it could have achieved greater results if the school selection process was more front loaded. This could have achieved a longer average tenure in the program for students and increase the program’s effectiveness.

There were no clear goals set for the health initiatives, nevertheless, parents appear to have been satisfied more with health promotion compared to other program activities.

Although the program appears to have a positive effect on most areas, there are indicators of poorer performance in some others, with tenure and educational level in the program clearly affecting the overall performance. Other parameters, such as parents’ unemployment and family’s affluence can affect overall effectiveness.

The program’s increase in geographical dispersion led to an increase in the suppliers’ cost; however, the overall cost per meal was reduced in Cycle B, while its overall synthesis was improved. This was mainly a result of better agreements with the school canteen operators. It must also be noted that in Cycle B the program doubled the amount of fruit and protein-rich foods like cheese and chicken and increased total calories, while only marginally increased direct meal costs, indicating more intense negotiations with suppliers.

The analysis suggests that the incorporation of cost elements in the selection process would increase cost-effectiveness among schools with similar characteristics, ideally through the application of a predictive model that can assess the program’s impact.

Apart from its direct contribution to the beneficiaries, the program appears to have an even greater economic impact to the country. It is estimated that, overall, the program has created more than double of its initial economic activity in industries related to its operations. At the same time, there are indicators of increased school performance, reduction of absences and drop outs as a result of eating breakfasts at schools. These need to be part of an overall strategy to develop a tool that can provide policy insights in areas such as education, health and social welfare.

The introduction of randomized control groups can test different hypotheses in order to improve the program and its positioning as a forerunner of a wider policy orientation on healthy nutrition at schools across Greece. Different behavioral patterns were recognized through the analysis that can support such a need.

The promotion of “healthy environments” that can sustain a favorable nutritional behavior requires a wider collaboration of stakeholders. In the short to medium run, current and future stakeholders from the private sector shall be encouraged and incentivized to actively support the program through their Corporate Social Responsibility (CSR) policies. An enlarged ecosystem includes actors across different aspects of a more permanent solution, such as the retail operators, the Government, the industry, food access organizations, “change – makers”, etc.

In Greece, a number of isolated endeavors have emerged until today, without utilizing possible synergies of an overall sustainable solution, while some of them are also attracting reservations about their overall effectiveness. The way forward includes the development of an analytics platform that can support policy orientation, as well as the promotion of a more permanent solution that includes a wider collaboration, with the participation of the Government.
Introduction
GDP Evolution

The GDP evolution shows the setback of the Greek economy since the beginning of the economic crisis in 2008.

At the end of 2013, the size of the economy had contracted by 26% in real terms compared to the beginning of the crisis. This is by far the greatest contraction among southern European economies over the same period: Spain: -6.8%; Portugal: -6.9%; Italy: -7.5%. Such deep and drawn out a recession has no precedent in the peacetime economic history of most advanced economies.

Unemployment

The most distinct feature of the Greek social landscape in the current crisis is the steep rise in joblessness. The unemployment rate was fluctuating around the 10% mark in the first half of the 2000s. It then began to fall until May 2008, when unemployment figures reached their lowest level for over a decade (325,000 workers or 6.6% of the labor force). Thereafter, the unemployment rate started to steeply rise, reaching an average 12.5% in 2010 and 26.1% in 2013. In Dec 2013, the number of jobless workers was almost 1.4 million and the unemployment rate at 27.2%.

As presented below, the majority of unemployed people reside in Attica and Central Macedonia, accounting for about 55% of the total unemployment group, while South Aegean, Central Macedonia and Epirus are the regions with the highest number of unemployed people as a percentage of their population:

<table>
<thead>
<tr>
<th>Region</th>
<th>Unemployment Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attica</td>
<td>36%</td>
</tr>
<tr>
<td>C. Macedonia</td>
<td>19%</td>
</tr>
<tr>
<td>Western Greece</td>
<td>8%</td>
</tr>
<tr>
<td>Thessaly</td>
<td>7%</td>
</tr>
<tr>
<td>Eastern Macedonia &amp; Thrace</td>
<td>6%</td>
</tr>
<tr>
<td>Central Greece</td>
<td>5%</td>
</tr>
<tr>
<td>Peloponessse</td>
<td>4%</td>
</tr>
<tr>
<td>Crete</td>
<td>4%</td>
</tr>
<tr>
<td>Western Macedonia</td>
<td>3%</td>
</tr>
<tr>
<td>Epirus</td>
<td>2%</td>
</tr>
<tr>
<td>Ionian Islands</td>
<td>2%</td>
</tr>
<tr>
<td>South Aegean</td>
<td>1%</td>
</tr>
<tr>
<td>North Aegean</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: OAED, Feb 2014

Highest relevant Unemployment
Risk of Poverty – Social Exclusion

The household income in Greece reached its peak in 2010 and within the next two years it recaptured the levels of 2005 – 2006. The relative poverty threshold, set at 60% of the national median disposable income followed a declining course leading to an increased number of households below the poverty level.

In 2012, more than 35% of the population in Greece was at risk of poverty or social exclusion compared to 29% during the period 2005 – 2006. Given that the 2012 median income and the relative poverty threshold were similar to those of 2005, it can be inferred that apart from household income, additional parameters have negatively affected social welfare in Greece.

Overall, more than one in three people in Greece fall within one of the three following categories: at-risk-of-poverty\(^1\), severely materially deprived\(^2\), or living in households with very low work intensity\(^3\).

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**Disposable Income**

The prolonged recession in Greece had also a significant impact on the personal disposable income, which has contracted since the beginning of the crisis by more than 14%, while in Spain the reduction was 12.8%, in Italy 11.9% and in Portugal 6.7%.

**Evolution of Real Personal Disposable Income, Annual % change, 2008 – 2014*\**

Source: Economist Intelligence Unit (EIU), accessed on 06/2014

*Forecast

**Geography of Average Income**

The regions with the highest average income are mainly located in central Greece, the Aegean islands and Crete. At the same time, the "poorest" regions in Greece are located in parts of Northern and Western Greece.

**Geography of Average Income**


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\(^1\) Persons at-risk-of-poverty are those living in a household with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalized disposable income (after social transfers).

\(^2\) Severely materially deprived persons have living conditions constrained by a lack of resources and experience at least 4 out of the 9 following deprivation items: cannot afford 1) to pay rent/mortgage or utility bills on time, 2) to keep home adequately warm, 3) to face unexpected expenses, 4) to eat meat, fish or a protein equivalent every second day, 5) a one week holiday away from home, 6) a car, 7) a washing machine, 8) a colour TV or 9) a telephone (including mobile phone).

\(^3\) People living in households with very low work intensity are those aged 0-59 who live in households where on average the adults (aged 16-59) worked less than 20% of their total work potential during the past year. Students are excluded.
By far, the highest expenditure of poor households is food, as it constitutes 33% of the total expenditures. Together with housing costs, they represent the 56% of total expenditure, while the respective percentage for non-poor people is only 32%.

**Introduction**

**Greece in Crisis**

**Inability to make ends meet**

According to Eurostat, 91% of households in Greece struggle to make ends meet, a figure that is steadily increasing since 2004, indicating the relatively low effectiveness of social welfare policy in Greece (an increase of 21 percentage points since 2004).

**Household Expenditure by Poverty Status**

Poor population\(^1\) spends on average EUR 344 per month on goods and services, while non-poor population\(^1\) spends almost 3-times more (EUR 1 078). Out of the total expenditures, poor population\(^1\) spends EUR 115 on food on a monthly basis, or about EUR 3.78 daily.

**Reasonable Living Expenses**

Recently, in 2014, the Ministry of Development, in cooperation with the Ministry of Finance, conducted a study to determine the reasonable living expenses of a household. The monthly total of these costs is foreseen to act as a benchmark to assess the ability of each borrower to service its debt obligations.

The goods and services that households consume are classified into four groups, based on the necessity of their role. The 1st Group includes basic survival needs, such as food, clothing, utilities expenses, transportation, health, education, etc. The 2nd Group included additional food needs, the 3rd Group additional goods and appliances, and the 4th Group additional expenses on alcohol drinks and tobacco, airline transportations, vacations and sports.

**Relative spending across the rest of the categories in indicative of the inability of the poor population\(^1\) to sustain a quality of living that provides incentives for healthier nutrition.**

\(^1\) A person is categorized as poor or non-poor, depending on whether is below or above the relative poverty threshold defined at 60% of the national median total disposable income.

\(^2\) Expenses do not include government taxes, rent payment, and loan installments

\(^3\) Based on European Union Statistics on Income and Living Conditions (EU-SILC) data
Introduction

Effect on Children

The economic crisis appears to have a severe, multi-dimensional negative impact on children, resulting in child poverty. Adverse economic conditions also negatively influence food choices and eating habits, further threatening the health of children through malnutrition.

Child Poverty

According to Eurostat, in EU 27 (except Ireland) the number of people under the age of 18 at risk of poverty1 is estimated at 19.4 million, representing approximately 4% of the EU population, but also 23% of the population at risk of poverty, indicating that the problem is significantly higher among children.

<table>
<thead>
<tr>
<th>Children at Risk of Poverty</th>
<th>As % of the EU population</th>
<th>As % of the population at risk of poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 27</td>
<td>21%</td>
<td>25%</td>
</tr>
<tr>
<td>Romania</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Spain</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Greece</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Italy</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Latvia</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Malta</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Hungary</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Croatia</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Portugal</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Poland</td>
<td>18%</td>
<td>21%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>16%</td>
<td>19%</td>
</tr>
<tr>
<td>France</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Austria</td>
<td>14%</td>
<td>15%</td>
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<tr>
<td>Estonia</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Belgium</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Germany</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Sweden</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Cyprus</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Finland</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Denmark</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Eurostat, 2012

Child poverty remains at high levels; 20.8% children in Europe are at risk of poverty. In Greece, the figure has reached 26.9%, which constitutes one of the highest rates in the EU, along with Romania, Spain and Bulgaria.

Children at Risk of Poverty in EU, as a % of children population, 2012

On average, the percentage of children at risk of poverty remained relatively constant between 2008 and 2012. Nevertheless, there were remarkable variations between the countries; for the UK the rate decreased by 5.5%, in Croatia increased by 6.5% while in Greece and France by 3.4%.

The causes of child poverty2 include household’s poverty, government policies, lack of education, unemployment, social services, disabilities and discrimination.

The increase in child poverty in Greece between 2011 and 2012 is by far the largest recorded in Europe. This development, far departed from the target to reduce child poverty by 18% until 2020 under the Europe 20204 agenda.

Children Poverty in Greece, (Number of children in thousand, 2008-2012)

In Greece in 2012, the population of poor children reached 521 thousand. Around 363 thousand of these children were in school age (between 6 and 17 years old).

The rate of children at risk of poverty or social exclusion in Europe (AROPE)3 remained relatively steady between 2005 and 2012 ranging from 26.3% to 27.9%. In Greece, the percentage of children at risk of poverty or social exclusion by 2010 was relatively stable, with a slightly upward trend, which from 2011 onwards surged. Between 2011 and 2012, the children at risk of poverty or social exclusion increased by 89 thousand or 14.9% while the corresponding increase in the total population was 11.5%.

Children at Risk of Poverty or Social Exclusion as a % of Children, 2005 - 2012

Source: Unicef, 2014

1 Persons at-risk-of-poverty are those living in a household with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalized disposable income (after social transfers).
2 The AROPE indicator is defined as the share of the population in at least one of the following three conditions: 1) at risk of poverty 2) in a situation of severe material deprivation, 3) living in a household with a very low work intensity.
4 Europe 2020 is a 10-year strategy proposed by the European Commission on 3 March 2010 for advancement of the economy of the European Union.
Obesity amongst children

Two out of ten boys and one out of ten girls are obese in OECD countries. The obesity epidemic continues to spread, and no OECD country has seen a reversal of trends since the epidemic began. Until 1980, fewer than one in ten people were obese in OECD countries. In the following decades, rates doubled or tripled and are continuing to grow.

In Greece, child obesity appears to have doubled during the last decade according to data from the Hellenic Medical Association for Obesity (EIEP).

Below, is the percentage of obesity amongst the 15-year old population group.

From the distribution of obese students in Greece, it appears that Rhodes, Chios, Lefkada, Zakynthos and Kilkis present the highest percentage of obese students, while in the large urban centers such as Attica, Thessaloniki and Patras the problem seems to be relatively mild.

Compared with the distribution of household income in Greece, there seems to be a tendency of increased obesity in areas of mainland with relatively low household incomes and also in some areas with significantly high incomes. This is indicative that obesity can be linked with both poorness and malnutrition practices.

Obesity by sex category, as % of 15-year old population, 2009 - 2010,

More than 15% of adolescents in southern European countries (Greece, Italy, Portugal and Spain), as well as in Iceland, Luxembourg and Slovenia report overweight or obese conditions. Fewer than 10% of children in Denmark, France and the Netherlands report to suffer from obesity.

Problems related to overweight, obesity as well as physical inactivity tend to start in childhood, and often disproportionately affect disadvantaged socioeconomic groups. Lower socioeconomic status, physical inactivity, food & nutrition and obesity appear to be associated.


Fruits & Vegetables Consumption

Nutrition is important for the development and long-term health of children. Eating fruit during adolescence, for example, instead of high-fat, sugar and salt products, can protect against health problems such as obesity, diabetes, and heart problems. Moreover, eating fruit and vegetables when young can be habit forming, promoting healthy eating behaviors for later life. Thus, fruit and vegetable consumption receives a high priority in most European countries.

There are many studies supporting a relationship between income level and fruit and vegetable intake; low-income groups tend to consume lower amounts of fruit and vegetables than higher income groups. As presented below, Greek children consumption of fruits & vegetables appear to be below their European peers, even some of those with significantly lower GDP/capita.

Fruits & Vegetables Consumption
Daily consumption, as a % of total, 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>34%</td>
<td>30%</td>
</tr>
<tr>
<td>Romania</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td>Germany</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td>Belgium</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td>Portugal</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>Italy</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>France</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Austria</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Spain</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Ireland</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>EU-24</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>31%</td>
<td>30%</td>
</tr>
<tr>
<td>Finland</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Greece</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>Hungary</td>
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<td>28%</td>
</tr>
<tr>
<td>Estonia</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>Sweden</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>Latvia</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td>Poland</td>
<td>30%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Source: OECD, 2013


Although Countries like Slovakia and Romania have lower GDP per Capita than Greece, they appear higher on the list than Greece.
Schools

In Greece there are more than 13,300 schools educating around 1.3 million students. The vast majority (92%) of these schools are public, while there are about 1,000 private schools nationwide.

Most of the school units (77%) are pre-school and primary level and serve about 59% of students. Only 23% of the school units are part of the secondary education, serving 41% of students.

38% of schools and 43% of students in Greece are located in Attica and Central Macedonia, including Thessaloniki.

Apart from Attica and Central Macedonia, the rest of the schools in Greece are highly dispersed within regions.

The distribution of students nationwide follows, more or less, the distribution of schools. A similar picture can be found on the data for private schools.

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Distribution of School Units Per Education Level (%)

35% Pre-School
42% Primary Schools
13% Gymnasiums
10% Lyceums

Source: ELSTAT, accessed on 06/2014

Distribution of Public Schools per Region

As a % of total, school year 2012 – 2013

Source: ELSTAT, accessed on 06/2014

Distribution Public School Students per Region

As a % of total, school year 2012 - 2013

Source: ELSTAT, accessed on 06/2014
**Early Leavers - School Dropouts**

According to Eurostat, an improvement has been recorded in Greece in relation to early school leavers.

In 2012, the percentage of early school leavers in the country declined to 11.4% from 13.1% in 2011, while the average in the EU (28-countries) declined at a slower pace from 13.5% to 12.8%. Spain (24.9%), Malta (22.6%) and Portugal (20.8%) have the highest rates of early school leaving although these figures have been improved since 2011.

According to the same data for 2013, Greece presents a lower percentage of early school leavers than the EU average (28-countries). Eastern Macedonia & Thrace region, Central Greece, Aegean Islands & Crete seem to face the bigger problem. At the same time, in Attica and Thessaly, the rate of early leavers is quite low (7% and 8% respectively).

The 2020 target rate for Greece is set at 9.7%. According to the same data, figures for girls are significantly better than boys, as the number of girls who drop out of school is 24% lower than that of boys.

**Early School Leavers**  
(2011 - 2013)

<table>
<thead>
<tr>
<th>Region</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Macedonia &amp; Thrace</td>
<td>22%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Central Greece</td>
<td>15%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Aegean Islands &amp; Crete</td>
<td>9%</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Ionian Islands *</td>
<td>11%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Peloponnese</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Central Greece</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>EU-28 Average</td>
<td>12%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Greece - Average</td>
<td>12%</td>
<td>13%</td>
<td>13%</td>
</tr>
</tbody>
</table>

**Academic Performance**

Over the past decade, the OECD Program for International Student Assessment (PISA), has become the benchmark for evaluating students’ academic performance.

All 34 OECD member countries and 31 partner countries and economies, totaling 65 countries, participated in PISA 2012. Greece appears to be relatively low in the countries’ ranking, as it took the 42nd place. Compared to the previous measurement in 2009, Greece has fallen 14 places in the list, with an average decrease of 1%, in comparison to the average of the OECD countries that has remained unchanged.

The above indicate a steady tendency of the children to stay within the school environment, especially in urban areas. At the same time, their performance is lagging behind their European peers.

**Latest PISA Results**  
(Average Test Scores, #Ranking)

<table>
<thead>
<tr>
<th>Country</th>
<th>OECD 2009</th>
<th>OECD 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>#31</td>
<td>#31</td>
</tr>
<tr>
<td>OECD</td>
<td>0%</td>
<td>-1%</td>
</tr>
</tbody>
</table>

Source: OECD PISA Results 2009 & 2012

The above indicate a steady tendency of the children to stay within the school environment, especially in urban areas. At the same time, their performance is lagging behind their European peers.

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1 PISA assesses the extent to which 15-year-old students have acquired key knowledge and skills that are essential for full participation in modern societies. The assessment, which focuses on reading, mathematics, science and problem-solving.
Summary

As presented earlier, the economic conditions in Greece have deteriorated significantly since the beginning of the crisis. Economic output, employment, and income all remain far below pre-crisis levels. Employment has plunged with more than 1 million job positions lost since 2008 and unemployment remains high. The majority of unemployed population is located in Attica and Central Macedonia, while South Aegean appears to have the highest unemployment rate across all regions in Greece.

Falling wages have compounded household income losses. Some of the poorest areas, in terms of average disposable income per capita, are located in Northern Greece. The consequences of these labor-market difficulties have been felt strongly, with 35% of the population at risk of poverty or social exclusion.

These developments also left a lasting mark on vulnerable groups such as children. Greece exhibited the largest increase in child poverty in Europe, far exceeding the increases in other European countries during the same period. Specifically in 2012, 363 thousand children aged between 6 and 17 in Greece were in poverty. This accounts for 18.7% of all children in that age.

In Greece and based on reasonable living expenses as devised by the Greek Government, the monthly needs of a child sum up to EUR 221 to service its basic needs. On a daily basis, the child needs EUR 3.78 to cover basic food needs. Based on the poverty threshold this can be reduced to EUR 2.44 daily.

The changes in the socioeconomic condition of children, also affected children’s eating habits. The prevalence of childhood obesity increased over the latest years in Greece, which also has one of the highest rates worldwide. Children in Greece appear to consume less fruits and vegetables compared to other countries. At the same time, the country’s milk and yogurt consumption, has dropped over the last years, due to an increase in the milk prices.

School has been internationally recognized as a means of improving the health and wellbeing of students. The vast majority (94%) of the students in Greece attend public schools. 40% of public school students are concentrated in Attica and Central Macedonia, and most of them are at pre-school and primary level units. Although Greek students appear to be in line with the EU average in terms of early school leavers, they are ranked quite low in terms of academic performance.
Introduction

The response to the crisis

Stavros Niarchos Foundation

The Stavros Niarchos Foundation (hereafter referred to also as the “SNF” or the “Foundation”) is one of the world’s leading international philanthropic organizations making grants in the areas of arts and culture, education, health and medicine and social welfare. The Foundation funds organizations and projects that exhibit strong leadership and sound management and are expected to achieve a broad lasting and positive impact for society at large. The Foundation also seeks actively to support projects that facilitate the formation of public-private partnerships as an effective means for serving public welfare.

The Stavros Niarchos Foundation offers grants solely to non-profit organizations. It does not solicit or accept donations from individuals, companies or other organizations. Additionally SNF does not make donations or offer scholarships to individuals however supports them through numerous actions and programs of the non-profit organizations it supports. From 1996 until today the Stavros Niarchos Foundation has approved grant commitments of more than EUR 1.08 billion in 110 nations around the world.

The “Grants Against the Greek Crisis” Initiative

Since the beginning of 2012, SNF has allocated EUR 100 million in grants aiming to help alleviate the severe consequences of the financial crisis in Greece and assist those most in need to navigate through these difficult circumstances in the least painful way possible. The grants are allocated in various programs and initiatives, such as the herein evaluated “Food Aid & Promotion of Healthy Nutrition” program of Prolepsis; the “Education in Philanthropy” program which concerns the development of two complementary educational programs aiming to support the creation of a widespread philanthropic culture; the “Mobile Medical Units” program which is run in collaboration with the Olympic Village Polyclinic with the aim of offering health care programs to residents of islands and remote areas throughout Greece; the “Support for Visually Impaired People” program which focuses on independent living and the social and psychological support of visually impaired people, and “Syn sto Plyn” program which is run by Praksis and includes the “Social Housing” and the “Day Centers” subprograms.

SNF is directing its support to non-for-profit organizations that focus on helping those that are most vulnerable. However, the crisis is far reaching and is impacting every level of society, including non-for-profit organizations of every shape and form that have been offering valuable services to the public in many different areas. Many of such organizations have experienced a severe reduction in their budgets, and have seen support wither away. As a result, they are facing a serious crisis that is restricting dramatically their ability to function properly and to offer many of their programs and services. Althought, some of these organizations and their programs may not serve directly the purpose that defines the initiative, SNF has chosen selectively to support a number of them, since SNF believes that their services have a significant impact, and that the loss of such services at a time like this will be a major loss to society at large. Thus far, more than 180 organizations has been supported by the “Grants Against the Greek Crisis” initiative of SNF.

Source: www.snf.org

Food Aid & Promotion of Healthy Nutrition Program

The Food Aid & Promotion of Healthy Nutrition “ΔΙΑΤΡΟΦΗ” Program is an initiative undertaken by the SNF in collaboration with Prolepsis Institute. The Program is addressing to students attending public schools located in socio-economically vulnerable areas. The Program has a dual aim, as it provides all students participating with the opportunity to receive a daily free-healthy meal, which covers 24-31% of the students’ daily energy needs and 53-64% of their recommended daily protein requirements. At the same time, the Program introduces to schools and through the students to families, new nutritional models and habits that promote a healthy lifestyle. By providing specially designed materials and organizing educational events and activities, the Program supports healthy eating and the overall promotion of health, ensuring that the benefits of the Program will have a positive impact on both the contemporary citizens and residents of Greece, and its future generations.

Prolepsis’ objectives

The Institute of Preventive Medicine, Environmental and Occupational Health Prolepsis is a non-profit organization, active in the field of medical research, health promotion, environmental and occupational health since 1991.

Prolepsis consists of a multi-disciplinary team of experts including physicians, epidemiologists, public health and health promotion specialists, nutritionists, communications specialists, sociologists and economists. Through the programs and actions that the Institute has undertaken, it encourages interdisciplinary and international collaborations and creates networks of cooperation within the Greek and European, as well as the international framework.

For 20 years now Prolepsis has operated in the field of Public Health by:

- Offering specialized services in the fields of medical research, data management, organization of integrated health education and health awareness campaigns.
- Providing consultancy services for the prevention, the proper handling of workplace risks as well as for the evaluation of environmental risks.
- Advancing research methodology in the field of health and preventive medicine.
- Supporting education in public health and medical research issues.
- Encouraging interdisciplinary and international co-operation and creating networks of collaboration.

Prolepsis has collaborated with various public organizations and banks such as Ministry of Health, Ministry of Labor and Social Protection, the Hellenic Center for Disease Control & Prevention (HCDCP), the National Bank of Greece, the Agricultural Bank of Greece (ATEbank), universities such as the National and Kapodistrian University of Athens Medical School, other private institutions such as SNF, Alumminon, TITAN, and a number of pharmaceutical companies, such as Novartis, Pfizer, Bristol Myers-Squibb, Wyeth, Sanofi Aventis.

Source: diatrofi.prolepsis.gr

Source: www.sfn.org
Evaluation Methodology

The Evaluation Framework

Introduction

The evaluation methodology followed in this report is based on the deployment of five (5) criteria that address the performance of a program. Each program starts with a set of objectives that should answer some identified need(s) at the external environment. The objectives are translated into a program that receives inputs (i.e. funding and other resources) and through structured activities delivers a set of outputs. These outputs should be responsible for the desired initial outcomes, which in their turn should be routed back to the program objectives. The long-term outcomes challenge the sustainability of the program, as they alleviate the societal problems addressed by the program and thus reduce the need for the program itself.

The Evaluation Framework

The Evaluation Process

The assessment of the Program towards the criteria has been performed through primary and secondary research and analysis, on the basis of evaluation questions and evaluation criteria. Quantitative and qualitative data were requested and collected by Prolepsis and follow-up meetings were performed to gain a better understanding on the operational assumptions that pertain them.

Additional meetings were performed with the Prolepsis team and the SNF management to understand the objectives and the rational behind the funding and structure of the Program, as well as all the components of the value and supply chains. A number of working visits were performed at the offices of Prolepsis. Due to the schools’ summer break, no on-site visits to schools were performed.

Primary research involved distribution of questionnaires to students’ parents through the Prolepsis admin mechanism. These questionnaires were sent out to principals of schools that had participated in the Program, or applied for participation in the next period. The goal was to form distinct target groups that will assist in understanding the evolution of each group’s perspectives regarding the Program. However, due to the timing of this evaluation, most schools were closed and questionnaires were only collected from students in Attica and Thessaloniki region. Furthermore, requested absence and grades data was only available for primary schools in Athens. Overall, the primary research collected data for about 1 200 students.

Results of the questionnaires were received and used to test different hypotheses as well as to support in gaining deeper insight regarding the evaluation criteria. It must be noted that the end year assessment of Prolepsis had not been completed at the time of this evaluation and thus, no results on the effectiveness of Cycle B were available.

Secondary analysis, focused on data, reports, documents and other relevant material that were provided by Prolepsis. Data was analyzed through a basic statistical approach, benchmarked against initial objectives and best practices from similar programs where available and formed the basis of the conclusions and recommendations.

In addition, the Net Promoter Score (NPS) Methodology was used to assess the overall satisfaction of the various stakeholders of the Program. The Net Promoter system begins with scores from customer surveys with questions such as the following: “On a scale of 0 to 10, how satisfied were you from the Program?” Ratings of 9 or 10 indicate “promoters”; 7 and 8, “passives”; and ratings from 0 to 6 indicate “detractors”. The Net Promoter score is the percentage of promoters minus the percentage of detractors.

Net Promoter Score Methodology

<table>
<thead>
<tr>
<th>How likely is you would recommend us to a friend?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely likely</td>
</tr>
</tbody>
</table>

Net Promoter Score (NPS) = % - %

The Evaluation Pillars

Relevance: The extent to which the objectives of the program were relevant to the strategy and priorities of SNF and Prolepsis and the needs of the target group.

Effectiveness: A measure of the extent to which an aid activity attains its objectives. It assesses the extent to which the actual outcomes of the program were consistent with the desired outcomes and whether the program was actually responsible for the actual outcomes observed.

Efficiency: The cost of inputs with units of outcomes in relation to the cost of inputs with units of outcomes (technical efficiency) and whether the objectives were met with the most economically efficient way.

Impact: The longer term effects to the beneficiaries affected directly or indirectly by the program. The measure of whether the outcomes of the activities are likely to continue after funding has been withdrawn.

Sustainability: A measure of the program’s leveraging power to sustain a culture that will foster social welfare addressing the same needs.
Relevance
Relevance

The Identified Need

As described before, the economic crisis has significantly affected vulnerable population groups such as children. In many parts of Greece, phenomena of food insecurity, which was until recently considered a characteristic problem of developing countries, are now emerging with great significance. Food insecurity in the form of moderate or severe hunger directly affects the health, development and prosperity of the child population.

More specifically, inadequate food intake in children is associated with a number of serious health, behavior, and cognitive deficits. Children who are food-insecure are in poorer health and are more likely to be developmentally “at-risk” than non-food-insecure. Children who experience food insecurity are more likely to have insecure attachment relationships and to perform more poorly on tests of cognitive development.

At the same time, child food-insecurity is also associated with a greater risk for being overweight. There is evidence that food insecurity can result to malnutrition, lower diet quality, less variety and poor nutrition programming, all of which can contribute to being overweight and overeating.

Greece has one of the highest rates of adult, adolescent and childhood obesity in the EU. This reality corresponds to the findings of several studies that have identified obesity as an indicator of poverty, as under conditions it can affect lower socioeconomic classes.

The malnourishment of children and childhood obesity are considered as two sides of the same coin and therefore practical initiatives are needed to support students and their families in a sensitive, transparent and accountable manner.

At an international level, the problem has already been diagnosed and the prevention and treatment of children malnutrition and childhood obesity constitute the top priorities of the World Health Organization and of the European Commission.

Food Insecurity

According to the World Health Organization, food security is existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”. Commonly, the concept of food security includes both physical and economic access to food that meets people’s dietary needs as well as their food preferences. In many countries, health problems related to dietary excess are an ever increasing threat.

Food security is built upon three pillars:

- **Food availability:** sufficient quantities of food available on a consistent basis.
- **Food access:** having sufficient resources to obtain appropriate foods for a nutritious diet.
- **Food use:** appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation.

On the other hand, food insecurity is limited or uncertain availability of nutritionally adequate and safe food or limited or uncertain ability to acquire acceptable food in socially acceptable ways.

In September of 2013, the Economic Research Service at the United States Department of Agriculture (USDA) released its most recent report on food insecurity, indicating that 49 million people in the United States are living in food insecure households, 15.9 million of whom are children.

School breakfast can have far-reaching impacts on low-income students' health, their academic achievements and effectively increasing their future economic prospects.

1. U.S. Department of Agriculture, Economic Research Service
2. www.childtrend.org
5. Ending childhood hunger: A social impact analysis, Deloitte
Program Overview

Through the "ΔΙΑΤΡΟΦΗ" program, Prolepsis addresses the need that has emerged in the years following the crisis for food aid to children, by providing daily nutritious and healthy meals to students of public schools. The Program was designed with a vision to fulfill a twofold objective

• to provide all students in the participating schools with a free, healthy and nutritious meal every day and
• to encourage the adoption of healthy eating habits for both the students and their families.

Despite the intensity of malnutrition in Greece, as a direct consequence of the economic crisis, the Program’s scope was not narrowed just to providing meals to those in need. Additionally, through various informative initiatives such as sessions, visits and actions, students and their families are being actively informed about healthy eating habits.

To minimize the risk of stigmatization for students and their families, the meals are being provided for free to all students in the schools that have been selected based on a pre-defined list of criteria. The implementation is based on respect to anonymity, transparency and non-discrimination.

In April 2012, a pilot application of the Program was introduced in order to investigate the optimal method for food distribution with the view of scaling up during the next school year. The pilot took place until June 2012. During this period, alternative methods of food distribution were tested and evaluated (supermarket vouchers and canteen coupons).

The Program was chosen to be continued for the school years 2012 – 2013 (Cycle A) and 2013 – 2014 (Cycle B). In addition to this, a series of initiatives were implemented to promote the Program internationally. During these 3 years, Prolepsis and the “ΔΙΑΤΡΟΦΗ” program achieved increased awareness through interviews, publications and press references in the largest domestic and international broadcasting channels and newspapers.

Objectives

“DIATOFI” program aims at improving the academic performance of students, at minimizing the rate of school dropouts, at promoting healthy living via the consumption of domestic products and at facilitating the adoption of healthy dietary standards and habits.

Prolepsis addresses the abovementioned objectives by:

• Providing food to students at risk of food insecurity and / or hunger in various parts of the country, to avoid malnutrition, in a cost efficient and effective manner. In order to minimize the risk of stigmatization, the Program is applied to all students in selected schools of socio-economically vulnerable areas, with full respect to the concepts of anonymity.
• Encouraging healthy dietary choices of students through educational activities, designed to improve and promote healthy habits.
• Raising awareness of parents / caregivers about the importance of a healthy diet for their children.
• Monitoring student behavior with regards to school absences and behavior at school.
• Evaluating the Program’s implementation

According to the latest contractual agreement with the SNF (July 2013), the main goal of the grant is described as below:

“This grant is restricted to support the continuation of the Food Aid and Promotion of Healthy Nutrition program, to public schools located in underprivileged areas and which are mostly affected by the socioeconomic crisis, for the school year 2013-2014, as described in the letter of May 2013, from the Grantee to the Foundation, incorporated as part of the terms governing the grant. In the sole discretion of the Foundation, payments will be made directly to the Grantee and part of the grant will be paid in advance”

Relevance

<table>
<thead>
<tr>
<th>Program Evolution and Scaling</th>
<th>EUR</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
<td>1 million</td>
<td>6 272</td>
</tr>
<tr>
<td>Cycle A</td>
<td>5 million</td>
<td>24 904</td>
</tr>
<tr>
<td>Cycle B</td>
<td>10 million</td>
<td>60 530</td>
</tr>
</tbody>
</table>

Source: diatrofi.prolepsis.gr
Project Team

The Program team consists of members of the Prolepsis Institute, while members of the Stavros Niarchos Foundation monitor and oversee execution.

- The Research team is responsible for designing, monitoring and reviewing all of the Program’s elements and functions. It consists of physicians, nutritionists, health promotion specialists, statisticians and sociologists.

- The Operations’ team that consists of the coordinators and volunteers that ensures compliance with the approved procedures and quality standards of the operational plan by maintaining regular communication with all parties involved. The team makes frequent visits to schools and meal suppliers, performs weekly telephone calls and disseminates informational material to all parties involved, including the students and their parents. Furthermore, the team runs a hotline for anyone involved or interested in the Program.

- The Project Management team is responsible for administering, coordinating and reviewing the Program.

- The project team collaborates and is constantly in touch with the Prolepsis Institute’s collaborating partners at the National and Kapodistrian University of Athens Medical School, as well as collaborating partners in distinguished Universities in the United States and the United Nations.

Operating Model

The Program is funded by an annual grant from SNF as well as other smaller donations from individuals and institutions that allows Prolepsis to extend the reach of the Program to additional schools.

Prolepsis is responsible for the “ΔΙΑΤΡΟΦΗ”’s program management.

Each year, following a request for proposal (RFP) and a tender, Prolepsis engages, through a 1-year contract, catering companies who act as contractors to prepare and deliver the meals to the schools. Strict criteria, relating to food quality as well as infrastructure appropriateness, apply to these outsourcing agreements that are closely monitored by Prolepsis throughout the distribution channel.

The overall supply chain of the Program is briefly presented below:

Supplier Procurement

The supplier selection process changed significantly between the Pilot and the fully operational Cycles that followed.

The Pilot

During the Pilot, the Program tested two different methods of food provision. The first method applied was the distribution of food vouchers, which could be redeemed at the supermarket (only on certain products). The second method was the provision of coupons for use in the school canteens, for purchasing only healthy products.

<table>
<thead>
<tr>
<th>Supplier Procurement</th>
<th>School Selection</th>
<th>School Reps &amp; Canteen Engagement</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supermarket Vouchers</strong></td>
<td><strong>Canteen Coupons</strong></td>
<td><strong>Participation Rate</strong></td>
<td><strong>Cost</strong></td>
</tr>
<tr>
<td>92%</td>
<td>95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUR 1.80</td>
<td>EUR 1.79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student Involvement

Indirect, as parents get the food from supermarkets

Direct, as students get the food themselves in the school

Need Covered

Supermarket vouchers used to cover the needs of the entire family

Meals from the canteens were consumed directly by the students

Potential Student Stigmatization

Distribution of vouchers could have been tailored to the needs of the families, without stigmatization at school

Distribution via the canteen could cause stigmatization in case of a tailored approach
Supplier Procurement (continued)

Prolepsis decided to apply the second method (meals via the canteen) for the subsequent school year. Based on the above, the food provision via the canteen, appears to be the optimal method in all categories, and in line with the program’s objectives.

Cycle A

Separate procurement processes were introduced for the suppliers of lunch and dairy items. The consolidation of the meal was performed after the delivery of the dairy item to the lunch item supplier (cater). The cater was responsible for the final distribution of the meal. Four different suppliers were selected for the lunch products to serve 13 municipalities and 1 supplier for the dairy items for all municipalities.

- 4+1* Distribution Companies
- 13 Municipalities
- 24,904 students

*4 contractors for a designated geographical region and 1 contractor for milk procurement.

Cycle B

Due to the increased geographic coverage of the program, it was decided that the supply of the dairy products should be part of the mainstream procurement process for the rest of the lunch items. Seven different suppliers were selected for the lunch products to serve 23 municipalities.

A national open tender was organized for the selection purposes. The process initially included the assessment of the minimum requirement criteria based on the documentation provided by each supplier. For the suppliers that had met these requirements, a verification process was following with on-site visits (installations, vehicles and food testing).

After the on-site visits, additional requirements were communicated to all suppliers regarding the findings of the visits and the food testing. Following that, negotiations on the price was initiated with the view of reducing the originally offered prices, so that additional schools would be served.

The experience so far indicates that any quality issues of the suppliers are difficult to be singled out without on-site visits. As the award making process is leaning towards the start of the school year, any unforeseen difficulties (e.g. areas with no supplier after the on-site visits) have to be addressed with a secondary procurement process.

Moreover, as the school selection admission process remains open throughout the year, any differentiation from the original geographical distribution of schools can result in areas with no active supplier.

Effectively the above can either loosen the school selection criteria, so that there are no schools for non set geographical areas or / and request a new offer for the new area(s). However, as there is limited time to prepare a full procurement process, this can result in the Program introducing a less demanding procurement process (e.g. single offer).

For instance, in the case of X catering, although the supplier had been rejected for Thessaloniki and Thrace via the open tender (the company’s facilities did not pass the on-site visits criteria), X catering was asked to take over that area, as there was no other available bidder.

After the start of the school year, X Catering was asked to take over the Thessaly area as well, as new schools from that area were admitted in the Program after the conclusion of the initial procurement process.

The narrow time-window during which Prolepsis had to procure suppliers for these two areas, could also suggest reduced negotiating power, which can be supported at least for X catering (see also efficiency chapter).

School Selection

1. Invitation to Apply

A number of invitations is sent out to schools based on a set of criteria, in order to form a base of potential applicants that can participate in the Program. For the school year 2013 – 2014, applications were sent to:

- Schools that were located in areas with low average taxable income, according to the latest available data from the Ministry of Finance. The invitations were sent to the approximately bottom 10%, 20% and 25% for Athens, Thessaloniki and the rest of Municipalities respectively.
- Schools indicated by bodies such as Municipalities, Directorates of Primary and Secondary Education, based on recorded incidents that indicate the relevant need (e.g. children fainting).
- Schools that expressed interest to join the Program or participated in the previous year Program.
- Schools that were geographically close to other schools and have evidence of high food insecurity with moderate or severe hunger.

Ideally, the sum of the invitations sent for a given year (excluding the Pilot, in which the geographical focus was limited) should have represented the targeted need of the Program. Based on Prolepsis, 2,066 invitations were sent to schools, which were attended by approximately 250,000 students.

Nevertheless, as mentioned before, in Greece 363,000 children at student age (6 to 17) are experiencing child poverty1 or are at risk of poverty or social exclusion. Hence, based on the employed criteria, the Program appears to have identified a relatively high part of the need, considering the limitations of the funding that could only serve approx. 61,000 students.

1 Data for 2012
School Selection (continued)

**Application Submission**

The application to join the Program is sent to the potential applicants as an electronic form with certain fields. The application is filled by the principal of the school electronically. The requested data, besides figures and facts for the school, also include the principal’s estimation of the percentage of the students facing severe financial problems that don’t allow them to meet their daily nutritional needs.

**Selection**

A set of cut-off criteria was used to select the schools that will receive the Program out of the ones that had finally submitted applications. Firstly, quantitative criteria were applied to refine the eligible schools:

- Food Insecurity score calculated based on available data (this factor has significant weight for schools where food insecurity has been measured within the school; relatively less weight if measured in adjacent schools; and it is not taken into account if the school is in a new area with no available data)
- Principal’s estimation on the percentage of students that suffer from food insecurity
- Average taxable income in the area (based on the post code)
- Unemployment rate in the area (based on the post code).
- Other characteristics of the school, such as proximity to blocks of flats of social housing, number of children from institutions that is at an inaccessible area.

Next, qualitative criteria were applied, mainly through in person visits to assess the real level of need. If necessary, additional supportive information and other relevant data from local authorities were collected and examined.

Considering the objectives of the Program, the beneficiaries should have ideally been targeted based on the food insecurity score parameter. Nevertheless, due to the lack of data regarding the food insecurity scores of schools in Greece, the selection process was based mainly on the premise that average / median disposable income, principal’s estimation and food insecurity score were highly correlated. Retrospectively, Prolepsis ran correlation tests between the average disposable income, the principals opinion, the FAS and the FSSM score. The statistically significant correlation exhibited\(^1\), seems to support the initial hypothesis.

Based on the available information, Prolepsis appears to have used the relevant data that were available at that time in order to run the school selection process.

In the matrix below, the main changes in the are presented:

### Evolution of School Selection Process Criteria

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th>Cycle A</th>
<th>Cycle B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Taxable Income</td>
<td>2009 data – 3 years before the Pilot</td>
<td>2011 data - 2 years before Cycle A</td>
<td>2011 data till November, 2013 data afterwards</td>
</tr>
<tr>
<td>Food Insecurity Scores</td>
<td>Reports from SNF and Ministry of Education</td>
<td>Data from schools that participated in the Pilot</td>
<td>Data from schools that participated in the Pilot and Cycle A</td>
</tr>
<tr>
<td>Unemployment</td>
<td></td>
<td></td>
<td>Implemented in the selection process in November 2013, using OAED data</td>
</tr>
</tbody>
</table>

Nevertheless, the program could have gathered more detailed data to assess longer term outcomes both to the health and the academic performance of students from both participating and non-participating schools.

As supported by the international bibliography\(^2\), school breakfast can have far-reaching impacts on low-income students’ health, academic achievements and economic prospects. Studies have indicated that students who eat breakfast see fewer vitamin deficiencies, are less likely to experience chronic illnesses and are more likely to maintain a healthy status. Additionally, research has shown that eating school breakfast can contribute to increased attendance and greater academic achievement.

\(^1\) Prolepsis Data Report indicates that FSSM, FAS, Principal’s opinion and Median Disposable Income are statistically significant correlated

\(^2\) Ending childhood hunger: A social impact analysis, Deloitte
School Selection (continued)

Program Implementation

Following the selection process, a newsletter, with general information on the Program, is sent to the principals, the Teachers’ Associations (aiming at engaging them actively in the Program) and to the Parents’ Associations (in order to participate and support the program) of the selected schools. Subsequently, the canteen operator is engaged by signing the relevant agreement, with a pre-specified fee.

A visit to the school is arranged to inform the various stakeholders. Principals are notified about their obligation to inform students regarding the Program and a personal information pack, containing the informational letter to parents of students, a refusal form, questionnaires to evaluate the Program and record the problem and informational material on healthy eating is delivered to them.

In total, the Program gradually grew significantly in terms of applications, school admissions and funding. In particular, the number of admitted schools increased from 34 to more than 400 in less than 3 years, while SNF funded operations with almost EUR 16 mil. during the same period.

From Cycle A to Cycle B, the number of applications to join the program grew significantly, although the number of invitations sent to both Cycles was more or less the same, as these were linked with the process of identifying the need within the constrains of a finite funding. Between the two Cycles, the number of applications increased by 2.67 times, the number of admissions increased also by 2.47 times, the admission rate decreased by 3 percentage points (from 41% to 38%) and the grant amount doubled.

Evolution of Program Applications & Admissions

Schools enter the Program throughout the school year, although the invitations are sent to all of them almost simultaneously. The long decision process is due to principals’ or parents’ inability to decide quickly. This creates additional implications to the supplier procurement process, as there are no criteria in place that can link the admission process with the suppliers’ procurement process. In Cycle B this has led to a secondary supplier procurement as discussed earlier in the report.
School Food Programs in other countries

In the following pages, specific programs concerning the provision of free or partially free school food (mainly breakfast) are presented for a number of countries around the world, with a specific focus on the operating model used and especially on parameters such as: funding sources, project management, pricing scheme and supplier selection method.

United Kingdom

In the United Kingdom, changes to the school meal program came as a result of a television program back in 2005 – 2006, featuring celebrity chef Jamie Oliver, which drew public attention to the nutrition process at schools.

A school breakfast club is a provision for children to eat a healthy breakfast in a safe environment before their first class. The term "breakfast club" is commonly used to describe such facilities in the United Kingdom.

Breakfast clubs typically stay open for between 45 minutes to 1 hour and 15 minutes and close before the children’s first morning session. Sometimes the clubs are staffed by volunteers, though sometimes there are paid caterers being supervised by teachers or support staff.

There are, broadly speaking, two models for breakfast clubs – those where breakfast is given free to all children and those where better-off parents pay for their children’s breakfast.

The free model avoids the stigmatization associated with being single out as a FSM (Free School Meal\(^1\)) child. It also means that breakfast is provided to children in low-income working families who are often just above the FSM threshold. These clubs usually rely heavily on local volunteers and alternative sources of subsidy to help them stay afloat without state funding.

Magic Breakfast

On July 2013, the Department for Education released a plan of action designed to improve the food quality and take-up at schools, while putting the kitchen at the heart of school life. The “School Food Plan” listed a number of actions including providing GBP 16.1 mil to ensure that thousands of children get healthy breakfast; provided a checklist for head-teachers to help improve the ‘food culture’ in their schools and launched flagship pilots at two London boroughs to prove that better school food can have a significant impact on children’s health and attainment.

In particular, the School Food Plan sets out a Department for Education commitment to set up financially self-sufficient breakfast clubs, to increase healthy breakfast provision for children who are arriving hungry at school.

For a child to qualify for a free school meal in England and Wales, their parent or carer must be receiving one of the qualifying benefits: Income Support, Income-based Jobseekers Allowance, Income-related Employment and Support Allowance, Support under Part VI of the Immigration and Asylum Act 1999, the guaranteed element of State Pension, Credit Child Tax Credit (provided they are not also entitled to Working Tax Credit and have an annual gross income of no more than £16,190), Working Tax Credit run-on - paid for 4 weeks after you stop qualifying for Working Tax Credit or Universal Credit.

The department awarded a contract to Magic Breakfast Charity to set up breakfast clubs in schools, where over 35% of the children are living in poverty and are eligible for Free School Meals (the UK average is 18%). Magic Breakfast charity in UK is dedicated to ensuring every child starts the day with the right breakfast as fuel for learning. There are 1 959 schools with 40% or more of their pupils eligible. The charity is currently helping to run breakfast clubs in around 230 of these schools, providing food and practical support and has a further 140 on its waiting list.

Breakfast Club has also teamed up with Mayor’s Fund for London and the Greggs Foundation to deliver healthy breakfasts to over 2 000 primary school children every day in 50 of the most disadvantaged schools in London.

Within the running mandate, all schools with FSM entitlement greater than 40% should set up breakfast clubs and that they can do so without relying on ongoing state subsidy. To help them get started, the Department for Education will offer contracts to catering companies, charities or voluntary organizations to work closely with schools over a two-year period. Their task will be to set up breakfast clubs that will no longer require a state subsidy after two years – either because they have adopted a paying model or because they have created a model that supports itself through local volunteers or non-state subsidies.

The providers will work with schools to help head teachers assess their specific needs, to identify the arrangements that will have the most impact and to develop and implement a plan to maintain self-funded clubs beyond August 2015.

Kellogg’s Breakfast Clubs

Kellogg’s has helped establish and support over 1 000 breakfast clubs over the last decade delivering training and offering grants to schools as part of their ‘Give a Child Breakfast’ campaign. They now work in partnership with Forever Manchester, a UK charity, whereby clubs can apply for funding (as long as they have at least 40% FSM to be eligible). Established Breakfast Clubs receive GBP 200 plus GBP 200 of Kellogg’s Cereal Vouchers. Schools wanting to start a new Kellogg’s Breakfast Club will receive GBP 400 and will be required to attend a Kellogg’s Breakfast Club Information Day where they will receive advice, support, handy tips and techniques to running the club.

Greggs Breakfast Clubs

The Greggs Foundation set up their first club in 1999 and now oversees 230 breakfast clubs which feed 12 000 children every day. School must again have at least 40% FSM to be eligible. The Greggs Foundation receives funding from a range of partners, often private sector companies including major partner, Greggs plc. Greggs Foundation uses the funds to support breakfast clubs through an initial start up grant for equipment, such as chest freezers to store food items or toys and relevant activities for the club. The Foundation regularly provides additional payments towards other healthy food items, while Greggs plc donates bread from the nearest shops.

The US Department of Agriculture (USDA) administers the National School Lunch Program (NLSP) and the School Breakfast Program (SBP), both of which offer free and reduced-price meals to low-income students. Historically, more low-income students eat school lunch than school breakfast, with NLSP in 2011 reaching over 20 mil low-income students and the SBP 10.5 mil.

The SBP is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It began as a pilot project in 1966 and was made permanent in 1975. The SBP is administered at Federal level by the Food and Nutrition Service. At the State level, the program is usually administered by State’s education agencies, which operate the program through agreements with local school food authorities in more than 89 000 schools and institutions.

Generally, public or nonprofit private schools of high school grade or under and public or nonprofit private residential child care institutions may participate in the SBP. School districts and independent schools that choose to take part in the program receive cash subsidies from the U.S. Department of Agriculture (USDA) for each meal they serve. In return, they must serve breakfasts that meet Federal requirements and they must offer free or reduced-price breakfasts to eligible children.

All reimbursable meals are subsidized, but the depth of the subsidy and hence the size of reimbursement, depends on income eligibility criteria derived from the federal poverty lines. Some children eat free, others qualify for a reduced price and other must pay the “full price”. Nationally, approximately 80% of the breakfasts are served free of charge or at the reduced price. However, while in some communities it is normal for most students to eat for free, in other it is look down upon as a “welfare food”.

Each lunch is checked to see whether it qualifies for reimbursement (from a nutrition standpoint) and then assigned to a price category, so that the school can claim the correct amount from federal. In particular, children whose family income falls above 130% of the federal poverty line are given a free lunch, those between 130% to 185% qualify for a reduced price meal. The rest pay the “full price” even though the meals are subsidized by the federal government. The cashier looks up their status on a list. In order to protect their privacy, the cashier is not allowed to ask their status within earshot of other children. Some children purchase a prepaid ticket, while other pay by cash on the spot

Some schools run the breakfast-in-the-classroom program that makes use of a provision in the law that permits schools to serve meals free of charge to all children and obtain their reimbursement utilizing the school’s ratio to the three-price categories.

Despite the existence of the of the federally sponsored lunch and breakfast programs, there is a great deal of food bought, sold and consumed within schools that is not part of the program and consequently not subject to the nutritious regulations or the burdensome accountability processes that govern the official reimbursable meals. These are called “competition foods”.

The SBP was established as a two-year pilot project, designed to provide grants to assist schools serving breakfasts to “nutritionally needy” children. While the term “nutritionally needy” was not defined, the original legislation stipulated that first consideration for program implementation was for the support to be given to schools located in poor areas or in areas where children had to travel a great distance to school. To encourage schools in needy areas to participate, Congress authorized higher federal payments for schools determined to be in “severe need.”

During the next few years, the pilot program was extended several times, and a number of modifications were made to expand the program. In 1971, Congress directed that priority consideration for the program would include schools in which there was a special need to improve the nutrition and dietary practices of children with working mothers and children from low-income families. In 1973, the categorical grant reimbursement structure was replaced by a system of specific per-meal reimbursement.

In 1975 the program received permanent authorization. Also, Congress declared its intent that the program “be made available in all schools where it is needed, to provide adequate nutrition for children in attendance”. Moreover, legislation continued to emphasize participation by schools in severe need and to provide higher reimbursement to these schools.

With regards to procurement, the US uses the “lowest cost bid” approach in an effort to operate within the constraints of federal reimbursement levels. Also, in the United States, the “farm to school” or the “farm to cafeteria” movement has grown rapidly in the past decade, which includes purchasing directly from local or regional farmers. Recently there have been attempts to improve the quality of meals served in schools and steer the in-school nutrition in the US, towards more healthy dietary standards. The Healthy-Free Kids Act of 2010, spearheaded by the First Lady Michelle Obama as part of her fight against childhood obesity campaign (Let’s Move! Initiative legislated on December 2010) sets new nutrition standards for schools making use of a budget of USD 4.5 billion. The standards were effective for the school year 2011 – 2012 onwards. However this act has a long way to become effective, as there are indicators of sharp decrease in school participations as well as an increase in food waste.

In FY2012, over 12.9 mil children participated every day. Of those, over 10.1 million (78%) received their meals free or at a reduced-price.


Share Our Strength’s - No Kid Hungry campaign

In 2012, Share Our Strength’s - No Kid Hungry campaign collaborated with Deloitte on a project to identify the potential long-term impact on children in need who are participating in the federal SBP. This collaboration resulted in an interactive calculator, that provides decision-makers in schools and districts with a model to understand the financial feasibility of feeding students by maximizing three federal nutrition programs: school breakfast, afterschool meals and summer meals. Based on information entered, results are automatically populated to show users their annual estimated costs, reimbursements and increases in student participation for the meal programs.

Results include calculations based on the provided data (mainly demographic and cost projections). They include estimates of the number of students that could be fed, meals to be served, total costs, federal reimbursements and annual net costs of the program.
In December 1999, the Italian Government issued law 1999/488, which constituted a very innovative legislation that established a direct and explicit link between organic and local food and public sector catering. The law guaranteed the promotion of organic agricultural production of quality food products and the provision of organic, typical and traditional products at school canteens. Additionally, the law promoted the locality of the schools meals system, by establishing that the quality of the proposed services must be assessed by also considering the relationships that school food has with local cultures and tradition. Many initiatives have been taken into schools to essentially localize the food chain. As a consequence, the school food in Italy is seasonal, locally / regionally produced or fairly traded.

In the Italian procurement systems, local authorities play a central role as they are delegated the responsibility of designing the tender through which school catering companies are selected. There are cases however, such as Rome into which the city is divided in municipalities. The municipalities collaborate with the Department of Education in drawing the tendering specifications, they provide advice on the nutritional aspect of the school food, they are responsible for the inspections and they directly manage the school meal service.

In the case of Rome, an “open procedure” has been adopted, under which all catering companies interested in supplying schools they are offered the opportunity to respond to the tender. In addition, a set of diversified / innovative criteria was introduced for the tender process. Contracts were awarded on a 100 - award point system. Price accounted for 51 of the points while 30 points were for the organization of the service (environmental certification & friendliness of the transportation system, number of staff meant to be used) and the rest were awarded on the basis of organic food provision and efforts to promote food education. The local authorities manage the contracts and the relationships with the contracted suppliers. There is also a specialized contracted company to verify the quality and hygiene of the food, the procedures utilized in premises and the compliance with the menus and weights agreed. The framework of the contracting process divides the city into 11 lots. While food companies can bid on as many “lots” as possible, no company can receive a contract for more than two lots.

In the case of Rome, school meals represent approximately 40% of public catering. The basic program structure is almost entirely privatized – in this case private companies employ the staff needed to prepare and serve meals in publicly owned facilities. Companies provide lunch service plus a mid-morning snack. A three year contract is typical, supporting the contractors as well as a certain competitive edge due to the limited nature of such contracts.

Due to the promotion of organic foods, almost 60% of Local Authorities purchase these for meal preparation and non-organic food has to be certified under specified regulations. Genetically modified foods or ingredients are not permitted.

In Italy, government policy promotes locally-grown foods for public procurement. Rome contracts with many smaller food companies – each responsible for everything needed in the schools to feed children (food, labor, infrastructure, equipment, etc.) within a specific geographic section of the city. Rome’s approach is focused on “best value”; the school system uses a combination of criteria (purchase price, infrastructure needs and food quality) to award contracts.

In Italy the “whole school” approach is an integral part of the school food service. The dining experience is considered very important and much emphasis is placed on Italian food culture and healthy eating. Young children (aged 2-14) sit at round tables covered by table cloths and silverware and they are served a three course meal, with teachers often joining them. Meals are provided free for the poorest families, with discounts for low-income families.

The cost of the lunch is born by the municipal government and to some extent by the families themselves. However no money is handled at the individual school level, but directly to the district office. An average school meal costs USD 4.68. In families which have more than one child attending school, a 20% discount is offered on total cost of the school meal. The full monthly cost per child is USD 49.76. This cost is reduced by 25% for families earning less than USD 15 547 per year. Lunch is provided for free for families who earn less than USD 5 165.

It is highlighted that children are not allowed to bring food to school and additionally there are no vending machines in the school.


1Fair trade is an organized social movement whose stated goal is to help producers in developing countries achieve better trading conditions and to promote sustainability.
Finland was the first country in the world to serve free school meals. From 1948 free school catering is in place, though catering activities on a smaller scale had been around since the beginning of the 20th century. Until the beginning of the 1980’s school food mainly consisted of soups, porridges and thin porridge-type dishes. Children brought bread and milk with them to supplement their school lunch, which was generally not very substantial.

In the 1960’s school meals slowly became more varied. Frozen and processed foods started to be used and more vegetables were served. In the 1970’s the school menus often contained new food products, such as rice and spaghetti that were yet to be popular at pupils’ homes. Many children also learned to eat grated-root vegetables.

Nowadays, all students in schools and some colleges are entitled to a free meal. This meal is required to fulfil one third of the student’s daily nutrition requirements. The program is funded by the Ministry of Social Affairs and Health, while each Municipality is responsible for procuring the meals and organizing the distribution. Municipalities receive approximately a 70% subsidy of the costs from the central Government (Ministry of Social Affairs and Health).

Meals are provided either directly by the Municipality council or a private catering company. Packed lunches are not allowed. It is required that a meal must be freshly prepared and contain a main course, salad, drink, bread and margarine. Dietary guidelines for schools are issued by the National Nutrition Council which also facilitates overall planning of the program.

The cost of a free meal per school child is USD 2.63 on average. The children are self-served and return the food trays themselves in order to reduce labor costs. The lunch program also focuses on the learning of table manners and Finnish customs. The role of school meals is to be a pedagogical tool to teach healthy nutrition and eating habits, as well as to increase consumption of vegetables, fruits and berries, full corn bread and skimmed or low fat milk.

Today more than 830 000 pupils enjoy lunch at school. Active feedback is encouraged and students are participating in improving school meals, through various actions and initiatives, such as the “Vegetables for Better Health” campaign. The initiative was supported by the Finnish Heart Association (FHA), since 2000.

In 2006, the campaign focused on health snacks:

- 320 schools ordered informative materials for approximately 50 000 students; food catering staff were instructed on the eligibility criteria for healthy snacks.
- 100 schools have arranged demonstration days to introduce different kinds of vegetables and fruits to schoolchildren, reaching 26 000 students.

Other programs use specific techniques, such as play, to achieve their results.

In France there is no national school lunch program and the lunches are organized by local municipalities. France aims to ensure that schoolchildren receive essential and high-quality nutrients. Packed lunch from home and vending machines are not allowed in French schools.

Funding for school meals is subsidized by approximately 50% by the Ministry of education and the remainder paid by parents, the amount being determined according to their level of employment. Local councils are in charge of providing the meals, but they can also contract the meals to private caterers. Hence, the school food program is managed at a local level.

Municipal governments are responsible for the operation of pre-school and school lunches. Often, schools have a built-in kitchen and dining room. Where there is no such facility, meals are usually provided by the municipality via one or more “central kitchens”, which in some cases will supply a number of schools. In some cases, these kitchens are run by the municipality, but there is an increasing trend to outsource meal preparation to large private companies. However, even where a private company prepares the meals, it is the Municipality’s responsibility to monitor them, serve them and provide staff to help the children eat.

The relevant French law allows Municipalities to set meal prices at their own will, but also allows for a sliding scale and caps prices — with the goal of allowing all children to have equal access. Prices vary between French municipalities, with the average price per meal paid by parents varying between USD 3.0 and USD 3.5. In Paris, for example, most families pay USD 3.0, the wealthiest families pay USD 7.0 and the lowest-income families pay 20 cents per meal. In many cases, municipalities subsidize lower-income families through general tax revenues, and have mechanisms to make meals available for free.

Essentially, meals are cross-subsidized. Parents are often also involved, through being members of the committee that oversees menu choices, food purchasing, and other logistics.

The French Ministry of Education has strict regulations governing portion sizes, nutritional composition, and cooking methods. For example, over the course of 20 meals (one month), only 4 main dishes and 3 desserts can be high fat (more than 15%). Fried food can only be served four times per month. Schools must limit ketchup to once per week (many don’t serve it at all). Schools are not allowed, in fact, to leave any sauce, mayonnaise, salad dressing or ketchup available to students to serve themselves freely as well as no sugared / flavored milks. Dairy requirements are met through cheese or other dairy products such as yogurt.

Relevance

Key Findings

The School Food Programs of various countries are presented and compared below, with regards to parameters such as the alternative funding sources, the centralization of project management, the pricing scheme and the supplier selection process.

- The food school meals programs have various funding sources, ranging from Government funding or donations to various paying models making the program self-sufficient.
- In the USA and in the United Kingdom, the Government has issued relevant regulation by which it sponsors the provision of free or partially free school food.
- In Italy a smaller portion of the overall funding requirements is provided by the local authorities, while in the French model, the system is funded by cross-subsidization (different prices applied, depending on financial criteria) between students.

- Most of the countries are operating some kind of pricing scheme in order to differentiate support based mostly on families’ financial criteria.
- In Finland the free-for-all application is embedded within the overall governmental policy; it is funded centrally and administered locally by Municipalities of private caterers.
- There does not seem to be preference of schemes that distribute meals only to selected groups; thus preserving stigmatization seems highly relevant.

- The observed differences in costs are mainly due to the diversification of the provided meal; average breakfast has ~approx. half the price of the average lunch
- Italy appears to have the higher cost, as a result of the specialized-organics products served.
- The cost of the meal served in Greece through the program appears to be higher than in the US; this difference can be explained by the meal composition (US support is mainly price oriented) and the sizing of the support that can offer significant economies of scale.

- In the US, the support is mainly price oriented, – however with a tendency to improve quality
- In most of the countries, relevant programs have introduced dual focus (price and quality), with an increasing trend to shift focus from price to quality
- In Greece, the program is focusing on quality in order to preserve the needed nutritional parameters and sustain longer term outcomes

Several aspects of the School Food Programs vary between countries mainly because of cultural and economic differences. The various models used are at a different stage of maturity. Additionally, a trend of localizing the food chain, with an emphasis on organic products, is arising mainly in countries such as Italy and France.
Assessing Relevance

The Program’s objective is to provide all students in the participating schools with a free, healthy and nutritious meal every day and additionally to encourage the adoption of healthy eating habits for both students and their families. Considering the above within the perspective of the overall funding against crisis, it can be argued that the program’s objectives are reaching longer term goals than the initiative’s main purpose to “alleviate the severe consequences of the financial crisis”.

From the assessment of the invitation and the school selection process, it seems that the program has identified the need to be addressed. In Cycle B, the program identified 57% of the actual need and was able to address 10% of the total actual need. According to the principals’ and parents’ estimations ~17% - 21% of the students do not require support, while according to FSSM measurements, the percentage of students with food security is about 40%. This indicates that either the questionnaires were filled by a disproportionately large food secure sample or/and parent’s and principals overestimate the actual need for support. However, the need as perceived by parents and principals, the poverty threshold and the food insecurity could be seen as rather different variables (or approximations), the latter describing a more intense situation where there is limited access to food.

The school selection process appears to be in line with the objectives of the grant, however it is solely based on the severity of the prioritized need and the flexibility of the suppliers to serve areas with limited accessibility. The steadily increasing geographical coverage enhances the need to take into account the available funding when prioritizing and selecting schools. The statistically significant correlation between food insecurity and the median household income was retrospectively calculated by Prolepsis and supports the initial hypothesis which has been factored in the school selection process and was used in order to identify the need.

The supplier procurement process is directly linked with the school selection process. Evidence from both Cycles support that the rolling selection results in a long admission process, which increases the uncertainty regarding the areas that will be covered and leads to secondary supplier selection. Although the national open tender process appears to be in line with the program’s objective and strict quality standards, the criteria of the secondary supplier selection process are open to subjectivity. Additionally, the lack of alternative suppliers increases the supply chain risk, as it is linked with reduced negotiating power on behalf of the Program.

The program has chosen to use the free-for-all scheme to avoid stigmatization of the students not able to pay for the meal. Although the applied pricing scheme is aligned with the program’s objective “to provide a free, healthy meal to all students”, there are examples of other countries that have introduced more flexible approaches with tailored approaches to payment, based on students’ financial ability. However, these are only considered applicable within an overall setting that can avoid children stigmatization.

The transition into a model that can support the above tailored approach seems to be constrained by the parameters of the Program itself. Available options for paying scheme with partial reimbursement are being discussed later on in the report. In any case, the fact that the Program is not linked with the overall financial and tax administration of the Government renders the implementation of such a paying scheme difficult, as schools are not able to hold data on the family income of students, nor to manage a payment system.

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Effectiveness
Program Outputs

Initial Planning and actual number of beneficiaries

In accordance with the initial objectives, the number of supported children increased significantly from 4,000 (Pilot) to 50,000 (Cycle B). The total number of children benefited by the Program reached almost 90,000, 22% more than it was originally planned. However, the period of support was smaller than planned, as it fell behind by 47 days in Cycle A and 41 days in Cycle B.

School Admission Process

As mentioned before, although schools receive invitations to submit their interest in joining the Program almost simultaneously (at the beginning of the school year), applications are submitted throughout the year. This results in late admissions and schools spending less time in the Program.

Although, the school admission criteria between Cycles A & B remained relatively similar, it appears that Cycle B was more front-loaded than Cycle A, especially at the beginning and end of the school year. Admissions’ intensity was almost the same for Cycle A and Cycle B till mid-February, but afterwards, the total number of beneficiaries was reached much faster in Cycle B (mid-March compared to mid-May).

Evolution of Program Capacity per Cycle (Students Admission, Cycle A & B)

In terms of school admissions, it can be concluded that admissions for Cycle B were more “front-loaded” than in Cycle A. In particular, with 50% of the schools in Cycle A were admitted by mid-November, while in Cycle B one month earlier.

Evolution of Program Capacity per Cycle (School Admissions, Cycle A & B)

Source: Prolepsis data, Deloitte Analysis

Program Admissions per Cycle compared to initial objectives (000 Students)

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Initial Planning</th>
<th>Actual Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
<td>4.0</td>
<td>6.3</td>
</tr>
<tr>
<td>Cycle A'</td>
<td>18.0</td>
<td>22.2</td>
</tr>
<tr>
<td>Cycle B'</td>
<td>50.0</td>
<td>59.4</td>
</tr>
</tbody>
</table>

% Above Target
- Initial Planning: 57%
- Actual Beneficiaries: 23%

Average period of meal administration (days)
- Pilot: 160 days
- Cycle A': 113 days
- Cycle B': 145 days

Distributed Meals per Cycle compared to initial objectives (000 meals)

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Initial Planning</th>
<th>Actual Meals Distributed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
<td>(+ 179 th. meals*)</td>
<td>2.9</td>
</tr>
<tr>
<td>Cycle A'</td>
<td>(+ 43 th. meals*)</td>
<td>2.5</td>
</tr>
<tr>
<td>Cycle B'</td>
<td>(+ 165 th. meals*)</td>
<td>6.4</td>
</tr>
</tbody>
</table>

% Below Target
- Initial Planning: -23%
- Actual Meals Distributed: -19%

The above indicate that although Prolepsis has eventually granted access to more than planned children, there was not enough time to fully deploy its plan for reasons that are associated with the rolling school admission process.

Source: Prolepsis data, Deloitte Analysis

Notes:
* Children that benefit from the Program; supported by donations other than SNF’s
** Children admitted and either their school dropped out of the Program or themselves refused to participate

Source: Prolepsis data, Deloitte Analysis

Effectiveness
Effectiveness

Although no significant change was made in the process between the two Cycles (almost the same school admission criteria and the same number of invitations were sent out to schools), the Program reached capacity faster in Cycle B than in Cycle A, in terms of both school and student admissions. The increased publicity of the Program and the perceived satisfaction of beneficiaries from Cycle A can explain the difference.

In any case, the rolling school admission process seems to limit the benefits associated with a long Program tenure and thus is estimated to negatively affect the Program’s effectiveness.

The food insecurity levels were measured through the FSSM (Food Security Statistics Module) questionnaire administered to parents. FSSM is based on the premise that food insecurity causes predictable reactions, which can be measured by a survey and then summarized through an index. Program measurements indicate that food security status has improved in all regions where the survey was carried out, with only a few exemptions. As FSSM increases the food security status worsens and vice versa.

The Program outcome measurements of Cycle A (2,802 questionnaires filled at the beginning and at the end of the Cycle) indicate that students who received the Program for 6 months or more improved their FSSM score by an additional 4 percentage points compared to students who received the Program for a period up to 2 months.

Tenure of 6 months or more

Tenure of 4 - 6 months  -5,3%
Tenure of 2 - 4 months  -3,4%
Tenure of 2 months or less  -1,3%

% FSSM change between the Beginning and the End of the Program

% difference compared to beneficiaries that received the program for up to 2 months

The relationship between tenure in the Program and percentage point FSSM change, proves that the earlier the admission to the Program the higher the benefit to the students.

Incremental Program Benefit, % reduction of FSSM, every 2 months

< 2 months  -1,3pp
2 – 4 months  -1,0pp
4 – 6 months  -0,4pp
6+ months  -1,9pp

At the same time, the highest incremental benefit per two-month period comes from students who received the Program from 2 to 4 month and from the ones who remained for more than 6 months. All other things equal, this can lead to the conclusion that the Program was most effective for schools that were admitted either before December or between February and April (this applies to schools that did not leave the Program prior to the Cycle end).

The cumulative outcome (percentage point FSSM decrease) of the program, as depicted in the chart below, reveals the behavioral mechanisms of a typical child and supports the existence of multi-parametrical adoption patterns throughout the Program life cycle.

Cumulative Program’s Outcome based on tenure (reduction in pp FSSM, per 2 month tenure)

-5pp -4pp -3pp -2pp -1pp
< 2 months  2 - 4 months  4 - 6 months  6+ months

Source: Prolepsis data, Deloitte Analysis

The “early effects” of the program correspond to outcomes that students internalize in a relatively small period of time (less than approx. 3 months).

In the mid section, the curve seems to flatten. Although, students keep receiving the program, the FSSM is quite inelastic. The reason for this could be the difficulty in changing further their eating habits and this can be linked to behavioral "hysteresis", i.e. the children dependency with the history of past nutritional behaviour.

The “later effects” correspond to outcomes that students internalize after staying for more than 4 months in the program (5 months approximately).

Additional evidence is needed to statistically test the above findings, however, it seems fair to assume that the diversity of the socioeconomic conditions in Greece can support different behavioral patterns and can call for different approaches.

1 For this analysis only responses from schools with more than 5 questionnaires answered, were taken into account in the analysis.

2 Hysteresis is the dependence of the output of a system not only on its current input, but also on its history of past inputs. The dependence arises because the history affects the value of an internal state.
Health Promotion Events

Over the two years of the Program’s duration, a number of events have been organized for health promotion purposes. These events include guest lectures, speeches, seminars by leading chefs as well as informative events relating to student nutrition and fitness.

Events per type & per cycle

During Cycle A, events were mostly concentrated in Athens and Thessaloniki while in Cycle B events diversified both geographically, covering 11 regions in total, and in terms of content.

Fundraising

Fundraising appears to increasingly become more active in terms of initiatives and active search of potential donators from both public bodies and private sector. However most attempts to establish support from the public sector or gain access to EU funding do not appear to have been successful till now.

Nonetheless, diversified efforts to secure funding through individual donators, foundations and private companies appear to bear fruits. Additionally, Prolepsis website offers a user-friendly online donation platform that supports donations via Paypal and VivaPayments.

### Health Promotion Events

#### Events per type & per cycle

<table>
<thead>
<tr>
<th>Cycle A'</th>
<th>Cycle B'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speeches - Nutrition</td>
<td>70</td>
</tr>
<tr>
<td>Speeches - Fitness</td>
<td>54</td>
</tr>
<tr>
<td>Chef Visits</td>
<td></td>
</tr>
</tbody>
</table>

### Fundraising

Fundraising has increased by more than 260% between Cycle A and Cycle B. Donations from Foundations have increased by 66%, whereas donations from the private sector reached EUR 475 th. from almost non-existent in the previous year. On the other hand crowd funding seems to have slightly decreased.

**School Year 2012 - 2013**

- **Foundations**
  - The Welfare Foundation for Social and Cultural Affairs (KIKPE): 160,000 €
  - Janssen - J&J Corporate Citizenship Trust: 51,000 €

- **Private Sector**
  - Abbott Pharmaceuticals: 500 €
  - LRCN Pharmaceuticals: 2,500 €

- **Crowdfunding**
  - Prolepsis Online Fundraising Platform: 18,328 €

- **Total Fundraising**: 232,328 €

**School Year 2013 - 2014**

- **Foundations**
  - Bodosaki Foundation: 244,000 €
  - The Welfare Foundation for Social and Cultural Affairs (KIKPE): 106,000 €

- **Private Sector**
  - METE S.A. MINING – TECHNICAL TRADE S.A: 250,000 €
  - AB Vasilopoulos: 223,000 €
  - Merck Pharmaceuticals: 1,500 €
  - Holmes Place: 300 €

- **Crowdfunding**
  - Prolepsis Online Fundraising Platform: 5,611 €
  - Moraiti School Alumni Association: 3,573 €
  - Crowdfunding: 4,387 €

- **Total Fundraising**: 838,371 €

### Fundraising per Cycle (000s EUR)

- **Cycle A'**
  - Foundations & NGOs: 838,4
  - Private Sector: 474,8
  - Crowdfunding: 353,6
  - **Total Fundraising**: 232,3

- **Cycle B'**
  - Foundations & NGOs: 10,0
  - Private Sector: 18,3
  - Crowdfunding: 211,0
  - **Total Fundraising**: 353,6

Source: Prolepsis data, Deloitte Analysis
Effectiveness

Satisfaction Level

Participating families appear satisfied with the various aspects of the Program. It is noteworthy that the observed satisfaction index increases in areas outside major urban centers like Athens and Thessaloniki.

Regular surveys by Prolepsis on student parents measure satisfaction level for meal administration, nutritional information on the meal package, extra informative material handouts, informative events and guest speeches as well as the effectiveness and interaction with Prolepsis employees.

The results are presented below:

### Satisfaction level - Meal Administration

<table>
<thead>
<tr>
<th>Level</th>
<th>Very satisfied</th>
<th>Somewhat Satisfied</th>
<th>Neutral</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.3%</td>
<td>37.9%</td>
<td>31.8%</td>
<td>8.0%</td>
</tr>
</tbody>
</table>

Net Promoter Score: 14.3%

### Satisfaction level - Information on the meal package

<table>
<thead>
<tr>
<th>Level</th>
<th>Very satisfied</th>
<th>Somewhat Satisfied</th>
<th>Neutral</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40.1%</td>
<td>42.7%</td>
<td>15.2%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Net Promoter Score: 31.1%

### Satisfaction level - Informative Material

<table>
<thead>
<tr>
<th>Level</th>
<th>Very satisfied</th>
<th>Somewhat Satisfied</th>
<th>Neutral</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33.8%</td>
<td>45.2%</td>
<td>18.3%</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Net Promoter Score: 38.1%

### Satisfaction level - Guest Speeches & Informative Events

<table>
<thead>
<tr>
<th>Level</th>
<th>Very satisfied</th>
<th>Somewhat Satisfied</th>
<th>Neutral</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>39.7%</td>
<td>38.6%</td>
<td>18.1%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Net Promoter Score: 36.1%

### Satisfaction level - Interaction with Prolepsis' employees

<table>
<thead>
<tr>
<th>Level</th>
<th>Very satisfied</th>
<th>Somewhat Satisfied</th>
<th>Neutral</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27.9%</td>
<td>41.3%</td>
<td>24.4%</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Net Promoter Score: 21.4%

Source: Prolepsis data, Deloitte Analysis

Based on the results, fewer students’ parents appear to be satisfied with the meal administration as opposed to the health promotion activities (information on the meal package, informative events and guest speeches). This indicates that some parents could view the meal administration as an external “pressure” to change their child’s eating habits. On the other hand, health promotion activities are viewed as a means to achieve that goal and therefore received more relaxed views.

This conclusion can also be supported by socioeconomic factors. The majority of schools are located within urban environments, where there seems to be a higher degree of food insecurity diversification. Thus, there might be a tendency for scientism from parents that are relatively better off to admit the need of a healthy meal for their children. However, some misunderstanding in the responses may have occurred, as some views on meal administration could have internalized opinions about the overall canteen operations.
This decrease translates to more than 700 students who no longer experienced food insecurity at the end of the program.

<table>
<thead>
<tr>
<th>Number of Students per FSSM Category in the beginning and end of Cycle A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Food Security</td>
</tr>
<tr>
<td>Food Insecurity without hunger</td>
</tr>
<tr>
<td>Food Insecurity with hunger</td>
</tr>
<tr>
<td>Food Insecurity with severe hunger</td>
</tr>
</tbody>
</table>

Source: Prolepsis Data, Deloitte Analysis

Aggregate results indicate an average (weighted by the number of students) FSSM reduction of about 11% for the schools that received the Program within Cycle A. At the same time, significant deviation of achieved outputs is witnessed among served areas ranging from -5% to -26%, indicating different parameters affecting the effectiveness.

### Percentage change of students per FSSM Category at the Beginning and End of the program (Cycle A)

<table>
<thead>
<tr>
<th>Percentage change of students per FSSM Category</th>
<th>Beginning</th>
<th>End</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Security</td>
<td>43.7%</td>
<td>36.5%</td>
<td>-7.2%</td>
</tr>
<tr>
<td>Food Insecurity without Hunger</td>
<td>14.2%</td>
<td>9.5%</td>
<td>-4.7%</td>
</tr>
<tr>
<td>Food Insecurity with Hunger</td>
<td>5.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Insecurity with Severe Hunger</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Prolepsis Data, Deloitte Analysis

However, matching the same respondents at the beginning and end of the Cycle indicates that there are certain regions that the survey did not perform as expected. Overall, most impressive FSSM improvements appear in the regions of Achaia, Rodopi and Larisa, while measurements in Imathia and Kavala indicate negative outcomes at the end of the Cycle (in June). The analysis, however, does not take into account potential improvement in the %FSSM after the end of the Cycle (discussed at the Impact section).
The highest %FSSM improvement was in the area of Achaia, based on All Questionnaires data. In this area, unemployment dropped by 10% and FAS was improved by 18%, while the schools in this area, remained in the Program for a relatively short period (3.8 months on average). On the other hand, in Attica, where significant improvement was observed as well, unemployment dropped by 10%, but FAS increased by only 8%. In Attica though, schools received the Program for 6.2 months on average.

Schools in Kavala and Imathia, based on measurements from Matched Questionnaires, appear to have been impacted negatively, in terms of the FSSM index. Neither the change in unemployment, nor the %FAS could explain such a result. Imathia received the Program for a relatively short period, whilst Kavala for a relatively long period. This leads to the conclusion that the negative impact could either be due to a statistical anomaly, or to other factors that could affect the food security status.

Hence, the main driver for the measured FSSM change could differ from one area to another and depend on the evolution of a number of factors. At the same time, there is a chance that statistical anomalies could occur.

Additionally, cross comparison between change of the FSSM and the value of the FSSM index in the beginning of the Program reveals a statistically significant relation. In other words, the worst the initial food security status (higher FSSM index), the more significant the improvement that was recorded. The relationship between the % change of the FSSM and the FSSM initial value is presented below per each area served. Excluding Kavala and Imathia, which presented a negative effect on FSSM and Xanthi, which appears to be an outlier, the rest of the areas seem to be in line the initial hypothesis.

The change in the food security status could also be influenced by other factors. These factors include the parents' employment status, the household’s affluence status measured by the FAS index, and/or the tenure in the Program. The development of the aforementioned factors is presented below, for both categories of questionnaires.

### % Unemployment

<table>
<thead>
<tr>
<th>Area</th>
<th>% Unemployment Matched Questionnaires</th>
<th>% Unemployment All Questionnaires</th>
<th>% FAS Matched Questionnaires</th>
<th>% FAS All Questionnaires</th>
<th>Tenure Matched Questionnaires</th>
<th>Tenure All Questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesia</td>
<td>-12%</td>
<td>50%</td>
<td>-2%</td>
<td>6%</td>
<td>4.8</td>
<td>6.1</td>
</tr>
<tr>
<td>Kavala</td>
<td>-17%</td>
<td>19%</td>
<td>-12%</td>
<td>5%</td>
<td>4.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Achaia</td>
<td>-10%</td>
<td>18%</td>
<td>-14%</td>
<td>3%</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Imathia</td>
<td>-8%</td>
<td>12%</td>
<td>8%</td>
<td>8%</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Xanthi</td>
<td>-10%</td>
<td>8%</td>
<td>-10%</td>
<td>8%</td>
<td>3.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Achaia</td>
<td>-10%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>3.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Rodopi</td>
<td>-9%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>3.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Larisa</td>
<td>-15%</td>
<td>7%</td>
<td>8%</td>
<td>8%</td>
<td>3.3</td>
<td>4.3</td>
</tr>
</tbody>
</table>

The highest %FSSM improvement was in the area of Achaia, based on All Questionnaires data. In this area, unemployment dropped by 10% and FAS was improved by 18%, while the schools in this area, remained in the Program for a relatively short period (3.8 months on average). On the other hand, in Attica, where significant improvement was observed as well, unemployment dropped by 10%, but FAS increased by only 8%. In Attica though, schools received the Program for 6.2 months on average.

Schools in Kavala and Imathia, based on measurements from Matched Questionnaires, appear to have been impacted negatively, in terms of the FSSM index. Neither the change in unemployment, nor the %FAS could explain such a result. Imathia received the Program for a relatively short period, whilst Kavala for a relatively long period. This leads to the conclusion that the negative impact could either be due to a statistical anomaly, or to other factors that could affect the food security status.

Hence, the main driver for the measured FSSM change could differ from one area to another and depend on the evolution of a number of factors. At the same time, there is a chance that statistical anomalies could occur.
Effectiveness

Body Mass Index (BMI)

The BMI metric measures the relative weight based on an individual’s mass and height, indicating whether the individual is underweight, normal, overweight or obese. Prolepsis survey results reveal an overall significant increase in the number of participating students with normal weight between the beginning and the end of the Program. Measurements in schools participating in the Program across different regions reveal that in some areas the results were impressive while in others the percentage of students with normal weight even decreased.

Assessing Effectiveness

The Program has exceeded the initially planned goals in terms of school admissions, in both Cycles and the Pilot, but was below its targets in terms of meals provision. The reason for this was the long school admission process. Although the invitations for submission of interest were sent out to almost the same number of schools in the two Cycles, the applications were received faster in Cycle B, which resulted in earlier school admissions. This probably has to do with the publicity that the Program received and the satisfaction of the beneficiaries from the schools that participated in Cycle A.

The tenure in the Program appears to be a significant parameter that affects the impact on a student’s food security status. Based on the analysis conducted, the highest incremental benefit (in terms of FSSM decrease) derives from tenures between 2 to 4 months and more than 6 months. This indicates that different Program adoption patterns exist that call for different approaches.

Although the Program appears to have a positive effect on most areas, there are indicators of poorer performance in some specific areas. Apart from the Program effectiveness, there are other factors, such as unemployment or family affluence status, that could have also contributed to this.

The areas that were included in the Program, on average appear to suffer from insecurity without experience of hunger, which confirms the relevance of the selection process. Finally, the Program efforts appear to have a more significant effect to areas that were initially in a worst situation, in terms of food security, compared to the rest. However there are indications of significant household’s affluence delaying the adoption of the Program parameters.

Data indicate that the Program was more successful in helping overweight than underweight students return to normal weight, while it appears to have little to no effect to obese students.

Mediterranean Diet Quality Index (KIDMED)

KIDMED metric measures compliance to certain Mediterranean diet patterns. Adopting an eating pattern which complies with the Mediterranean diet not only decreases body fat mass and obesity risk, but also reduces the risk of developing various health problems. According to survey results, provided by Prolepsis, KIDMED score increased by around 3.6% during school year 2012 – 2013 (Cycle A), indicating that the Program helped students shift their nutritional habits towards a more healthy, Mediterranean-based diet that also involves consumption of more vegetables and fruits.

Data for underweight as well as overweight and obese students indicate that the Program was more successful in helping overweight than underweight students return to normal weight in a period of a single school year, while it appears to have little to no effect to obese students.
Efficiency
Nutrition accounts for more than 91% of total expenses both in budgeted and actual expenses. As already mentioned, the rolling school admission process has resulted in the nutrition cost not absorbed in full.

**Allocation of Funds (€000, Pilot, Cycle A & B)**

Although the budget was more than doubled in Cycle B, no major differences in the mix of the different components was identified, indicating a balanced expansion, based on the same parameters.

**Allocation of Funds (€000, Cycle A)**

Efficiency

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**Budget vs. Actual Spending**

The Program’s budget was organized into the following components:

- **Nutrition** includes both direct (meal preparation and transportation) as well as indirect expenses (canteen operator fee, packaging and menu design, etc.)

- **Health Promotion** includes all the expenses associated with organizing informative events, guest speeches and other events with the participation of established nutritionists and / or other experts as well as the design, production and distribution of informative material, board games and other.

- **Program Management** includes all other expenses that do not fall within the three categories described above, namely:
  
  i) Administrative expenses, such as consumables, management expenses, utilities, phone bills, utilities, etc.

  ii) Monitoring expenses, including all expenditure associated with monitoring the procurement and distribution of meals, Quality Assurance, etc.

  iii) Fundraising, including all communication and other expenses that aim to attract external funding for the program.

**Expense Categories:**

- **Nutrition**
  - A.1 Nutrition (Direct Cost)
  - A.2 Nutrition (Indirect Cost)

- **Health Promotion**
  - B.1 Events
  - B.2 Informative Material

- **Program Management**
  - C.1 Administrative & General Expenses
  - C.2 Monitoring
  - C.3 Fundraising
Budget Commitments

During the Pilot period, budget commitments seem to have been focused on Nutrition. During Cycle A, focus moved to health promotion and in Cycle B focus was again given on Nutrition. This outlines an overall predisposition of the Program to lean towards the direction of serving immediate needs.

Administrative Expenses - Food Banks, Food Pantries & Food Distribution

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>94%</td>
<td>85%</td>
<td>97%</td>
</tr>
<tr>
<td>Health Promotion</td>
<td>61%</td>
<td>94%</td>
<td>74%</td>
</tr>
<tr>
<td>Program Management</td>
<td>75%</td>
<td>86%</td>
<td>76%</td>
</tr>
<tr>
<td>Total</td>
<td>92%</td>
<td>85%</td>
<td>95%</td>
</tr>
</tbody>
</table>

The above can be supported by analyzing the different components of each expense category. It seems that Cycle B of the Program emphasized more on the direct nutrition cost, as this was providing immediate value to the recipient children.

Distribution of Nutrition Expenses

Cycle A, 000s EUR

<table>
<thead>
<tr>
<th>Component</th>
<th>2012</th>
<th>2013</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Nutrition</td>
<td>17%</td>
<td>2%</td>
<td>17%</td>
</tr>
<tr>
<td>Direct Nutrition</td>
<td>83%</td>
<td>98%</td>
<td>91%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>99%</td>
</tr>
</tbody>
</table>

Cycle B, 000s EUR

<table>
<thead>
<tr>
<th>Component</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Nutrition</td>
<td>9%</td>
<td>17%</td>
<td>26%</td>
</tr>
<tr>
<td>Direct Nutrition</td>
<td>91%</td>
<td>73%</td>
<td>64%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Charity Navigator

1 http://www.charitynavigator.org/
The above analysis reveals deviations in the team’s direction of efforts, between the two cycles.

- For the nutrition expenses, there was a shift in the allocation of resources from the indirect to the direct expenses. This comes as a result of the reduced canteen operators fee and of the increased suppliers’ cost.
- For the health promotion expenses, there is a shift towards producing and distributing information material than organizing events.
- For the program management expenses, there is a significant increase in the fundraising efforts of the team and a similar trend in the intensity of the monitoring function of the Program.

### Technical Efficiency

#### Total Cost of a Meal

The average cost per meal for Cycle A was EUR 1.72 while in Cycle B, Prolepsis managed to achieve a 6.4% reduction in the average cost per meal (the prices mentioned in the report include VAT), mainly due to the reduction of the cost allocated to the canteens operations and making use of economies of scale in the administration of the program.

#### Cost per Meal Breakdown

(Cycle A, EUR)

#### Cost per Meal Breakdown

(Cycle B, EUR)

#### Cost per Meal Breakdown Differences

(Cycle A & B, EUR)
As presented before, the total cost per meal was reduced by approximately EUR 0.11 in Cycle B. This is mainly due to a reduction in the indirect nutrition expenses. The reason for this was mainly due to better agreements with the canteen operators, resulting to a reduction of EUR 0.18 per meal. It must also be noted that in Cycle B there was a significant increase in quality and quantity of food provided. Specifically, the program doubled the amount of fruit and protein-rich foods like cheese and chicken and increased total calories, indicating more intense negotiations with suppliers.

Although Prolepsis managed to decrease the indirect nutrition cost component of the meal, part of this drop (31%) was absorbed by an increase in the direct nutrition cost component. This is mainly due to the increased geographical dispersion of the program, which increased the number of suppliers and the expenses of their distribution process.

Nutrition Cost per Area

The geographical distribution of the Program in Cycle A was rather limited, reaching out to 13 areas, as opposed to the Cycle B in which the Program was implemented in 23 areas. This, along with the incorporation of the dairy distribution into the mainstream process and the different meal composition altered the average cost of the meal per served area.

Overall, differences in nutrition costs were identified to both cycles, especially in Cycle B. It must be noted that the addressed costs include credit arrangements in some cases due to financial sanctions imposed on suppliers, as a result of deviations or problems with the quality of meals.

Average nutrition cost of a meal\(^1\) per area,
(Cycle A, EUR)

<table>
<thead>
<tr>
<th>Area</th>
<th>Cost (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thessaly - Thrace</td>
<td>1.28</td>
</tr>
<tr>
<td>Athens - Thiva</td>
<td>1.29</td>
</tr>
<tr>
<td>Thessaloniki - Imathia</td>
<td>1.36</td>
</tr>
<tr>
<td>Patras</td>
<td>1.37</td>
</tr>
</tbody>
</table>

Average nutrition cost of a meal\(^2\) per area,
(Cycle B, EUR)

<table>
<thead>
<tr>
<th>Area</th>
<th>Cost (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attica</td>
<td>1.38</td>
</tr>
<tr>
<td>Central Macedonia</td>
<td>1.33</td>
</tr>
<tr>
<td>Thessaly</td>
<td>1.42</td>
</tr>
<tr>
<td>Thessaloniki</td>
<td>1.46</td>
</tr>
<tr>
<td>Attika, Serbo-</td>
<td>1.51</td>
</tr>
<tr>
<td>Choutos</td>
<td>1.75</td>
</tr>
<tr>
<td>Patras</td>
<td>1.78</td>
</tr>
</tbody>
</table>

Hence, the average cost of the meal is EUR 0.03 more expensive in Cycle B.

In Cycle B, meals were distributed to urban areas such as Attica and Central Macedonia and in the periphery as well. In periphery, EUR 1.8 millions were spent in direct nutrition. If this was only distributed to urban areas, 101,811 additional meals could have been produced or, for an average program tenure of 144 days, this could result in approximately 707 children.

Cost of a Meal per Educational Level

The average cost of the meal is different for Pre & Primary school levels compared to Gymnasiums & Lyceums. In Cycle B, based on suppliers’ final offers, the cost of a meal for Gymnasiums & Lyceums was on average x1.17 or EUR 0.23 more expensive than the cost for Pre & Primary school levels.

Average Meal Cost per Level,
(Cycle B, EUR)

1.19
x1.17
x1.19
x1.18
x1.11
x1.13
x1.23
x1.16

1 The difference between the canteens’ cost per meal and the indirect cost per meal is because only approx. 70% of schools have canteens and because indirect cost includes additional expenses, such as packaging and meal design.

2 Refers only to the direct nutrition cost component.

Source: Prolepsis data, Deloitte Analysis
Supplier Selection Efficiency

Due to the philanthropic profile of the Program, it is reasonable to assume that, at least, the operational profitability of the suppliers would be at least at arm’s length compared to the rest of their operations. To that end, the negotiations with suppliers resulted in favorable competitive conditions for the Program.

From the data received from the suppliers of Cycle B1, it seems that certain suppliers achieved higher margins from the Program, compared to their overall operations.

Health Promotion

About 2.3% of the total budget relates to actions and initiatives that aim to promote health, nutrition and fitness. These initiatives complement meal administration and aim to promote a healthy lifestyle through nutrition and exercise.

From the analysis, it can be argued that in Cycle B the Program searched for less expensive channels to promote health. There is a significant shift towards promotion through informational material, while the number of events did not follow the expansion of the Program, neither in students (x 2.7), nor at schools (x 2.5).

This is along the same lines with the shift of the Program’s budget commitment in nutrition for Cycle B that was discussed earlier. In addition, events in Cycle B were found to have been slightly less expensive than in Cycle A.

1 Questionnaires were sent to all suppliers of the Program as part of the primary research conducted.

Source: Prolepsis data, Deloitte Analysis

Monitoring Mechanism

Prolepsis closely monitors the supply chain of the Program, from the processing facilities to the end beneficiary. Monitoring teams, spread across Greece, include supervisors and volunteers; each supervisor together with a team of volunteers is responsible for 20 – 30 schools in a specific region. The coordinators reported issues after performing quality assurance checks to the various aspects of the supply chain.

The monitoring cost incudes the wages of the coordinators, the travelling expenses and the lab quality checks. The monitoring cost per meal differs from one area to another, due to the intensity of the controls.

In Cycle B, Attica and Thrace have the highest monitoring cost per school per month of program tenure, while in Thessaly, Achaia-Ileia and Central Macedonia it is about 60 – 70% lower. For Athens, the higher monitoring cost per school indicates a possible utilization of the convenience offered by the proximity of Attica operations. However, it must be mentioned that Attica served the majority of students and had 3 different suppliers located in the area. In Thrace, where only a small number of schools is served by the program, access costs have driven up the monitoring cost per school.

Monitoring Cost per school per month in the program (Cycle B, EUR)

Source: Prolepsis data, Deloitte Analysis
Fundraising Efficiency

SNF’s budget included expenses for fundraising activities - attracting other organizations and individuals to support the Program. The following figures are based on the allocation of relevant expenses such as communication expenses & support, promotion events, consumables and other expenses etc.

Fundraising (Actual Expenses)

Pilot & Cycle A
EUR 50,290
EUR 232,328 raised
EUR 0.22 raised EUR 1

Cycle B
EUR 157,704
EUR 838,371 raised
EUR 0.10 raised EUR 1

Comparability with other charity organizations

Based on the Financial Rating Tables of Charity Navigator for Fundraising activity, the fundraising efficiency is evaluated in two dimensions; the fundraising expenses as a % of total program expense, and the amount of EUR spent to raise 1 EUR in donations.

Although Prolepsis achieves the highest score in the fundraising expenses scale (1.2% in Cycle A, and 1.5% in Cycle B), fundraising outcomes seem quite low in both Cycles, suggesting that additional funds are needed to justify the inputs in place.

Fundraising Expenses - Food Banks, Food Pantries & Food Distribution

<table>
<thead>
<tr>
<th>Score: Cycle A &amp; B</th>
<th>10</th>
<th>7.5</th>
<th>5</th>
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</tr>
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<tbody>
<tr>
<td>Percent of total functional expenses spent on fundraising</td>
<td>0% - 10%</td>
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<td>Amount spent to raise 1 Euro</td>
<td>EUR 0.00 - EUR 0.03</td>
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Source: Charity Navigator

Cost Effectiveness

Food Security Improvement Cost

The cost to improve food security was examined using Cycle A data, as Cycle B data were not yet available. Without undermining the need to preserve the quality standards, cases were identified where an increased meal cost did not offer a higher FSSM change. This creates some scepticism around the needed balance between quality and price to achieve the desired outcome.

Cost of Food Security Status Change per Area
(Cycle A, % FSSM Change – FSSM)

Assessing the above finding within a program’s framework that meets high quality standards, it can be argued that higher costs are not necessarily linked with better outcomes.

The above suggests that within the current economic environment, the increase of food security seems to place significant emphasis to food access, as the most pressing need to be achieved, before a healthy behavior can be internalized.

Also, by looking at the cost effectiveness of different educational levels, it seems that the program achieved higher cost – effectiveness at Pre-School and Primary levels compared to Gymnasiums & Lyceums. While the meal on average costs EUR 0.23 less for Pre-School and Primary school than the meal for Gymnasium and Lyceum, the measured food security status improvement is more significant.

Source: Prolepsis data, Deloitte Analysis

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Source: Prolepsis data, Deloitte Analysis
Efficiency

Yet, by looking at the food security status at the beginning of the year, the students in Gymnasiums and Lyceums appear to be in a worst situation than their peers in pre-school and primary school. This makes the selection of children of higher educational grades more relevant.

Based on the matched questionnaires, 1% improvement is EUR 0.03 more expensive for Gymnasiums & Lyceums, while based on the unmatched questionnaires data, 1% improvement costs double the amount. Hence, the cost of improving the FSSM in Gymnasiums & Lyceums is 1.15 to 2 times more than in pre-schools and primary schools.

Assessing Efficiency

The Program’s expenses were allocated in three major cost categories: nutrition, health promotion and program management. Although the budget was evenly expanded from Cycle A to Cycle B, a shift of focus in favour of nutrition costs was observed, indicating an overall predisposition of the Program to lean towards the direction of serving immediate needs.

At the same time, the Program in Cycle B focused more on informational material, with the number of events not following the expansion of the Program in schools. However, Prolepsis also managed to drop the cost of the average event organized from Cycle A to Cycle B.

The total cost of a meal was reduced from EUR 1.72 in Cycle A to EUR 1.60 in Cycle B. The EUR 0.12 reduction was mainly due to the decrease in the canteen operator fee, as a result of better agreements with them. Part of the reduction was absorbed by an increase in the direct nutrition cost that was imposed due to the geographical dispersion of the program (EUR 0.03). The most expensive areas was Crete and Epirus, which cost an additional EUR 0.455 per meal than Attica and Central Macedonia.

The Program has achieved better terms (lower EBITDA margin) with suppliers in certain cases, while in other cases it did not manage to secure efficient at least an arm’s length deal, mainly due to the imposed secondary procurement process that reduce the programs negotiation power towards some suppliers.

On the other hand, while the fundraising expenses appear to be relatively low in comparison with the overall Program expenses, when compared to the fundraising effects, they appear quite high, ranking Prolepsis low in relevant international efficiency scales.

Overall, the food security status improvement appears to have been negatively correlated with the meal cost (including only direct nutrition expenses). Under these terms, the focus on price seems reasonable, assuming that the needed quality issues are met, while, based the results of Cycle A, there is some scepticism on the needed balance between quality and price to achieve the desired outcome.

Also, the cost of improving FSSM in Gymnasiums & Lyceums is higher in pre-schools and primary schools. Nevertheless, the selection of students of higher educational grades is more relevant to the program’s objective, as they appear to be in a worst food security status than the students in pre-school or primary school.
Economic Impacts

Apart from the direct social impact from the distribution of daily meals to the beneficiaries, the Program is estimated to have created a greater economic impact. Under the assumption that most of the expenditures would have not taken place if it wasn’t for the Program, direct and multiplied economic effects to the economy have been estimated.

Direct economic impact

The direct economic effects involve the expenses towards contractors, canteen operators, guest lecturers and other professionals involved in the organization and execution of health promotion events. Additionally, payroll expenditure due to the operation of the Program is considered to have a direct economic impact. As examined in the previous chapters, the total expenditure due to the economic activities of the program is estimated at EUR 4.29 million for Cycle A and 10.25 million for Cycle B.

<table>
<thead>
<tr>
<th>Total subsidies and operational Expenses (EUR mil)</th>
<th>Catering Expenses</th>
<th>Administrative Expenses</th>
<th>Educational Services</th>
<th>Other Expenses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle A</td>
<td>3.94</td>
<td>0.14</td>
<td>0.11</td>
<td>0.10</td>
<td>4.29</td>
</tr>
<tr>
<td>Cycle B</td>
<td>9.42</td>
<td>0.24</td>
<td>0.22</td>
<td>0.37</td>
<td>10.25</td>
</tr>
<tr>
<td>Total</td>
<td>13.36</td>
<td>0.38</td>
<td>0.33</td>
<td>0.47</td>
<td>14.54</td>
</tr>
</tbody>
</table>

Most of the above expenses can be linked with multiplied economic activity, as they are channeled to the economy creating an indirect economic impact to local businesses, which is translated into sales, wages and job placements / attainments. Consequently, these effects are in turn creating a further multiplier effect to the economy with the creation of more sales, wages and job positions until the economic system returns to a balanced state.

The overall effects can be calculated through the application of the Input-Output methodology in which, multipliers are applied to the direct expenses made from one industry to the rest of the affected economic activities.

Based the Input – Output national tables published by Eurostat, the multipliers were calculated for the above categories of expenses are presented below.

<table>
<thead>
<tr>
<th>A/A</th>
<th>Economic Activity</th>
<th>Output Multiplier</th>
<th>Income Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accommodation and food services</td>
<td>1.92</td>
<td>0.22</td>
</tr>
<tr>
<td>2</td>
<td>Office administrative, office support and other business support services</td>
<td>2.60</td>
<td>0.96</td>
</tr>
<tr>
<td>3</td>
<td>Scientific research and development services</td>
<td>2.94</td>
<td>0.95</td>
</tr>
<tr>
<td>4</td>
<td>Other</td>
<td>1.70 – 1.85</td>
<td>0.25 – 0.35</td>
</tr>
</tbody>
</table>

Overall, the Program is estimated to have created almost double of its initial economic activity in industries related to its operations. This does not include the additional benefits that were achieved through the same process for the additional funds pooled for the support of additional schools.

Overall Economic Impact of Cycle A

Overall Economic Impact of Cycle B

Additional opportunity costs relating to the improvement of the life conditions of the beneficiary families, can be assumed, however their quantification would require substantial data on their life metrics that are not available. However, the Program’s impact on children’s health and their educational performance was analysed and is presented next.

1 Input-Output model, Wassily Leontief (1905–1999)
2 http://epp.eurostat.ec.europa.eu/portal/page/portal/esa95_supply_use_input_tables/introduction - Latest available table refers to the 2010 industry relations
3 Employment is expressed in full time equivalents
4 Based on the average annual wage of Greece in 2010 (EUR 18.723) used for consistency with the last available input-Output table from Eurostat
Data provided by Prolepsis indicate that FSSM improvement for Program participants during Cycle A can be retained or even enhanced until the beginning of Cycle B (at least 4 months later). Specifically, in a total sample of more than 20,000 children, the recorded improvement of FSSM reached 11% during the Program, however food insecurity was increased by 8% during the following months till the beginning of Cycle B, leading to an overall 3% reduction.

However, this improvement was mainly driven by results in some areas such as Xanthi, Magnesia, Imathia, as in other areas like Larisa, Achaia and Rodopi FSSM improvements achieved in Cycle A was not sustained till the beginning of the next Program Cycle. An overall trend that can be concluded from the data is that a moderate improvement during the Program leads to more sustainable results and a better impact for the students.

Further analysis of the data reveals a segmentation of the addressed population in relation to Program’s longer term impact.

Cluster (1): FSSM improvement after the end of the Program, exceeded the improvement during the program indicating that in-school nutrition together with informative actions and initiatives had a significant impact on student’s nutritional habits and health. Such areas in this cluster include Kavala, Imathia, Magnesia and Xanthi.

Cluster (2): FSSM was further improved after the end of the Program, but the improvement did not exceed the one achieved during the Program. No regions fall under this category.

Cluster (3): FSSM improvement during the Program was not sustained after the end of the program. However, the “relapse” in the following period did not cancel out the improvement during the program. Attica and Achaia regions falls within this cluster.

Cluster (4): FSSM improvement during the Program was not sustained after the end of the Program. Furthermore, measurements were even worse since the beginning of the Program, indicating a tendency of this group to fall back to its initial status. This cluster includes the regions of Thessaloniki, Rodopi, Larisa.

Comparison of FSSM improvement during and after the end of the Program (per area served)
Analyzing the provided dataset by educational level, reveals that in Pre-School, Primary School and Gymnasium, where the Program recorded a positive effect (in terms of FSSM improvement) within the duration of Cycle A, there was a relapse during the following months after the end of the Cycle. The relapse was from 5% in Gymnasiums up to 24% in Pre-Schools, compared to the end of the program.

Lyceums on the other hand present the opposite picture. While there was no measured improvement during the Program, this seems to have been achieved during the period after the end of the Program.

This is indicative of the different pace with which each educational level absorbs the Program parameters. As already discussed in the Effectiveness chapter, there seems to be different profiles with different adoption patterns.

Further data analysis reveals that the effect and impact of the Program per educational level can be segmented into different clusters:

- **Cluster (1): Lyceums**, The measured effect of the Program, in terms of FSSM improvement, for Lyceums was negative during the program while positive results emerged in the following period.

- **Cluster (3): Primary Schools & Gymnasiums**, Measured FSSM improvement in Primary Schools and Gymnasiums was significant during the program, reaching figures of 13% and 7% respectively. However, in the following months, FSSM measurements got worse, but not to a point that would cancel out the already measured improvement.

- **Cluster (4): Pre-Schools**, FSSM was improved by 12% for Pre-School students but this improvement was shortly followed by a double-fold increase in Food Insecurity as measured four months after the end of the Program.

**FSSM Change during and after the end of the Program**

(per education level)

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Initial Measurement</th>
<th>Program Effect</th>
<th>Program Impact</th>
<th>Absolute Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-School</td>
<td>-0.58</td>
<td>+1.03</td>
<td>+0.17</td>
<td>-0.41</td>
</tr>
<tr>
<td>Primary School</td>
<td>-0.64</td>
<td>+0.42</td>
<td>+0.23</td>
<td>-0.41</td>
</tr>
<tr>
<td>Gymnasium</td>
<td>-0.39</td>
<td>+0.23</td>
<td>+0.10</td>
<td>-0.29</td>
</tr>
<tr>
<td>Lyceum</td>
<td>+0.10</td>
<td></td>
<td></td>
<td></td>
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</table>

**Comparison of FSSM improvement during and after the end of the Program**

(per education level)

Overall, it seems that the effect of the Program during the school year decreases with the children’s age, while the impact of the Program in the following period increases. This is an indication that higher educational maturity provides more resources for the children to be able to internalize the program’s parameters and adapt their lifestyle towards healthy nutrition, while younger children seem to enjoy the immediate effects of the program, but they are not convinced enough into a sustainable outcome.

Considering the above different types of clustering and considering the different adoption patterns discussed earlier, it is reasonable to assume that changing nutrition habits requires insights on the behavioral mechanisms of different beneficiaries.

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1 Refers to unmatched questionnaires i.e. different samples of students during measurements in the beginning & end of Cycle A, as well as in the beginning of Cycle B.
2 Program effect refers to the absolute FSSM improvement during the program; impact refers to the FSSM change that was recorded between the end of Cycle A and the beginning of Cycle B of the program.
Impact

Attendance Rates & Grade Improvement

A total of 13 schools that participated in the Program and 5 that did not participate were examined in the primary research conducted. Effectively, more than 1,000 students in total, aged between 12 and 15 years old were examined in terms of their school absences as well as their grades for the school year 2012 – 2013 and 2013 – 2014.

The survey results indicate that for participating schools, attendance rates have increased and grades have improved compared to a decrease in grades for non-participating schools.

### Participating Schools

- **Absences Reduced** by 1.4 Days
- **Improved Grades** by 0.2%*

**0.2 Days** less absences for every month in the Program

(1 more day of school in a 5-month period)

Hunger has a huge effect on how a child performs at school. In fact, 9 out of 10 teachers say having a healthy breakfast is key to academic achievement.

*Grade improvement was measured only in Primary School Students, where the grading system is significantly skewed towards higher Grades (A or B). Therefore even a small improvement in Primary School grades may signal a significant overall grade improvement for students that benefit from in-school nutrition.

### Non Participating Schools

- **Data Not Available**¹
- **Grades Dropped** by 0.9%

¹ Absences for the school year 2012 – 2013 for the non-participating schools were not addressed due to limited responses.

In 2012, Deloitte expanded its commitment to “Share our Strength’s - No Kid Hungry” campaign by collaborating on a project to identify and quantify the potential long-term impacts associated with children participating in the US Federal School Breakfast Program.

The analysis, “Ending Childhood Hunger: A Social Impact Analysis,” showed that there are dramatic potential impacts associated with the simple act of feeding kids a healthy school breakfast, including positive, large-scale outcomes in education, economics, and health.

Findings clearly link in-school healthy nutrition with higher attendance rates and improved grades, elements that were also singled out from our survey. Additionally, according to the above analysis, better grades and less absences increase significantly the graduation rates and thus employment rates as well as expected annual income.
Impact

Higher Academic Achievement

<table>
<thead>
<tr>
<th>Students who eat school breakfast on average:</th>
<th>Students who attend class regularly have lower dropout rates.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend more days of School per year</td>
<td>Students achieving high grades are more likely to graduate high school</td>
</tr>
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</table>

Greater Economic Productivity

<table>
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<tr>
<th>High school graduates are shown to have greater long-term economic productivity than those who do not receive high school diplomas.</th>
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<tr>
<td>High school graduates earn higher annual wages and have a higher employment rate</td>
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Associated Benefits with Eating School Breakfast

Increased Educational Level

- 1.5 more days of school
- 17.5% better scores
- 25% more likely to graduate High School
- 20% lower dropout rates
- 4% Higher Employment Rate

More Productive Workforce

- Higher Annual Income by USD 10 500

Reduced Healthcare Expenditure

A balanced healthy nutrition leads to better health, especially in younger ages, as it counters obesity and thinness, while it also reduces a large number of health risks. Although no relevant figures could be made available, it can be assumed that a portion of school absences are linked with healthcare issues in the served areas. Student malnutrition and inability to access nutritious breakfast on a daily basis only make the situation worse. Improving the students' health, can have a direct effect to the economy as it reduces healthcare expenditure in the short, medium and longer run.

Lower drop out rates

Healthy nutrition on a daily basis, supports students on achieving better results and reduces drop-out rates. Currently, dropout rates in Greece are about 2 base points better than EU-28 Average. The 20% achievable reduction as indicated by the above study would put Greece about 4 base points above EU average.

Relative amounts, figures and benefits might differ across geographical regions and may also depend on socioeconomic factors but a clear connection between in-school nutrition and positive outcomes in education, health, economy and society as a whole is apparent.

Satisfaction Level

According to the results from the survey conducted by Prolepsis at the end of school year 2012 – 2013 on more than 9 500 Program participants (student parents), overall satisfaction with the Program appears quite high.

Well above 75% of the respondents appear very satisfied with the Program in its current form. However, it seems that satisfaction level in major urban centers like Athens and Thessaloniki is lower on average compared to responses from schools in more rural areas.

As already discussed in the Effectiveness Chapter, the majority of schools are located within urban environments, where there might be a tendency for scepticism from parents that are relatively better off to admit the need for the Program.

The diversified socioeconomic parameters within urban environments seems to explain the different perceptions regarding the Program.

Overall Satisfaction Level per region

(participating families)

Source: Prolepsis data, Deloitte Analysis

Parents' opinion regarding the Program's contribution to students health (%)

Source: Prolepsis data, Deloitte Analysis
Deloitte also surveyed about 650 students from schools that participated in the Program and about 600 students from similar schools, in terms of geographic characteristics, that did not participate in the Program in either Cycle.

Due to the fact that this evaluation was executed during the summer recess period, as well as due to time restrictions, the examined sample was based solely in Athens and Thessaloniki.

Satisfaction regarding the Program in its current form was measured for students that participated in the Program. Results are in line with Prolepsis’ measurements for the previous year, indicating that more than 75% of Program participants in Athens and Thessaloniki are very satisfied with the Program.

**Impact**

**Assessing Impact**

Apart from the direct contribution of the Program to the beneficiaries, the Program appears to have an even greater economic impact to the economy. It is estimated that, overall, the Program has created more than double economic activity in related industries compared to its initial inputs.

Although, the Program appeared to have been quite effective in almost all areas, there seem to areas in which food security status improvement fades away, as students return back to their initial state, or at an even worst situation. At the same time, almost half the areas manage to sustain the effect, or improve it even more during this period. This could mean that in these areas students have more easily internalized the Program parameters and have amended accordingly their nutrition habits.

On the other hand, there seems to be an association between the Program’s impact and the different educational levels. In particular, students’ age appear to be negatively correlated to the Program’s effectiveness, but positively correlated to the longer term impacts. This indicates that older students are more likely to internalize the program parameters than younger children.

Deloitte with the collaboration of Prolepsis held a primary research order to assess the Program’s impact on the beneficiaries. Although the participants’ number was relatively small, it can be argued that the Program increased attendance and improved grades in the participating schools compared to non-participating schools.

Two-thirds of the beneficiaries’ parents appear to be very satisfied with the Program. The rest of the responders, mainly in Attica and Thessaloniki appear to withhold some reservations, as the diversification of socioeconomic parameters within urban environments can create some conservative skepticism.

**Satisfaction Level**

(Participating Schools, Athens - Thessaloniki)

Source: Deloitte Research, Deloitte Analysis

On the other hand, an interesting finding of the survey is that Program participants perceive healthy in-school nutrition as very important for the students’ health, in a greater degree than those that have not yet benefit from the Program. This indicates, that the Program has been successful in changing misperceptions and steering habits towards a more healthy in-school nutrition.

**Perceived Importance of in-school nutrition to students health (%)**

Source: Deloitte Research, Deloitte Analysis
Sustainability
European Strategy for Nutrition

In May 2007, the European Commission established a coherent and comprehensive Community Strategy\(^1\) to address the issues of overweight and obesity, by adopting the White Paper, focussing on action that can be taken at local, regional, national and European levels to reduce the risks associated with poor nutrition and limited physical exercise, while addressing the issue of inequalities across member states. In particular, the strategy:

- **Encompasses a range of Commission policies that can be, and are being marshalled towards the purpose of improving nutrition and preventing overweight and obesity.**

There are currently two separate EU-funded school distribution programs under the EU's Common Agricultural Policy (CAP) that specifically target children in schools: the School Milk Scheme (SMS), set up in 1977 and the School Fruit Scheme (SFS) set up in 2009/2010. Although there are differences in design and administration, the schemes basically aim at encouraging the consumption of fruit, vegetables and milk as these have proven benefits in terms of public health. The School Fruit Scheme in particular was set up in the context of poor nutrition and increasing rates of child obesity, and on the basis that good habits established in childhood continue in later life.

- **Encourages more action-oriented partnerships across the EU, involving key stakeholders working in the field of nutrition: the private sector, Member States, the European Commission and the WHO.**

Actions have to be concluded at all levels of decision – making, from local to Community levels. As regards Community action, they shall be proposed either through the implementation of all relevant Community policies and activities or shall complement national policies when deemed appropriate, as foreseen in Article 152 of the EC Treaty.

Actions should aim to address the root causes of the health related risks. In this way the actions set out in the strategy should contribute to reducing all risks associated with poor diet and limited physical activity, including but not limited to that associated with excess weight.

The actions described are intended to work across government policy areas and at different levels of government using a range of instruments legislation, networking, public – private approaches and to engage the private sector and civil society.

For the sake of efficiency, the strategy will require action from a wide range of private actors, such as the food industry and civil society and actors at local level, such as schools and Community organizations.

- **Sets out a series of challenges to relevant stakeholders at all levels, notably the food industry, civil society and the media, by calling for widespread food reformulation schemes and responsible advertising.**

Monitoring will be essential, as the number of activities aimed at improving diet and physical activity is already extensive and is growing year by year. These is often little or no monitoring taking place, resulting in limited assessment of what is working well, or whether actions need to be refined or fundamentally changed.

Individual’s knowledge, preferences and behaviors, for example related to eating habits are shaped by the environment around them. This requires, on the one hand, access to clear, consistent and evidence-based information when deciding which foods to buy and on the other, the wider information environment, which is in turn shaped by cultural factors, such as advertising and other media.

- **Sets out the Commission’s plans to strengthen monitoring and reporting of the situation, in collaboration with the WHO, through initiatives such as the Nutrition Policy Database or the International inventory of documents on physical activity promotion.**

The Nutrition Policy Database contains data on food and nutrition policies, including information on policy documents, institutions for implementation and collaboration with stakeholders in WHO European Member States. It has been merged with the new Nutrition, Obesity and Physical Activity Database (NOPA) database.

The School Fruit Scheme

The main aim of the School Fruit Scheme is to achieve a constant increase in the proportion of fruit and vegetables in children's diets, so as to improve their dietary habits and thereby reduce levels of child obesity.

The program’s objectives are:

- The overturning of the declining consumption of fruits and vegetables.
- The steady increase in the share of vegetables in the diet of children at the stage where eating habits are formed.
- The improvement of children’s eating habits and consequently the reduction of childhood obesity rates.
- The achievement of the Common Agricultural Policy goals, including the increase of the income of the agricultural sector, the stabilization of markets and the availability of current and future supplies.

The program is being funded by the European Commission, as long as member States draw up a prior strategy for its implementation, namely indicating the added value of the scheme in relation to the regular school meals. Eligible costs include the costs of fruit and vegetables, the cost of purchasing, renting, hiring or leasing the needed equipment, the cost of monitoring and evaluation of the scheme and specific communication costs related to the visibility of the programs to schools.

Twenty-five Member States participate in the School Fruit Scheme of 2013/2014, which is co-funded up to 75% (will reach 90% for 2014/2015).

Some 8.4 million children in 61 396 schools benefited from the scheme in 2012/2013 for a total budget of EUR 90 million.

The national envelopes available for the 2014/15 School Fruit Scheme in each participating Member State have been approved recently. The decision takes into account the increase in EU funds available for the Scheme from EUR 90 million to EUR 150 million. At the same time contribution from the Member States is expected to be reduced at 10 - 25%.

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The School Milk Program

The European School Milk Program encourages children to consume dairy products and maintain a balanced diet. It also plays an educational role by supporting the development of good eating and nutritional habits that will last a lifetime. Through the School Milk Program, the European Union provides subsidies to schools and other educational establishments so that they can provide their students with selected milk and milk products.

The program’s objectives are:

• The increase of milk consumption and milk demand to fight the declining trend and stabilizing the market price for milk and milk products
• Increasing consumption of milk and milk products of children and young people, by providing them with healthy dairy products.

Member States are given the authority to tailor the School Milk Program on a national level. Thus, it is the Member State that decides which products on the EU list will be covered by the program subsidies in their country. They can also make further restrictions on the content of the milk or milk products that are offered under the subsidy – for example, by limiting the percentage of fat allowed. Additionally, within each Member State, the EU subsidies can be supplemented with additional funds.

School Fruit in Greece

In late May 2009, the Ministry of Agriculture informed the European Commission about its intention to participate in the project to promote the consumption of fruit in schools across the Greek territory. Beneficiaries would be children attending primary schools in the country, the total number of which amounted to 650,000. The budget for the first year (2009/2010) was EUR 3.15 mil, of which EUR 1.86 was funded by the EU.

However, the program was not utilized but only for the next school year (2010/2011) and only as a pilot. During this application, fresh fruits and vegetables were distributed to all students of primary education in the Region of Attica and Thessaloniki. The program served 1,545 primary schools (public and private) and the beneficiaries of the program amounted to around 283,674 students.

Although the program period was foreseen from September 13th, 2010 until June 15th, 2011, the implementation period (in terms of distribution of products) was confined to the months of May and June 2011 due to the delay of issuance of the necessary regulations and the delay for the selection of project operator. In addition, the complementary educational activities were not implemented.

For the period 2010/2011, Greece spent only 56.6% of the fund allocation (EUR 1.86 mil).

The ex-post review indicated the need for the program to be incorporated within the school programs, the need for the educational measures, the need to monitor the nutrition habits before and after the implementation of the program and the need for the program to target the areas with the lowest consumption of fruits in a cost-effectiveness manner.

For the 2011/2012 year the program was abandoned, since the relevant tender for the producers was cancelled.

For the period 2012/2013 the program was geographically distributed in various regions across Greece. The budget was EUR 3.15 mil, with EUR 1.86 mil funded by the EU. The implementation of the program was again limited to a short period of time (3 months), while it was overshadowed by an increased number of complaints about the quality of the provided meals, which resulted in the program not absorbing the originally assigned budget.

To eliminate the intense controlling of the decentralized operations, for the period 2013/2014, the program was again confined within Athens and Thessaloniki. The available budget was EUR 3.11 mil, with EUR 1.84 mil (59%) funded by the EU. Again, the implementation of the program is expected to be for a short period of time (announcement was made in April 2014). The program provides for distribution of fresh fruits and a fruit salads to 1,400 schools and 280,600 students of primary education. Each student will get, in five instalments, 10 salads, 22 oranges and 22 apples.

It is evident that the application of the School Fruit program in Greece has suffered from the emergence of endogenous problems of public administration not being able to respond effectively and efficiently to the mandate.

European Considerations

The European Commission today published a proposal bringing together two currently separate school schemes, the School Fruit Scheme and the School Milk Scheme, under a joint framework. In a context of declining consumption among children of fruit, vegetables and dairy products, the aim is to address poor nutrition more effectively, to reinforce the educational elements of the programs (boosting the consumption of selected produce in the long term and instilling healthy eating habits through education) to make them more efficient, through better targeting for maximum impact and more cost-effective distribution and to contribute to the fight against obesity.

Following a debate in the European Parliament and the Council and the approval of the legal and financial framework the reformed school scheme will probably take effect in 2016.

Deployment of Schemes in Greece

In accordance with Commission Regulation (EC) No 288/2009, Greece implemented the “School Fruit” and the “School Milk” programs to promote the consumption of such products in schools.
Sustainability

The Ministry of Rural Development and Food was the competent Authority for supervising the tender procedure and monitoring the implementation of the program. The Ministry of Education, Lifelong Learning and Religious Affairs was responsible for monitoring the process form the time the product was delivered to the schools.

The Payment and Control Agency for Guidance and Guaranty Community Aid (OPEKEPE) was responsible for organizing the tender procedure, the signing of contracts, the implementation and control of the program and the checking and settlement of the contractors' payments.

The Ministry of Health and Welfare was responsible for approving the products to be distributed under the scheme.

For the period 2014/2015, Greece can enjoy an increased co-financing rate of 81% (EUR 3.14 mil). However, there is a need to front load the whole preparatory process in order to be able to respond.

School Milk in Greece

Greece participated in the Scheme in the 2012/2013 period, however only at the end of 2013 it managed to initiate the scheme at a local level.

The implementation of the scheme for the running year (2013/2014) started as a pilot by servicing schools of Elefsina. The implementation of the measure has given the opportunity to Greek students to consume milk in schools, subsidized by about 0.18 euros per litre, with funds coming entirely from the EU.

The aim is to educate the children in milk consumption, but also to promote the fresh pasteurized cow milk and indirectly strengthen the livestock sector.

The program is supervised by the Ministry of Rural Development and Food and implemented by the Payment and Control Agency for Guidance and Guaranty Community Aid (OPEKEPE).

The grant is directed either at school, the school board, suppliers of products (canteens) or an organization set up for this purpose (e.g. Parents’ Board). It can also operate the scheme to one or more schools, while it has to undertake guarantees of achieving the measure.

The aid is defined in EC Regulation 657/2008 and the daily amount that may be allotted to each student is 250 ml. Based on the EC Regulation, the aid amount is about EUR 0.18 per litre for EUR 0.25 litres per student per day (or about EUR 0.0465 per student per day).

The requirements set for the implementation of the milk scheme include the commercial setting of organizations and / or partnerships to address financial traceability of the products, specific use of the milk products and quality of the suppliers installations. In addition, there are a number of reporting requirements to authorities.

The slow implementation of the scheme in Greece so far is indicative of the responsiveness of the industry to develop a mechanism that can respond to the above mandate. Due to the set requirements, it has to attract an increased number of stakeholders in order to achieve a scale that can effectively and efficiently address them.

In response to the possible combination of both schemes at European Level, Greece is facing the challenge to develop the needed mechanism that can utilize the relevant European funding.

Commitments undertaken ...

From the introduction of the EU Strategy for Nutrition, Greece seems to have fallen behind in terms of active responsiveness. The originally set National Action Plan for Nutrition and Food Disorders (2008 – 2012) that was developed back in 2008 remains relatively inactive in most of its items.

National Action Plan for Nutrition and Food Disorders

The action plan presented a number of actions that should have been implemented until 2012, such as:

- White paper for the advertising and marketing of food products to support the self regulation of the industry based on the guidelines for the media and marketing of products
- Education on health nutrition to increase the consumption of legumes, vegetables and fish and reduce consumption of meet through active advertising, seminars and healthy menus for organizations regulated by the Ministry of Health.
- Development of nutrition protocols and standard nutrition menus for dining areas regulated by the Ministry of health, as well as promoting the Government’s role in addressing food safety within Greece
- Promotion of health nutrition and physical activity by educating the people, emphasizing in neonates, mothers and older people
- Development of a database for health nutrition, effectively educating adolescents and children about prevention of food disorders
- Setting of healthy requirements for products that can be placed at the school canteens, coupled with activities that can leverage the uptake of nutrition habits by children and their parents
- Encouraging the consumption of fruits and vegetables (e.g. 5 min break for fruits)
- Promotion of healthy nutrition at work, with circulars and cooperation with unions
- Development of a diagnostic tool that can provide early warnings of health disorders and dissemination of information to educate on preventing undesirable situations
- Coordination within government towards a national nutrition policy based on a risk assessment that can effectively illuminate the population’s needs
- Cooperation with the food industry to develop and promote healthier products to the market, with certification benefits
- Cooperation across all levels of public administration to confront the environment that sustains obesity through e.g. safeguarding of open areas for physical activity
- Research on the different effects of malnutrition, by utilizing cooperation with scientific organizations and by developing the methodology for a rolling national nutrition research to representative population

Deloitte
The envisaged goals for the implementation of the National Action Plan included:

- the monitoring of nutrition characteristics and obesity in Greece,
- the reduction of obesity to general population by 20% until 2020
- the reduction of child obesity until 2020, with positive results from 2012
- the reduction of the calories’ consumption by 10% until 2020
- the increase in the consumption of fruit, vegetables, legumes and unprocessed fruits and reduction of sugar consumption until 2012
- the reduction of lipid intake by 20% until 2020, with positive results from 2012
- the reduction of the upward trend of calorie and lipid consumption for children until 2020, with positive results coming in from 2012
- The monitoring of National Action Plan implementation and results

The implementation of the action plan in Greece has only achieved marginal effects in terms of promoting health nutrition and reducing obesity.

The cooperation with the industry is mainly based on the discretion of the latter to adapt and promote their corporate social responsibility. Although there are cases of notable actions made by the industry, they seem to be rather scattered and with limited possibilities to address the objectives of the national plan.

The effort of scientific organizations was mainly focused on epidemiological research, which in turn was isolated to a large extent from an overall solution that could effectively promote healthier nutrition.

Even in the case of the EU funded projects of School Fruit and School Milk, the national targets remained untouched, as the lack of implementation flexibility and the limited achieved cooperation among stakeholders did not produce anything more than marginal absorption of funds, as indicated previously.

Although there are some examples of programs addressing the need to monitor the nutritional habits of the children at school there is no evidence of a policy oriented mechanism, while at the same time there is little active involvement towards the achievement of the objectives of the action plan.

The prioritization of measure, the coordination and monitoring of the National Action Plan was assigned to the National Committee of Nutritional Policy. The Committee was to include members from all stakeholders in the action plan and be supported by a Secretariat.

Appointed Committees

The endeavors to coordinate the implementation of the action plan were appointed to National Committees with the view of devising a list of achievable measures.

National Committee of Greek Nutrition

In 2010, the National Committee of Greek Nutrition was formed in order to propose policies and measures for the promotion of healthy nutrition in Greece. One of the main conclusions of the Committee was that the increased fragmentation of the responsibilities within public administration and the need to introduce one central coordinating body that will ensure continuation in the future.

The outcome of the Committee was the recommendation of a number of measures and prioritized them based on their ability to be implemented in the short, medium and longer run.

- Informational and promotional measures
  A number of special informative broadcasts in the media and the cooperation of the industry for the promotion healthy nutrition.

- Regulatory adjustments
  Introduction of a Greek Nutrition Authority to coordinate all individual actions from line ministries, redenfinition of the requirements for the operation of the school canteens, investigation of the possibility to engage the local authorities or even the Parents’ School Committee to the operation of the canteens; tax incentives for healthy products and increase of their availability to the market.

- Activities at Schools
  Implementation of the program of fruit distribution to schools, the introduction of school classes on healthy nutrition, the increase of physical activity within school hours, a pilot nutrition program coupled with educational activities to children, parents and the rest of the educational community, development of infrastructure within schools (where possible) for dining and servicing the educational courses

Scientific Committee of Nutritional Policy

In 2011, the Ministry of Health introduced a Scientific Committee to prioritize the measures to be included in the National Nutrition Policy. The mandate included the following:

- The definition of research needs, measures and regulatory adjustments on prevention issues of chronic diseases, in accordance with World Health Organization (WHO) instructions and those of the European Commission
- The recommendation of measures and programs for the prevention of child obesity, as well as other chronic diseases linked with nutrition to children and adults
- The opinion about the needed regulatory adjustments relating to nutrition and health
- The recommendations for the annual reports that will monitor nutrition related issues (obesity, nutrition habits, interventions, abeyances, etc.)

The Committee with the support of four (4) sub-committees was mandated to operate for three (3) years (with an option to renew) and to convene four (4) times per year.
National Committee of Nutritional Policy

Recently (January 2014), the reconstitution of the National Committee of Nutritional Policy took place, as the successor of the Scientific Committee of Nutritional Policy. The aim of the Committee is to support the development of nutrition guidelines for individual population groups.

Despite the different setting arrangements of the above Committees, only limited outputs have been produced that can be traced back to the overall EU strategy and the Action Plan for 2008 – 2012.

Ministerial Decision on Canteens

Recently (August 2013), a decision was issued for the operation of school canteens (public and private), by the Ministry of Health. Based on this, there is a need to modernize the list of permitted products for sale, according to the latest scientific data on the prevention of childhood obesity and chronic diseases generally associated with children’s diet. The Ministerial Decision redefines the operational requirements of school canteens, including their receipt, storage, servicing, display and reporting requirements for the suppliers, staff employed, water supply, sanitation, etc.

The list of acceptable products includes fruits – vegetables, dairy, simple pastries, sandwiches, sweets, nuts and beverages under specific nutrition requirements in line with the Mediterranean nutrition pyramid.

The decision does not permit the distribution of other products through the canteens and was obligatory from the school year 2013-2014.

Health Checks

One month after the issuance of the above, a circular was distributed to all relevant Health Inspection bodies (Regions, Municipalities, etc.) with the view of safeguarding the requirements that had been set in the Ministerial Decision.

The circular has also proposed the extension of health inspections to food & beverage stores within the vicinity of the school.

Although the above seem to be in the right direction there is little evidence of being implemented in practice. The internalization of the requirements will probably take time, as the capacity of the inspection bodies is relatively low and there is no clear marketing approach that can permit the free will of the children to change their nutritional habits.

The sudden imposition of the requirements is not expected to succeed within an environment that sustains a number of easy and unhealthy choices within the school vicinity and it is not linked with an overall effort to change the mindset regarding healthier nutrition.

National Action Plan for Child Obesity

The national action plan for child obesity was funded by the European Commission and the Ministry of Health foresaw the implementation of educational and promotion actions targeting the child population across country, after the conclusion of a study pointing the social and physical environment factors associated with the increased children body weight.

The program is running from May 2012 and is expected to finish at the end of 2014. The public Hospital “Aglaia Kyriakou” has chosen to take the lead into the implementation and management of the program, with an overall budget of approx. EUR 3 mil.

After the conclusion of the epidemiological study in 2012-2013 (278 schools, 25,890 children), the program targeted 85 schools for a period of 6 months in order to change the mind-set of the children, their parents and of their teachers regarding nutritional habits and physical activity.

It must be mentioned that only 65% of the initially targeted children provided the concurrence of their parents to participate in the program. The measurements were made by 5 teams of 5 scientists each, including paediatricians, trainers, dieticians, administration professionals, health visitors, nurses and specialists in medical informatics.

The analysis showed that the percentage of obese children in Greece is 34.4%, with the highest 40% found in Macedonia and Ionian islands.

The factors that were found to protect children’s health include the educational level of the parents, the systematic taking of breakfast (especially when taken with the parents), mother’s monitoring of the child nutrition, the participation in organized physical activity and the regular walking or cycling.

The factors that were found to support children obesity are the parents’ obesity, the mother’s long working hours, the time of TV watching and the existence of TV in the child’s room, the grandmothers’ involvement in cooking, the long study hours and the lack of physical activity.

The activities that are implemented in the 85 schools are targeting four specific attitudes, i.e. the taking of breakfast, the intermediate meals, the limited movement and the physical activity.

The program foresees a large-scale information campaign with speeches in local scientific institutions, teachers, parents regarding the results of the program on healthy eating, physical activity and the importance of maintaining a normal body weight. In order to reach the whole of Greece, the program expects to also use tele-teaching methods.

Nutrition Program at Schools

During the school year 2012 – 2013, the Ministry of Education has initiated a program to provide free food at schools that were included in “Zones of Educational Priority”. Those zones record low economic and social indices and the intention of the program was to provide the necessary support in order to reduce school drop out and increase the educational potential.

The objective of the program was to provide lunches to all students through the school canteens after their operators sign a contract with the Ministry. It is mentioned that the program was not supporting schools that were being funded by other mechanisms.
Canteen operators from a predefined list of schools were given the chance to bid for the program based on price and by adhering to specific health and hygiene criteria. The controlling process was left to the responsible authorities.

The program was included in the NSRF 2007 – 2013 and for the period of 2013 – 2014 it was only applied to 48 primary schools in Attica and Thessaloniki. For the period of 2013 – 2014, the program will again focus on the regions of Attica and Thessaloniki (plus Crete) and the aim is to increase its footprint to 290 schools.

The allocated budget was EUR 2.52 mil for 2012-2013 and EUR 9.40 mil for the period 2013 – 2014, in total EUR 11.92 mil for a targeted population of more than 82,000 children.

Within the current economic crisis, the above illustrate that the Greek Government is in search of funding to support its action plan for child nutrition and obesity. The NSRF has provided a funding mechanism to support the nutritional needs of schools in Attica and Thessaloniki, however, it seems that the overall program is isolated from an overall strategy to sustain a solution that tackles the effects of the economic crisis to children.

“EFZYN” Program

The EFZYN program is regulated by the Ministry of Education with the objective of ensuring the healthy development of children and adolescents by adopting a balanced eating habits and physical activity. For the period of 2013 – 2017, it is funded by OPAP with the amount of EUR 1.5 mil.

The program is based on three pillars: evaluating health parameters in children and adolescents, informing / educating students, parents, teachers and the wider society as well as intervening at school, family, and society as a whole.

Specifically, the program is open to all students of nursery, primary and secondary schools of the country, it records and evaluates the growth rate, dietary habits, physical activity and level of physical condition.

The specific objectives of the Programme are:

- Access of all students and parents to valuable services related to their health
- Parents’ information on the evolution of their children physical development, based on the annual “Individual Development Report on Food and Fitness.”
- Prevention and early treatment of risk factors for the health of children and adolescents.
- Providing advice and guidance to parents on issues related to nutrition, physical activity, growth and health of their children.
- The training of the educational community on issues related to health promotion
- Strengthening the role of the school and especially of the teachers in relation to health education.
- Linking school, family and society through the collaboration of parents – teachers, but also through parallel actions carried out to the community.
- The exploitation of the Program for the design and implementation of targeted health policies.

Sporadic Measures ...

All the above endeavors that have been introduced in Greece during the last years seem to have some common problems. Most of them had little time to prepare and they were forced to be implemented without acknowledging the operational limitations imposed by the public administration and the responsiveness of the recipients struggling to make ends meet. They seem to retain constrains in relation to addressing the needs of the society within a sustainable manner, while some of them are also attracting criticism on their effectiveness.

In addition, there are indications of the industry providing aid to vulnerable populations in the context of Corporate Social Responsibility (CSR). Examples include the provision of contributions in kind in order to improve their corporate profile, increase the awareness and trust into their products and enhance the morale of the children.

In the absence of a sustainable solution that can cover the needs of the Greek society, the social services of Municipalities and philanthropy were given a mandate by the Greek government to support those that are mostly affected by the economic crisis. This is linked with the overall agenda to modernize the social policies of Greece, however, until today there are no signs of significant advancement in the implementation of the overall planning.

The bulk of the available support is distributed in an isolated manner without investigating synergies between complementary actions that can develop a sustainable outcome. Each of the endeavours usually concentrate either on alleviating nutrition problems or on educating the children and their close environment. Some of these measures are funded by the NSRF and they include:

- The development of a national system for preventing obesity during childhood and adulthood
- Awareness raising measures and research at various Regions / Municipalities across Greece, including telemedicine solutions
- Research of various Universities and Institutes for the analysis of parameters that sustain child obesity and the role of nutrition
- Feeding of children at schools with various nutrition protocols in place

Within this environment, philanthropy has been left to undertake a significantly higher stake than the one mandated by its endogenous limitations and thus, it can not replace the role of the Government in providing a sustainable solution for the whole population.
Directions of the World Health Organization

The directions of WHO for the action plan 2014 – 2020 introduce the notion of nutrition security. This is more than food security and relates to the supply and consumption of the optimum nutrition for growth, health and the prevention of the later non-communicable diseases. Determinants of nutrition security include food security (sustainable and adequate supplies, hygienic and consistent quality, widespread availability, affordable and accessible to all), but also determinants of consumer choice and consumption patterns, including household distribution of food, cultural practices, education and skills, information, product labelling and persuasive marketing practices and whether these are promoting or impeding healthy dietary behavior and optimum nutrition for each individual. By looking at these wider determinants, nutrition security takes account of cross-cutting issues, such as life course phases and social inequalities.

Nutrition security should be also interconnected with right to food, which means proper nutrition and health are fundamental human rights. Ensuring nutrition security also means ensuring the enjoyment of the right to adequate food and of the right to health.

Equity must begin at the bottom, hand in hand with healthy nutrition. The final report of the EC “Closing the gap in a generation” concluded that achieving healthy equity requires actions on the conditions in which people are born, grow, live, work and age and the structural drivers of these conditions at the global, regional, national and local levels.

The social determinants approach and the need to prioritize health equity are at the center of the revitalized public health agenda by the adoption of the Health 2020, which aims to increase equity and accelerate progress on achieving the right to health. The global economic downturn has profound importance for the health and well-being of populations and is likely to worsen health inequity. The people who are already most exposed to vulnerability and disadvantage feel the effects of the global economic downturn more strongly, for example reduced affordability of health foods.

Tackling nutritional inequalities across the social gradient and support for the most vulnerable people is necessary to achieve the biggest, but also affordable benefit for the nutritional health.

European Action Plan 2014 – 2020

In 2012/2013, the European Strategy underwent an independent external evaluation to determine its effectiveness. The resulting action plan until 2020 is focusing on the below areas, among others:

- **Promote healthier environments, especially in schools**

  Within schools it is important to improve the uptake of healthy and high quality school meals and to limit access to snacks and other supplementary, less healthy food options within the premises. Children and young people’s food choices also depend on what is most visible and easily accessible.

  It is vital that meals provided in schools are healthy, that the nutritional quality of the other foods sold in schools is improved, that the healthy option is always the easier option and that healthy eating and lifestyle education is improved, including a strong focus on increasing physical activity, attaining sustainable diets and reducing food waste.

  It is important to promote good habits from an early age, to ensure ease of access to healthy and nutritious food and to allow sufficient time for such foods to be consumed. This will help to introduce children to the taste and feel of healthier foods and will help in maintaining their concentration levels throughout the school day (and healthier throughout their lives).

- **Make the healthy option the easier option**

  Both long term social trends and the recent economic downturn have resulted in an increase in intake of energy-dense less healthy food options. Changes in working patterns with parents working longer hours, a shift to eating outside of the home. Loss of cooking skills, difficulties accessing to affordable fresh products and decreased purchasing powers of populations are following the economic crisis. In particular, the impacts on diets appears to be greater for poorer socioeconomic groups who are resorting to buying cheaper food which often results in less healthy diets.

  The development of new initiatives to improve both children’s and parents’ eating habits are now needed. Access to an improved supply of healthy offer in supermarkets. Local producers and markets, restaurants and other retailers (and schools) must be made easier.
By making healthy options more affordable and attractive (e.g. making it the default option, redesigning food displays, introducing nutritional objectives when defining subsidies) they will become more accessible to consumers, including those with limited socioeconomic means. This may be achieved by encouraging local producers and manufacturers not to add premiums onto reformulated foods or by subsidizing products such as fruit and vegetables, as in the case within the EU Schools Fruit Scheme.

At the same time, parents need to be educated on appropriate portion sizes for children and young people to differentiate between the adult portion and the child’s portion.

Initiatives to provide children and young people with fresh drinking water in schools, both to promote health and as a substitute for sugar-sweetened beverages should be prioritized. Similarly, the EU School Milk Scheme promotes consumption of milk as an alternative to sugar-sweetened beverages.

- **Restrict marketing and advertising to children**

  While adults may recognize when they are being targeted for advertising, children and young people not necessarily distinguish between advertisements and cartoons. This makes them particularly vulnerable to messages that may lead to the development of unhealthy dietary preferences.

  Apart from regulatory improvements and co-regulation with economic operators and service providers, the above needs voluntary initiatives from the private economy.

- **Inform and empower families**

  Given the role of habits in determining life-long preferences, a lifestyle approach that starts early and encourages long-term change is needed. The impact of parents as role models appears to be of crucial importance. Family based programs can include cooking classes or clubs aimed at helping families to acquire the right skills to select and cook healthy foods, while they can cover schools, local councils, workplaces, etc.

From the above, it seems that the needed initiatives are rather diversified towards interlinked measures to effectively battle food insecurity and obesity within school environments.

They require an enhanced collaboration of various stakeholders (e.g. public sector, suppliers, media) in order to secure the achievement of the objectives, coupled with a continuous monitoring of effects and an impact assessment to identify corrective actions.

### The Social Investment Package

The Europe 2020 strategy for smart, sustainable and inclusive growth sets targets on poverty reduction by aiming to lift at least 20 million people out of the risk of poverty, with significant focus on combating child poverty and reducing long-term unemployment.

According to the EU, child poverty and social exclusion, although different in shape and form, are problems that all Member States have in common. In most countries, the risk of being affected by poverty and social exclusion is greater for children than for adults. Growing up in poverty may affect every area of a child’s development and may have severe long-term consequences: restraining children from achieving their full potential; adversely affecting their health; inhibiting their personal development, education and general well-being. In fact there is an interconnection between young age and being poor and disadvantaged in adulthood.

The Social Investment Package (SIP) delivers some key messages for adjusting policy orientation to the new challenges. SIP targets the below recommendations:

- **Simplification of the services** in order to gain efficiency, by focusing on easing access to services, avoiding duplications within public administrations and facilitating an easy take-up.
- **Effective reforms** in order to enhance access to affordable, sustainable and high-quality services by the public administration.
- **Modernizing social policies** by following results orientation through focusing on activation measures and personalized approach.
- **Innovation** as an essential element of the social investment policy through a continuous assessment of the new challenges, by testing new policy approaches and by strengthening new forms of partnerships with stakeholders.
- **Support schemes** should be **better targeted** to those in need at the times they need it by ensuring better take-up rates.
- **Early and preventing interventions**, as these are considered the most efficient investments (e.g. early school leaving).

The promotion of health and nutrition at schools seems to be highly correlated with the objective of poverty reduction. The Greek government in the process of modernizing its social policies, should also consider how these are affecting the agenda for health nutrition and obesity, especially within school environments.

**European directions call for an optimization of the social policies, with great emphasis on cost – effectiveness and on early prevention interventions.**
The New Programming Period

Health matters have gained prominence in the last years in the framework of debates on public spending and adequate levels of social protection during the economic crisis.

In February 2013, the EU adopted health as a value in itself and as a growth – friendly investment\(^1\). It recommends investing in three key areas:

- **Investing in sustainable health systems** combines innovative reforms aimed at improving cost-efficiency and reconciling fiscal consolidation targets with the continued provision of sufficient level of public services.
- **Investing in peoples’ health as human capital** helps improve the help of the population in general and reinforces employability, thus making active employment policies more effective, helping to secure adequate livelihoods and contributing to growth.
- **Investing in reducing health inequalities** contributes to social cohesion and breaks the vicious spiral of poor health contributing to and resulting from poverty and exclusion.

Interventions to be financed under the “Investing in sustainable health systems” can be eligible as long as they support:

- Establishment of effective information systems to assess the performance of health systems and compare their outcomes against poorer benchmarks; establish public reporting on performance data

It is noted that “Health Systems are the process and infrastructures (legal, physical, financial and human resources) to deliver health care, prevent disease and improve health status. Health systems include not only health care, but also public health measures. Healthcare means health services provided by health professionals to patients to assess, maintain or restore their state of health (Directive 2011/24/EU on Patients’ Rights, March 2011)”

Interventions to be financed under the “Investing in peoples’ health as human capital” can be eligible as long as they support:

- comprehensive national strategies or action plans to promote health throughout people’s lifespan and increase awareness on major lifestyle-related health determinants, addressing in particular priority groups such as children, young people and people in low socio-economic groups
- improvement of people’s exercise and nutrition patterns and reduction of use / harm of tobacco and alcohol consumption
- strengthening of support of primary and secondary prevention to reduce the development and onset of major preventable chronic diseases, including cardiovascular diseases, diabetes and respiratory diseases
- engagement of community and consumer organizations, schools, stakeholders, industry actors\(^2\), media (incl. targeted campaigns) and health professionals at primary health, sport and healthcare facilities\(^3\) to address relevant risk factors (e.g. tobacco consumption) in an effort for healthier lifestyles.

Interventions to be financed under the “Investing in reducing health inequalities” can be eligible as long as they support:

- Addressing the risk factors that are particularly prevalent in disadvantaged population groups (e.g. tobacco consumption)
- Ensure physical activity possibilities in poorer regions / areas
- Support the development and collection of data and health inequalities indicators by age, sex, socio-economic status and geographic dimension

The EU introduces the issue of a “poverty mapping” instrument that can indicate areas that are mostly affected by poverty, giving not only the picture of the territorial distribution of poverty but an insight into that of health inequalities. Member States may include poverty mapping to assist in prioritizing geographical areas

The above are included within the thematic objective 9 of the new Programming Period (Social Inclusion and Poverty) with an available budget for Greece of around EUR 1.3 billion.

In order to be able to effectively absorb funding, there is a need to introduce a coordinating mechanism that can manage the different components of a strategy that has to be fully unfolded implemented within the next programming period 2014 – 2020.

Assessing Sustainability

The economic crisis in Greece has postponed the implementation of the national plan for Nutrition and Food Disorder that had been devised in 2008. As it is indicated at European level, the promotion of healthy environments that can sustain a favorable nutritional behavior are based on a set of different determinants and involve a wider collaboration of stakeholders.

In Greece, a number of isolated endeavors have emerged until today, however, they were only tackling part of the problem, without utilizing possible synergies of an overall sustainable solution, while some of them are also attracting criticism about their effectiveness. These programs range from covering the immediate nutritional needs of vulnerable groups, providing educational actions with the goal of promoting healthy nutrition, evaluating health parameters in children, conduct research on obesity, etc.

The European action plan for the period 2014 – 2020 reinforces the mandate that had been given back in 2008. The diversified initiatives that are being proposed can only be implemented through the introduction of a policy that that can enjoy higher efficiency and increased effectiveness for the implemented actions.

Within the above framework, philanthropy can reserve a more innovative role, by keeping focus on coordination and adaptation. Coordination, because given the scale and social complexity of the running challenges, funders will increasingly look to other actors to activate sufficient resources and make sustainable progress on issues of shared concern; and adaptation because given the pace of change today, funders need to get smarter more quickly, incorporating the best available data and knowledge about what is working and regularly adjusting what they do to add value amidst the dynamic circumstances they all face.

\(^1\) Staff Working Document “Investing in Health” as part of the Social Investment Package

\(^2\) Cooperation with the tobacco industry is not recommended by the European Commission

\(^3\) Sport and healthcare facilities can be involved in prevention activities, but ESIF should not invest into those facilities when sustained by or devoted to private business activities
Conclusions &
Recommendations
Conclusions

**Relevance**
- Mandated by a dual objective (i.e. alleviate immediate needs of the economic crisis and promote healthy nutrition), the Program is addressing nutrition as a means to achieve better school performance and sustain a healthy living.
- Thus far, the Program appears to be addressing almost 1/3 of the identified need, as this can be ascertained by the number of students who participated in the Program (61 th.), in relation to the number of students in need of the Program (208 th.), according to estimates by the principles of the schools invited to participate.
- The school selection process, appears to be in line with the objectives of the grant, as it prioritizes the schools based on their eligibly on a number of criteria that are approximating food security status.
- The supplier procurement process is quite long and directly linked with the school selection process, which is open throughout the year. Evidence from both cycles suggest that this can lead to a secondary procurement process, that sometimes can be more tenient or involve only a single supplier, which reduces the negotiating power of the Program and leads to higher costs.
- From the implementation of the Pilot in 2012, it was concluded that the provision of vouchers or coupons requires an off-school administration of family finances that could not be achieved without the participation of the public administration.
- The pricing scheme model that the Program followed a “free-for-all” model. Nevertheless, a number of countries appear to have adopted paying models for similar programs, which are based on the students financial ability. However all of these programs are supported by public authorities and their respective ability to monitor the financial condition of households and administer aid without causing discrimination or social stigma.

**Effectiveness**
- The Program exceeded the initially planned goals in terms of schools' admissions, but for less school days, due to the late admission of schools.
- The food security status of the areas included in the Program, confirms the relevance of the selection process. The duration of the tenure in the Program appears to be a significant parameter that affects food security status.
- Other parameters such as parents' unemployment or family affluence status could also affect the Program outcomes. Based on the analysis, different adoption patterns exist that call for different approaches.
- The Program appears to have a more significant effect to areas that were initially in a worst situation, in terms of food security, compared to the rest of the served areas.
- Data indicate that the Program was more successful in helping overweight, rather than underweight, children return to normal weight, while it seems to have little to no effect to obese children.
- In Cycle B, Prolepsis managed to attract 3.5 times more donations and increasing the footprint of the Program.
- Fewer students' parents appear to be satisfied with the meal administration as opposed to the health promotion activities. However, some misunderstandings in the responses may have occurred, as some views on meal administration could have internalized opinions about the overall canteen operations.

**Efficiency**
- Resource allocation was in line with the budget, but there was a deviation in the budget commitment focus during the two Cycles, outlining a predisposition of the Program to lean towards the direction of servicing immediate needs.
- The total meal cost reduction (EUR 0.12) between the two Cycles was mainly due to the decrease in the canteen operator fee. However, part of the reduction was absorbed by an increase in the direct nutrition cost, due to the increased footprint of the Program. It must be noted that in Cycle B there was a significant increase in quality and quantity of food provided, indicating more intense negotiations with suppliers.
- The Program has achieved better terms (lower EBITDA margin for the supplier) with suppliers in certain cases, while in other cases the profit margin of the supplier was higher, mainly due to the secondary procurement process introduced which lowered the negotiating power of the Program.
- Prolepsis managed to gradually drop the average cost of the organized events. However, the number of events did not followed the Program's expansion either in schools or in children.
- During Cycle A, the improvement in the food security status does not seem to be correlated enough with the meal cost. This indicates that higher prices do not guarantee better results and thus the balance between quality and price to achieve the required outcome could be revisited (i.e. focus on achieving better prices, as long as required standards are met by the suppliers).
- The cost of improving the food security status in Gymnasiums & Lyceums seems to be higher than in Pre-schools and Primary schools. Nevertheless, the selection of students at higher educational levels seems more relevant, as they appear to be in a worst food security status.

**Impact**
- Overall, the Program, is estimated to have created more than double economic activity in related industries compared to its initial inputs.
- On average, the improvement of the FSSM index achieved in Cycle A was sustained to an adequate level till the beginning of Cycle B (four months after the end of Cycle A). However, substantial differences were recorded between different areas (i.e. in Magnesia, Imathia and Xanthi, the FSSM index further improved, whereas in Rodopi and Larissa it deteriorated).
- Although the Program had a positive effect to all, the effect was greater in younger students. On the other hand, the effects on older students appear to be more maintainable after the end of the Program.
- The Program seems to have increased attendance rates and improved grades in participating schools compared to a decrease in grades for non-participating schools.
- More than 75% of the participated parents appear to be very satisfied with the Program. The lower scores in Attica and Thessaloniki can be explained by the higher diversification of socioeconomic status in urban environments.

**Sustainability**
- At EU level, the promotion of healthy environments that can sustain a favorable nutritional behavior involve a wider collaboration of stakeholders.
- In Greece, a number of isolated endeavors have emerged, however, they are only tackling part of the problem, without utilizing possible synergies in the supply chain. At the same time, some of those initiatives have attracted some criticism about their effectiveness.
- The European action plan for 2014 – 2020 renews the mandate that had been given back in 2008 and promotes diversified initiatives to promote healthy environments that can promote favorable nutrition behaviors.
- The budget commitments for Greece regarding the thematic objective 9 (Social Inclusion and Poverty) is EUR 1.3 billion for the new programming period.
- Within the above sustainable framework, the role of philanthropy should target to the coordination of resources and adaptation to the program parameters to the dynamic environment they operate.
1. Focus on Performance

Front – load the school engagement process

The current structure of the Program includes a rolling school admission process; this means that schools could enter the Program throughout the school year, without any restrictions. Despite the fact that Prolepsis sends out invitations for submission of interest almost simultaneously, the inability of the principals and students’ parents to come to a decision quickly results in late admissions to the Program.

A late school admission reduces the period that students receive the Program benefits, while it has been concluded that the Program’s effectiveness is a key parameter for the Program’s effectiveness. From the analysis, a tenure of more than 6 months can result in a 4% improvement in the food security status, compared to a tenure of less than 2 months. The highest incremental benefit was received by students that participated in the Program for more than 6 months.

Another implication of the late school admission is related to the supplier procurement process. The absence of limitations for schools that enter the program relatively late increased the geographical dispersion of the program, leading to a secondary supplier procurement process, to serve areas that were not included in the initial planning.

Searching for suppliers, via a secondary procurement process, in areas that had not been included in the tender, reduces competition for these areas. The narrow time-window during which Prolepsis had to procure suppliers for these areas, suggests reduced negotiating power.

Front-loading the school admission process could result in a longer average tenure in the Program for students and correspondingly to an increase in the Program’s effectiveness, while it could also eliminate the need for a secondary supplier procurement process and increase the cost-effectiveness of the Program.

The early defined geographical reach of the Program could be addressed in the initial national open tender process. To achieve a front-loaded school admission process Prolepsis could:

- Raise awareness regarding the Program, by increasing publicity in socioeconomically vulnerable areas. This would ease skepticism of parents and school administration and contribute towards making the decision quicker.
- Determine the areas to be served based on the measurements at the end of the school year and the socioeconomic parameters of each area.
- Send invitations earlier, to give enough time for the decision making process. Prerequisite for this is the agreement with the SNF on the applicable funding for the next period and the conclusion of school measurements to have been concluded in time.
- Within the first selection process, request non-binding offers from suppliers for additional areas, clustered based on size and number of offered schools / meals.
- In case the number of admitted schools is not sufficient during the first selection process, introduce a second cycle along with a specific period for submission of applications (e.g. 2 months).

As the above process is serial, deviations from the time plan in any step will result in the overall process to be delayed. Therefore, the Prolepsis program administration should closely prepare and monitor the progress of the above process and introduce corrective actions in case the overall planning is at stake.
Recommendations

Increase cost – effectiveness

The school selection process, does not incorporate the element of cost for servicing a school, as the criteria target schools based on their need. Therefore, cost – effectiveness can be enhanced in terms of serving an increased number of served students.

Increased costs of serving a school could come as a result of a number of factors. The direct element (cost of preparing and distributing the meal) is based on the suppliers’ distribution process; the location of premises; the existing supply chain with the secondary suppliers of meal components; the location / concentration of the schools to be served; their overall planning, etc.

It can be assumed that all the above factors are taken into consideration for their preparation of the suppliers’ final bid. As it has been shown, in Cycle B, the meal cost was higher for areas in periphery, compared to urban centers such as Attica or Central Macedonia.

The indirect cost component is mainly related to the school canteen operator fee. Despite the significant reduction achieved in Cycle B, the amount still accounts for around 11% of the total meal cost. This cost is not existent for schools that do not operate a canteen (~30%), therefore are less expensive for the Program.

The most “expensive” schools would be the ones that are difficult to reach and are operating a canteen as well. There were no available data to support the correlation of the effectiveness and impact of the Program with the distance of the school from the suppliers’ base or with the presence of a canteen. However, there is no indications that can support such a hypothesis.

Evidence of the increased complexity that is being incorporated in the Program exists by looking into the monitoring costs per area. There appears to have been areas (e.g. Aitolokamania, Rethymno, Angolis, Evia, Thessprola) where no monitoring costs have occurred, indicating a slackening of some Program parameters due to proximity.

As the Program is running with limited funds and with a school selection process in place, there is no reason why a cost effective manner should not be incorporated. The Prolepsis’ model of school selection could include the elements such as school distance (following the bids from suppliers for the respective area) and / or the presence of a canteen.

Although the above would allow the extension of the beneficiaries’ basis, possible ethical issues should be considered in advance. Within a larger partnership with the industry that can utilize additional or / and alternative funding (e.g. adoption of schools), the above issues can be eliminated.

2. Tailor and Innovate

Validate Program’s Objectives

Currently the program is running under a dual objective: the overall programming for the Grants against Crisis supports “the alleviation of the severe consequences of the financial crisis and assist those most in need to navigate through these difficult circumstances in the less painful way possible”. At the same time, the Diatrho program aims at “improving student’s academic performance, minimizing rate of school dropouts, promoting healthy living via domestic product consumption and facilitating the adoption of healthy dietary standards”.

Health promotion activities account for approx. 2% of the overall program expenses. Also, from the analysis it has been ascertained that the effectiveness of the program varies among geographical areas and education levels, which indicates that the needs of the recipient population are not the same and must be addressed within a more tailored approach.

Within the two running objectives, there are different options that could be explored in order to redefine / validate the program’s positioning. Within the running economic conditions, these can be limited to either focusing to alleviate immediate nutrition needs or continue the dual approach, by insisting more heavily on longer term outcomes. The first option requires an entirely different program setting that will create enough sunk costs and disturb the prospects of an overall policy towards healthy nutrition. The second option seems more relevant, given the scale and social complexity of the running challenges. The program is encouraged to activate networks and sufficient resources that will collectively contribute to both objectives, while funding may focus on facilitating coordination and adaptation of all actors under the same objectives.

Monitor long-term outcomes

The assessment of the effectiveness of the intervention to the beneficiary schools is made through the measurement of the food security status. The process includes questionnaires which are sent to students’ parents twice a year; once at the beginning and once at the end of the school year. This process allows Prolepsis to monitor the effectiveness within the period of the Program, since it can compare the food security status change, as measured by the FSSM index, along with other parameters.

Deloitte, analyzed successive measurements made by Prolepsis and it was ascertained that longer term effects of the Program are linked with different adoption styles by the beneficiaries. As one of the objectives of the Program is to sustain healthy nutrition habits, it seems that there is no clear strategy on the exploitation of successive measurements to witness to what extend the Program introduces longer term effects. At the same time, there is no indication of follow up measurements to schools that concluded the Program and were not admitted for the next cycle, in order to evaluate the long-term impact of the Program to students.

Successive and consistent measurements of the food security status (ideally to the same responders), along with other parameters such as BMI, KidMed, etc. of the students could offer a valuable insight on the longer term effects of the Program. It is important that the design and implementation of surveys must ensure statistically significant responses from all levels of food security and all geographical levels. Currently, the 40% of the survey responses is linked with population with food security, while the respective average percentage of this group within schools is assumed to be approx. half (17%-21%) based on the principals’ and parents’ estimations.
Recommendations

Monitor school and after-school performance

Monitoring student behavior at school is among Prolepsis’ proposed means to achieve its objectives. This includes indicators such as absence rates, grades and drop out rates, as indicated by international experience.

At the moment, there seems to be no strategy for including such issues in the monitoring of the program’s performance.

Results from the primary survey, carried out by Deloitte and Prolepsis, indicate evidence of increased school performance and lower absence rates in schools where the Program was implemented.

Successive measurements of these indicators which will complement measurements of food security status, BMI, etc. over a long period of time will allow Prolepsis to gain a thorough understanding of the effect and impact of the Program, gathering also the attention of public officials in the area of health, education, as well as extending the opportunity window with relevant industries such as private hospitals, schools, etc.

The collaboration of Deloitte with the “Share Our Strength’s No Kid Hungry campaign” is an indicative example of assessing the potential long-term impact on children who are participating in the federal programs in the USA.

Develop a predictive model

Currently, the school selection process is based on a set of cut-off criteria that collectively indicate whether the school should be admitted in the Program or not (a school is admitted only if it complies with each and every one of them). Since, food security data are available only for schools that have already participated in the Program, it is not possible to have FSSM measurements for all schools.

The process is based on the premise that the criteria used in the selection algorithm would reveal the schools in need. Indeed, based on the retrospective analysis, the high correlation exhibited between the average disposable income and the rest of the selection criteria with the food security status, confirms the initial hypothesis. Nevertheless, although the process reveals the schools in need, it does not reveal the intensity of the need per each school unit.

Prolepsis has collected data from schools that have participated in the Program and possesses the necessary technology to encompass a variety of statistical techniques and build a predictive tool to detect the level of need in a particular school. Predictive models calculate the relation between the specific performance of a unit in a sample and one or more known attributes or features of the unit. The objective of the model is to assess the likelihood that a similar unit in a different sample will exhibit the specific performance.

In this case, the predictive tool could take the form of an algorithm that would assign weights in a number of available variables (demographic, financial, behavioral, etc.) and predict the FSSM score, as well as other relevant indices and effectively prioritize the school admission process.

Introduce Randomized Control Groups (RCGs)

It isn’t always possible to know the most effective course of action at the outset. Innovative funders will need to take risks and experiment with new approaches, learn quickly and adjust as they go. They will reclaim the upside risk, using a portion of their resources to make high risk, high reward bets that have the potential to be truly transformative. Within the context of a nutritional program, “taking smart risks” can involve the development of controlled processes of testing different hypotheses and program configurations in order to adjust program objectives and components to the continuously changing needs of the target population.

Hypotheses to be tested can include different configurations of meals in order to assess their cost effectiveness, without compromising related to quality and healthy nutrition. It can also include testing of different promotional campaigns, in terms of mix and intensity of activities, to identify the point where the Program can sustain a longer term impact to children.

As different adoption styles have been identified, the above process can be part of an overall orientation to develop different “product mixes” for different groups (e.g. per education level, socioeconomic status) or even develop different applications of the Program within groups that have the same characteristics, in order to identify how they are being internalized by the different sub-groups.

Apart from that, the introduction of RCGs can explore the optimum balance between the need to alleviate the severe consequences of the financial crisis to vulnerable groups through the provision of healthy meals and the need to support the health objectives of Prolepsis that also include its functioning in the field of medical research and health promotion as a research centre with a major impact to society at large.

The controlled environment of the Program allows for different hypotheses to be tested in order to improve the Program itself and to better position it as a forerunner of a wider policy orientation regarding healthy nutrition at schools.

3. Seek a wider collaboration of Stakeholders

Building the landscape

Coordinating resources toward common goals no longer must mean developing a consensus. Funders are forging new ways of working together, from learning groups to strategic alignment networks that fit different purposes and circumstances, allowing individual funders to aggregate and amass resources of all kinds and effectively “punch above their weight”.

The challenge for funders is to find or to be found by the right partners to help them accomplish their goals. In some cases, this may require funders to follow rather than lead and it may need working with a range of new stakeholders, reaching across sectors to business and government agencies, grantee partners, academics and other that might be part of the solution.

An ecosystem of new providers includes a number of actors that can jointly move the needle on complex problems, such as nutrition of vulnerable groups and obesity through their engagement in different aspects of the solution.
The different aspects of a more permanent solution to healthy nutrition include:

**Nutrition:** Providers addressing healthy nutrition through increased attention to parameters that sustain malnutrition and obesity

**Poverty:** Actors seeking to promote healthy nutrition and reduce obesity through channels that address poverty and socioeconomic status

**Access:** Actors providing access to healthy food for all vulnerable communities

**Awareness:** Providers drawing attention to health issues and facilitating action

The directions of the European Commission call for the promotion of “healthier environments”, making the health option the easiest option, the marketing of healthy nutrition and the empowerment of families. At the same time, World Health Organization advocates sustainability and adequacy of supplies, quality, widespread availability, affordability and accessibility, with focus on consumer choice and consumption patterns, including household distribution of food.

Based on the above, the landscape of potential supporters can be enlarged and include different actors that have the capacity to drive change within their area of expertise and effectively increase the impact of the Program. Evidence from the assessment indicate that the ability to sustain a healthy nutrition goes along with the provision of a time window that provides the conditions for a steady adoption of habits.

Although the Program is focusing on the most vulnerable groups with relatively intense nutritional needs, quality and long term impact remains a top priority. Towards that goal, there is a need to sustain a healthy culture as a lifestyle of choice. This calls for the enlargement of partnerships in relevant areas with the view of leveraging the effects of the Program in schools and effectively transferring the effects to everyday nutritional decisions.

Enlarged ecosystems can include the following actors:

**Retail Operator:** A retail operator is charged with operating and keeping a retail store functioning. An experienced retail operator is key to a store’s success, from day to day management to product placement. Retail operator’s scope ranges from small stores with only a handful of workers to large supermarkets with hundreds of employees.

**Government:** To attract and expand healthy food access in underserved areas, some governments have streamlined permitting, flexible zoning policies or grants, loans or incentives to help facilitate and speed up retail development. They have also introduced searchable databases with sources that can be used to finance a variety of healthy food access projects (e.g. US Healthy Food Access Portal).

**Industry:** While some grants are available, additional money for healthy food initiatives can come in the form of corporate social responsibility (CSR) from relevant industries (e.g. food & beverage) or even in the form of loans from banks and other lenders.

**Foundations:** Several philanthropic foundations are providing grants to help improve healthy food access. They understand that with a relatively small investment they can help a healthy food business to open or expand and in doing so, providing jobs, attract additional business and improve the health of the community.

**Researches:** Ongoing research help to define how increased access improves residents’ health and strengthens the economy of undeserved communities. In the USA, the national Healthy Food Financing Initiative has helped leverage more than $109 million in grants and an estimated $1 billion in additional financing, supporting more than 100 projects across the country, revitalizing economies, creating jobs, and improving health.

**Public Health Professionals:** These actors seek to transform the diets of residents to improve health conditions and reduce obesity and other chronic diseases, including diabetes and heart diseases.

**Advocates:** They provide insights to players in the funding decision making process (e.g. governments and other lenders) to get involved in a meaningful way and they are supported by mapping tools (e.g. US Limited Supermarket Access Data Tool, Policy Map).

**Economic Development Professionals:** They work to persuade new business to commence operations and work with running business to continue growing with focus on healthy nutrition. They can include chambers of commerce and other business unions, non profit organizations, etc.

**Food Access Organization:** they are usually non profit organizations focused on providing access to healthy food. They advocate for community need and bring a public health perspective to the table in the administration of fresh food supply chain.

**Change-makers:** Usually highly recognized individuals supporting a movement to change eating habits. They can mobilize private and public sector resources based on the publicity they can attract.

Examples from abroad show that there are established actors that can provide the potential of a solution that is innovative and scalable.

An online grocer that delivers fresh, healthy groceries to the New York City metropolitan area. Initially created to address a citywide, fresh food access problem; FreshDirect is now also serving poorer boroughs, including the Bronx. In February 2012, FreshDirect received a subsidy of EUR 128 mil. in grants and tax breaks in order to expand its service to underprivileged areas.
Recommendations

Recommendations

Innovative Collaborations

NFL PLAY 60 is a national youth health and fitness campaign focused on increasing the wellness of young fans by encouraging them to be active for at least 60 minutes a day. Over 20 organizations (private, nonprofit, and public) have partnered with the NFL to promote its PLAY 60 campaign’s mission of youth wellness.

The role of Government

Increasingly, governments will be one of many players operating in a public value economy. As citizens expectations are increasing, the resulting gap in the provision of public value has to be covered by social partnerships that operate in a coordinated manner and produce impacts far beyond the success of any one grant, grantee or donor.

The running partnership with Prolepsis is based on the concrete foundation of the Institute providing the needed expertise in the field of medical research and health promotion. At the same time, the latter is engaged as the grantee in the management of access and awareness.

Acknowledging the importance of each of these determinants to the objective of healthy nutrition, it can be advocated that a wider collaboration with additional established actors in the market could increase the delivered value to the society.

Although, Prolepsis has created the needed mechanism to address the requirements of these parameters, these is a need to enlarge the landscape and introduce additional actors (incl. Government) that can provide a more sustainable outcome.

However, increasing participations in the landscape of the Program needs to be controlled within the framework of a solution that aims to be handed over to a more sustainable mechanism. While the Program should be considering the optimum partnership that could utilize the existing initiative and sustain operations, it is also important to seek the willingness of different channels to participate, acting as forerunners through the course o the Program.
Assessment of willingness to pay

In order to identify the willingness of stakeholders to actively participate in the Program, the testing of a pricing scheme is proposed in order to support the creation of a sustainable model. It must be mentioned that this model has to be gradually incorporated within the Program’s operations, following a confirmation of its acceptability by the addressed stakeholders and other involved actors.

In order to avoid discrimination and stigmatization, and following the results of the Pilot, the SNF and Prolepsis decided that meals should be served to all children. As indicated by data derived from school principals and parents, this resulted to approx. 19% of the children participating in the Program receiving support without being in such need. Since the total cost of Cycle B was EUR 10.23 mil., it can be derived that approx. EUR 1.94 mil. were spent on children that were not in need of the Program’s aid.

The introduction of a pricing scheme would require charging a price for student meals. The payment mechanism is a major issue for consideration as public schools are not allowed to charge or collect payments from families or children. Furthermore any pricing scheme would require access to income data that can only be provided voluntarily by the families upon request with enough probability of running against privacy issues.

Thus, as current operations do not permit the off-school administration payments, it seems rather difficult to introduce any pricing scheme (e.g. even through coupons) that would be relevant to international paying models. Distributing meals to only part of the students requires again an off-school administration of the family finances and at the same time intensifies stigmatization.

Until the Program can explore a wider collaboration of stakeholders (incl. public administration), any pricing initiative will have to be based on a voluntarily basis and be well marketed to avoid rising of public voice against the objectives of the Program. The message to be transferred has to convince on the need to support the most vulnerable groups and thus, the support of those better off would be appreciated.

A survey developed by Deloitte and carried out by Prolepsis in July 2014, measured the willingness of parents to pay for in-school healthy meals. Data were collected both from schools that participated in the Program during Cycle B, and also from schools that did not participate in the Program. The results are presented below:

**Willingness to pay for in-school nutrition (aggregate results)**

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<thead>
<tr>
<th>Program participants</th>
<th>Non-participants</th>
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<tbody>
<tr>
<td>29%</td>
<td>62%</td>
</tr>
<tr>
<td>8%</td>
<td>22%</td>
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</table>

Program participants:
- Yes, EUR 0.5 - 1.0: 21%
- Yes, EUR 1.0 - 1.5: 40%

Non-participants:
- Yes, EUR 0.5 - 1.0: 22%

From the survey findings, it can be argued that different behavioral patterns exist in relation to the willingness to pay, as presented next.

Willingness to pay for in-school nutrition compared to Household Income (% of positive responses)

<table>
<thead>
<tr>
<th>Household Income</th>
<th>Non-Participating Schools</th>
<th>Participating Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (~ EUR 7.000 p.a)</td>
<td>0%</td>
<td>29%</td>
</tr>
<tr>
<td>High (~ EUR 17.000 p.a)</td>
<td>100%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: Deloitte & Prolepsis Survey, Deloitte Analysis

Program participants of lower income (area A), appear willing to pay for the healthy meal currently provided to them for free, which reveals that the meal is perceived, amongst others, as a necessity for them.

As their income increases, the willingness of parents participating in the Program to pay gradually drops (area B). This could mean that as income increases, the perception about the Program shifts from a necessity to a healthy food alternative, which does not seem to constitute a primary need. Thus parents falling within this category are not willing to finance part of it.

Respondents from schools that have not participated in the Program (area C) appeared more willing to pay. This is contradictory to the “endowment effect”¹, as parents attach less value to the support provided to them after they enter the Program.

Within an enlarged collaboration of stakeholders that could permit the introduction of a pricing scheme, additional behavioral economics should be applied (e.g. stated preference tests) to identify the minimum amount that participated parents are willing to finance to stay within the Program.

Overall, willingness to pay for participants tends to decrease as income increases while on the other hand non-participants present a slightly upward tendency as their income increases (area D).

By weighting the responses, the amounts that each group (participants and non-participants) is willing to pay was calculated. Results indicate that non-participants are willing to pay more than double than the Program participants.

¹ In behavioral economics, the endowment effect (also known as divestiture aversion) is the hypothesis that people ascribe more value to things merely because they own them. This is illustrated by the observation that people will tend to pay more to retain something they own than to obtain something owned by someone else—even when there is no cause for attachment, or even if the item was only obtained minutes ago.
Recommendations

Considering the number of distributed meals (6,371,644 in Cycle B) and the average price of 1.50 that was communicated to the responders as the meal value, the theoretical savings can be calculated based on the responses of the survey group and by projecting the results to the overall population served in Cycle B.

<table>
<thead>
<tr>
<th>Program participants (~40%)</th>
<th>EUR 2.88 mil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-participants (~60%)</td>
<td></td>
</tr>
</tbody>
</table>

The above savings are higher than the costs incurred from providing meals to children not in need of the Program (estimated at EUR 1.94 mil.). However, the actual savings are expected to be lower as the survey sample was concentrated in urban environments with relatively higher family incomes.

As discussed previously, the introduction of a paying scheme needs to be backed by additional behavioral economics and to be supported by a targeted marketing campaign that will maximize outcomes.

In addition, it should be stated that the implementation mechanism deployed for the paying scheme will be critical. Options to be considered can include different channels such as internet site, phone calls, bank payments and utilizing the running platform of Prolepsis (http://diatrofi.prolepsis.gr).

Increase Stakeholder Awareness

Philanthropic programs are just one part of a larger ecosystem of actors and in almost all cases they will need to engage many different stakeholders, if they hope to address the today’s pressing needs for healthy nutrition and obesity reduction. Strong peripheral vision – seeing and developing a shared understanding of the system in which they operate – will be critical in helping funders build and coordinate resources to address large, complex problems. To that end, mapping the entire system of relevant forces and players will help to see a collective whole that was previously only visible in pieces, align the vision and coordinate the efforts of many independent stakeholders.

The SNF has a wide range of assets (money, knowledge, network, expertise and influence) that can be deployed to create social change. A targeted marketing approach that can leverage awareness and attract engagement from additional players is considered necessary.

Prolepsis and the "ΔΙΑΤΡΟΦΗ" Program have increased their brand and purpose awareness during these 3 years of operations and have received publicity not only domestically, but also on an international level. This hardly earned awareness can be leveraged in order to increase the program’s capacity and achieve a significant growth over the next few years.

Although the active involvement of the public sector is expected to boost the Program’s capacity, it is not expected that this can be achieved in the short run. The processes underlying the operations of the public sector are rather rigid and they require a long maturing process.

In the short to medium run, current and future stakeholders from the private sector shall be encouraged and incentivized to actively support the Program through their Corporate Social Responsibility (CSR) policies. Incentives might include brand promotion, advertising on the meal packaging, participation in events, conferences, visibility on Prolepsis website, etc.

The program suppliers shall be encouraged to donate part of their service agreement or “adopt” additional schools where they will offer meals for free assuming the effectiveness parameters of the program and in return they shall receive some sort of brand exposure either directly to the school or through other initiatives carried out by Prolepsis (events, interviews etc.)

Such initiatives are also applicable to the suppliers of catering companies, as most of them are leaders in their industry, but also to all other providers, suppliers, stakeholders of the program.

Schools shall also be encouraged to act as stakeholders by “adopting” other schools or through “twinning” schools so as to reduce the discrimination between adopter and adoptee.

Even individuals shall be encouraged to contribute by either donating to the program in cash or by a more personal and “emotional” approach. Such an approach would involve the “adoption” of one or more students for a certain amount of time and coverage of their nutrition expenses. In return, Prolepsis could offer personalized packaging stating something that “Sotiris, offered you this meal today”.

Increased crowdfunding requires necessary infrastructure that Prolepsis has already invested in. Support for online easy-to-use transactions, allowing the use of Paypal or credit cards is required in order to enhance online crowd funding.
Recommendations

4. Develop an exit strategy

Develop the needed tools ...

With more than two years of continuous operations, Prolepsis, has now acquired both the experience and expertise in both school nutrition and promotion of healthy nutrition habits to take the next step.

The innovative character of the program places Prolepsis in a unique position to take advantage of the experience, resources and the large amount of already collected data from Program participants, assuming a leading position in driving policy orientation on healthy nutrition, as well as on other affected policies (e.g. public health and education).

The multiple parameters of the Program that can determine its impact, require the development of a collective and flexible database of relevant data that can be utilized by researchers, policy makers, institutes and individuals interested in-school nutrition. Apart from that, the introduction of a possible front end layer can eventually support the demand side and other stakeholders to assess parameters and decide their course of action (e.g. apply for participation in a program).

By offering a common basis of collected and continuously updated, reliable and widely accepted data, further discussion and research shall be triggered encouraging domestic and international researchers to engage further with the in-school nutrition issue and thus attract more funding in the medium and longer term.

Within an interactive tool, data inputs shall be provided directly by the demand side (schools) through on-line applications for admission to the Program and complemented / managed by Prolepsis team. Results will automatically populate to show users an estimated cost, student population and projected participation, number of meals per year, and helpful information for Program implementation in each county or school. Ideally based on past measurements in the region or from participating schools with similar attributes, projected outcomes shall be offered.

Crowdsourced School Breakfast Map by NoKidHungry, supported by Deloitte. This interactive tool incorporates information of more than 25 000 schools across US in a user-friendly environment.

... and engage in a sustainable course of action

According to the Monitor institute, as the environment of intervention is getting crowded, individual actions might not be optimal and importance of working together is readily acknowledged. Yet, collaboration remains more the exception than the rule. That’s because too often, working collaboratively means giving up individual control, being patient with group processes that feel slow and drawn out and dealing with sometimes difficult interpersonal tensions, even as the benefits of doing so are often hard to see and measure in the short run.

Any individual organization or actor, no matter how large their assets or how efficient their processes, very rarely has the resources required to single – handedly produce meaningful change. Funders may not legally need to work with others, but if they hope to achieve significant impact on their communities – let alone on really complex problems – they will have to do so. And increasingly, the others that they work with will be actors not just in the non – profit sector, but in business and government too.

In the coming decade the most successful funders will combine long-standing instincts toward independent initiative and action with an emerging “network” mindset and toolkit that helps them see their work as part of a larger, diverse and more powerful effort overall. Resources and strategies will be coordinated to achieve common goals – with philanthropy uniting the individual and currently isolated efforts.

Any sustainable course of action entails the participation of the Government in the overall solution. This is what is happening internationally. In Greece, the severity of malnutrition to children and the historically significant obesity levels have deteriorated due to the economic crisis and due to the capacity of the public administration to develop a workable solution.

All initiatives carried out by governmental bodies so far have failed to introduce a mechanism that can effectively tackle malnutrition and obesity. Prolepsis has initiated discussions with relevant Ministries (Health, Education and Social Welfare) taking advantage of the next programming period and the allocation of funds to the objective of “social inclusion and reduction of poverty”. The funding is expected to incorporate the provision of daily meals, following healthy nutrition guidelines, the distribution of meals and the monitoring of the supply chain, promotional events and distribution of material and data collection on the performance of the program to society.

Data collection will incorporate the recording and analysis of various statistical indicators (e.g. food insecurity, quality of life, obesity, dietary habits) in order to map the nutritional characteristics of the vulnerable areas of the country and introduce an ongoing evaluation framework.

As discussions are underway, it is vital to incorporate elements of the existing analysis, especially in relation to the tailoring and innovation of the Program, as discussed earlier.

Mapping the need in a detailed, user friendly and research friendly form is an innovative approach on countering food insecurity in schools that will open up this issue to a broader audience and raise awareness. In this sense it can also be combined with the previously discussed channels of increasing awareness to the industry and individuals.
Final Remarks
Final Remarks

The way forward ..

Based on the findings of the analyses performed in this evaluation, the Program seems to have played an important role in improving food security status of children in socio-economically vulnerable areas in Greece. Mandated by a dual objective (i.e. alleviate immediate needs of the economic crisis and promote healthy nutrition), the Program is addressing nutrition as a means to achieve better school performance and sustain a healthy living.

Overall, the Program appears quite effective in most of the served areas. Certain inefficiencies have been identified, oriented mostly towards the late school admission process and the selection of suppliers. The presented recommendations include actions that can be implemented immediately in order to create the needed time window for the Program to improve its performance.

Given the limitations of funding, it can be argued that cost-effectiveness can drive additional schools to be included in the Program. The proposed tailoring of the admission process introduces cost not as a parameter to increase efficiency of the Program, but rather as a parameter to optimize the admission process and direct funding to additional schools, especially those that are most in need.

The limitations imposed by the decision to introduce a non-paying, free-for-all model are considered relevant within the parameters of a program that does not have the needed collaborations (e.g. public administration) to impose a pricing scheme or other means to avoid stigmatization of students within the school environment.

With wider collaborations in place, pricing schemes could potentially be introduced within the framework of an overall nutrition policy. The willingness of parents to pay for school meals are significantly limited by the current economic environment and any pricing scheme will need to be carefully planned, by engaging stated preference exercises and behavioral economics.

The introduction of Randomized Control Groups can provide valuable insights and test different hypothesis, under a controlled environment. Evidence from the analysis indicate that there are different behavioral patterns in place that may require different approaches. It can also help addressing the optimum balance between the need to alleviate the severe consequences of the financial crisis to vulnerable groups through the provision of healthy meals and support the healthy objectives of Prolepsis that also include its functioning in the field of medical research and health promotion as a research centre with a major impact to society at large.

The way forward could include a strategy to monitor longer terms effects, (e.g. reduction of absences, improvement of academic performance, productivity prospects) that have been addressed within this report. Prolepsis collects a large amount of data and possesses the statistical analysis tools and know-how to perform relevant analyses and extract useful conclusions. Tailoring them with a view of developing a policy development oriented database can have significant positive outcomes to the society and the economy as a whole.

To achieve sustainability, a wider collaboration between the various stakeholders is needed. This includes actors along the whole spectrum of in-school nutrition, such as retail operators, the Government, the food industry, food access organizations, change – makers, etc. in order to create an environment that can fertilize the outcomes of the Program.

Given the scale and social complexity of the running challenges, the program is encouraged to activate the above networks and sufficient resources that will collectively contribute to the dual objective of the program.

Considering the endogenous limitations of a funding mechanism, it is fair to assume that an exit strategy will eventually need to be prepared, in order to effectively and timely hand over the Program – or some of its aspects – to a scheme supported by an enlarged ecosystem that will also involve the Government. Within such a scheme, the SNF can reserve a more innovative role, focusing more on the coordination of involved actors and on the continuous adaptation of the Program to the ever evolving needs of the society.
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