THE SOCIO-ECONOMIC IMPACT OF THE COCA-COLA SYSTEM IN SERBIA
EXECUTIVE SUMMARY

When consumers buy Coca-Cola products in Serbia, they may not realize the widespread benefits their purchase brings to the Serbian economy. The Coca-Cola System in Serbia invited Steward Redqueen, a consulting firm specializing in conducting socio-economic impact assessments, to analyze how much the System contributes to the Serbian economy through employment creation, income and tax generation. This update follows on our previous assessments done in 2011 and 2014, and is based on financial data from 2015. The underlying analysis presented here is based on an “input-output” model, which follows the financials of the Coca-Cola System as they flow through the Serbian economy, creating ripple effects across various sectors. The methodology allows us to quantify not only the effects at the level of the System’s first-tier suppliers and trade partners, but also at the level of the suppliers to the suppliers and traders. The study thus captures the total economic impact of the System. The results presented in the report distinguish between:

- Direct impact (generated by the Coca-Cola System itself);
- Indirect impact (related to the procurement of local goods and services);
- Induced impacts (related to distribution and trade activities); and are presented in terms of:
  - Value added (defined as salaries to employees, tax payments and company profits and savings);
  - Employment (in full-time equivalents).

The major conclusions, based on fiscal year 2015 data, are as follows:

1. The direct value added of the Coca-Cola System is €29 million. Through the production and distribution of its beverages, the System enables economic activity in its local value chain and further supports €196 million in value added at the level of its suppliers, trading partners, and their suppliers. Therefore, the total estimated value added contribution of the System in the Serbian economy is €225 million (or 0.7% of total GDP). Therefore, every euro of value added at Coca-Cola supports €7 of value added in the Serbian economy;

2. The tax payments of the Coca-Cola System are €9 million, and support an estimated €139 million tax flow to the government (or 1.1% of total Serbian tax income);

3. The Coca-Cola System employs 1,000 people, and supports an estimated 11,700 jobs throughout the Serbian economy (or 0.6% of total Serbian labour force). Every job at Coca-Cola supports 11 jobs in the broader economy;

4. Overall, Coca-Cola System’s impact has increased by 7% in terms of value added and by 1% in terms of jobs since 2013. One of the key growth drivers was growth in volume despite a challenging business environment.

Through its production & distribution activities, the System supports €225 million in taxes, salaries, and profits along its value chain

From the total value added supported, €139 million is tax payments, equal to 1.1% of the total national tax revenues

The System supports 11,700 jobs in its value chain, from the farmers growing sugar beet to the people selling the beverages

Every job at the Coca-Cola System in Serbia supports 11 other jobs elsewhere in the Serbian economy

1 job equals 11
Socio-Economic Impact Assessments

Foreign companies have been a source of controversy for many decades. Supporters point to the benefits of adding foreign capital to domestic savings and to the employment, technology transfer, and (in many cases) exports that are generated. Detractors assert that foreign companies crowd out domestic firms and suppliers, while contributing little to government tax revenues. Our SEIAs go beyond assertions in an effort to quantify the direct and indirect impacts of firms in the countries in which they are active.

The Author

Ethan B. Kapstein is currently Visiting Professor at the Woodrow Wilson School, Princeton University. He is also Senior Director for Research at the McCain Institute for International Leadership. Kapstein is an Associate Partner with Steward Redqueen where he specializes in economic impact studies for a range of public and private sector clients. He is the author or editor of ten books and scores of academic and policy articles, and his most recent book, “AIDS Drugs for All: Social Movements and Market Transformations” won a 2014 “best book” award from the American Political Science Association. Kapstein is a former banker and retired naval officer and is a member of the Council on Foreign Relations.

Company profile

Steward Redqueen is a strategy consultancy firm that aims to make business work for society. It is represented in Amsterdam, Barcelona and New York and executes projects around the world. As specialists since 2000, Steward Redqueen focuses on integrating sustainability, quantifying impact and facilitating change. Clients appreciate our rigorous analysis, our ability to solve complex problems, and being ahead of the curve. We work for (multinational) corporations, (development) financials and public sector organizations.

Track record SEIA

Since 2006 Steward Redqueen has completed more than 100 socio-economic impact studies for multinational mining companies, development finance institutions, multinational food & beverage firms, banks and recreational organisations, in Asia, Africa, Latin America and Europe.

For more information, visit: www.stewardredqueen.com
In 2011 and 2014, professor Ethan B. Kapstein and Steward Redqueen executed Socio-Economic Impact Assessments (SEIA) for the Coca-Cola System in Serbia. The objective of these studies was to give the System’s management team an understanding of the wider impact of its operations as well as fact-based input for discussions with stakeholders. This report follows our previous works, and quantifies the impact of the System in Serbia in 2015.

Scope

This assessment analyses the impact of the Coca-Cola System in Serbia. The System consists of:

- The Coca-Cola Company (TCCC): responsible for the strategic marketing, brand management, packaging strategy, consumer promotion, advertising, public relations, and market research.
- Coca-Cola Hellenic (CCHBC Serbia), responsible for the production, sales and distribution of Coca-Cola beverages in Serbia.

In this study we capture the total (direct and indirect) impact of the System in the country. We distinguish between several effects:

- **Direct effects**: generated at the Coca-Cola System;
- **Indirect effects**: supported at first-tier suppliers of key ingredients and services and at the level of their suppliers;
- **Induced effects**: supported at distributors and retailers, as well as their suppliers.

Suppliers of key ingredient & services

Trade partners

Suppliers of trade

Exhibit 1: The System’s entire value chain, covered by the scope of the study

The study quantifies the System’s contribution to the Serbian economy in terms of related:

- **Employment**: number of full-time employees (FTE), which can be compared to the national employment.
- **Value added**: sum of all incomes for households (salaries), governments (taxes), and firms (savings and profits), which can be compared to the national GDP.

Structure of the report

The structure of this report is as follows:

- Section 2 outlines the ‘input-output’ methodology used in the socio-economic study;
- Section 3 gives an overview of the Coca-Cola System in Serbia and the local context in which it operates;
- Section 4 presents the Coca-Cola System’s impact on the economy in Serbia in terms of incomes and jobs supported;
- Section 5 presents the System’s impact over time;
- The final section presents the main conclusions and recommendations for the Coca-Cola System;
- The economic model is explained in more detail in Annex 1.
Calculations of economic effects are based on the so-called ‘input-output’ methodology which was developed by the Nobel Prize winning economist Wassily Leontief and is commonly used by economists worldwide for this type of analysis.

The starting point for the analysis is the final Coca-Cola consumption that can be traced in monetary terms throughout the economy. When a consumer buys a bottle of Coke in the supermarket, a part of what he spends is revenue margin for the selling outlet, another part goes to the distributor that transported this product from the production plant to the selling point, and a part of it goes to the Coca-Cola bottler. All of these parties procure goods and services from suppliers, pay salaries and taxes, invest and make a profit. To capture the impact, the total consumption value of the Coca-Cola System’s products serves as an initial injection into a so-called Social Accounting Matrix which represents all sector inter-linkages in a local economy. In this way the total economic impact related to the presence of the Coca-Cola System can be traced. For more information on the methodology used, please see the Annex 1. The exhibit below shows the information sources used to calculate the impact of the System in 2015.

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>MODEL</th>
<th>IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coca-Cola HBC 2015 financials data</td>
<td>Economic model uses “Social Accounting Matrix” which is based on the Serbian national accounts</td>
<td>Value added impact taxes, salaries, profits in value chain</td>
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<tr>
<td>Coca-Cola HBC 2015 commercial data</td>
<td>Methodology based on the work of Nobel Prize winning economist Wassily Leontief</td>
<td>Employment impact in value chain</td>
</tr>
<tr>
<td>The Coca-Cola Company 2015 expenses</td>
<td>National macro-economic statistics</td>
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</tbody>
</table>

**Exhibit 2:** The System’s entire value chain, covered by the scope of the study
Coca-Cola System in Serbia
Like any business, the Coca-Cola System is critically dependent on the health and resilience of the local economy in terms of the demand for its products and for shaping its investment decisions. This section describes the recent developments in the Serbian economy and provides an overview of the System.

**Recent developments in the Serbian economy**

After a strong performance in 2013, economic growth in Serbia turned negative in 2014. In 2015, GDP grew by less than 1%. Until 2008, Serbia’s economic growth model was import and consumption driven, financed by privatization revenues and borrowings. This is why Serbia was facing large macroeconomic imbalances, including the fiscal and current account deficit, high unemployment and volatile inflation. In order to reverse the trends and put the country on a dynamic and sustainable growth path led by investments, the new majority government elected in 2014 undertook economic reforms, with support from the IMF. Consequently, the general government deficit was cut from 6.7% GDP in 2014 to less than 3% of GDP in 2015 (Exhibit 3).

**Exhibit 3: Overview of macro-economic indicators in Serbia**

Owing to growing confidence in the Serbian economy, the increase in foreign direct investment (FDI) is greater than in almost any other country in central and south Eastern Europe. In 2015 FDI as a percentage of GDP rose from 4.5 to 6.4%. Signs of growing confidence by foreign investors are also reflected in the ranking in the Ease of Doing Business Index. Serbia has improved in its ranking by climbing to 59th place (up from 91st in 2014), the single largest change in a country’s position in the Western world.

Despite reforms, Serbia is still facing several economic challenges driven by both external factors (such as global financial turmoil and the Eurozone crisis), and internal factors (including the need for continuing reforms and macroeconomic stabilization, and relief from flooding). For the soft drinks industry, the extensive austerity measures introduced by the government at the end of 2014 had an instant negative effect on disposable incomes, resulting in a decline in off-trade volumes in 2015. Consequently, customer confidence in Serbia declined according to Nielsen data.
Today, CCHBC Serbia is one of the largest companies in the non-alcoholic beverage industry in the country. It employs 1,000 people, and its operations are made up of three distinct entities: CCHBC Serbia (soft drinks), Vlasinka (natural mineral waters), which was acquired in 1995, and Fresh & Co (juice and juice drinks), which was acquired in 1996. As noted, it is located in Zemun on a site comprising about 65,000 m², where six production lines, a warehouse and offices are located. In 2015, CCHBC Serbia invested in the modernisation and expansion of production capacities of the bottling plant in Zemun, including 4 million euros invested in the construction of the regional Juice Excellence Centre. The Centre is an important hub for the System – it will be producing juices for export to Montenegro, Bosnia and Herzegovina, Macedonia, Croatia, Slovenia, Bulgaria, Hungary, and Poland. The Coca-Cola System in Serbia has four distribution centres across the country which supports approximately 38,500 distributors and retailers of CCHBC Serbia’s products; these outlets, in turn, serve approximately 7,900,000 Serbian consumers. CCHBC Serbia’s product portfolio consists of international brands including Coca-Cola, Coca-Cola Zero, Fanta, Schweppes and Sprite; local brands such as Rosa, Next, and Joy; as well as brands licensed by other companies, such as Nestea and Ultra Energy.

In 2015, the Coca-Cola System produced 407 million litres of beverages, 10% higher than in 2013 (Exhibit 4). The consumption of Coca-Cola beverages per capita increased from 52 to 57 litres relating to a market share of non-alcoholic beverages of 43.1% (in terms of sales value).

Coca-Cola has been present in Serbia since 1968, when a new bottling plant in Zemun started operating, at the same location where it is today. At present, the Coca-Cola System in Serbia comprises a bottler, Coca-Cola HBC Serbia (CCHBC Serbia) and Coca-Cola Barlan S&M (TCCC), a subsidiary of The Coca-Cola Company. TCCC is responsible for the strategic marketing, brand management, packaging strategy, consumer promotion, advertising, public relations and market research of Coca-Cola products; CCHBC Serbia purchases the concentrates, beverage bases and syrups for producing drinks from The Coca-Cola Company according to the terms of its franchise agreement. In addition, it is responsible for the merchandising of products, key account management, implementation of promotions and product distribution. It also maintains an active program in the area of Corporate Social Responsibility (CSR).

The Coca-Cola System in Serbia

Exhibit 4: Overview of Coca-Cola beverage production in Serbia
TOTAL IMPACT OF THE COCA-COLA SYSTEM IN SERBIA
The local procurement of €67 million represents revenues for the System's suppliers, while the trade margins of €153 million are revenues for the outlets selling Coca-Cola beverages. The suppliers and outlets use these incomes to pay salaries and taxes, and purchase products and services needed for their own operations. Therefore, the local procurement of the System, together with the trade margins are the drivers of indirect impacts related to the Coca-Cola System's value chain in Serbia. These indirect impacts will be presented in the following sections.

Sales of Coca-Cola beverages

In 2015, consumers in Serbia spent an estimated €300 million on 407 million litres of Coca-Cola beverages. The beneficiaries of this consumption and spending include the Serbian government (in the form of VAT of €50 million), the trade sector (as margins for wholesalers and retailers of €96 million), and CCHBC (as sales revenues of €153 million). In addition to CCHBC’s local net sales revenues, the bottler also sells parts of its beverages abroad, generating export revenues of €35 million. TCCC also has expenses in the country related to its operations (€15 million). €238 million is the total expenditure related to the Coca-Cola System in the country. In order to produce and distribute its products, the Coca-Cola System spent €67 million on local procurement (ingredients such as sugar and fruit concentrate, packaging such as PET, cans, labels, as well as warehousing and business services). It also paid €20 million in salaries and €9 million in taxes, for a total of €29 million in direct value added for the Serbian economy.

Exhibit 5: Spill-over effects of Coca-Cola consumption in Serbia

6 Estimate based on wholesale and retail margins (received from CCHBC based on own estimates and Nielson) and VAT of 20% on top of CCHBC’s ex-factory price.

7 Sum of CCHBC local revenues €153 million, CCHBC export revenues €35 million, TCCC local expenses €15 million and other revenues.

8 Procurement from abroad (imports, mainly concentrate, but also fructose and biorefin) and System profits are not included in Exhibit 5.

9 The profits generated by the System accrue to foreign shareholders and thus represent no direct value added for the Serbian economy. Taxes include amongst other corporate taxation, payroll tax, import tax, property tax, motor vehicles tax and an environmental fee.
Overall, the state receives €139 million of tax revenues from the System’s value chain (see left-hand side of Exhibit 7), most of it in the form of VAT (€50 million of the €110 million). Salaries for the employees involved in the System’s value chain amount to €49 million. In terms of sectors, the manufacturing and business services ones benefit the most from the System’s activities. This is not surprising given that a large part of the System’s expenses are going to firms in these fields.
Contribution to employment

In total, the System supported 11,700 jobs in the Serbian economy in 2015, equal to 0.6% of total Serbian employment. The System supports jobs at local suppliers as well as distribution and trade partners (Exhibit 8). Its local procurement supports 1,500 jobs at suppliers. Of these, 670 are at manufacturers of sugar, packaging materials, machinery and equipment. 450 jobs are at service suppliers (mainly in firms providing marketing and advertising services to the System, but also financial, audit, and other professional services). 170 jobs are in other industries, such as construction and utilities. Further in the value chain, the System provides 1,400 jobs at suppliers’ suppliers, of which about 150 jobs are for farmers that grow fruits for concentrate and sugar cane for sugar. Induced about 7,800 jobs are supported by the sale of the System’s beverages. Among the direct trade partners of the System 5,300 jobs are supported at the nearly 38,500 outlets that offer Coca-Cola beverages. 2,500 jobs are supported at their suppliers. The System itself employs about 1,000 people, implying that for every job at the System, 11 jobs are supported in the wider economy.

Exhibit 9 illustrates the total 11,700 jobs broken down by round of impact and sector. The services, manufacturing and trade sectors benefit the most. As there is no direct procurement of sugar (beet) and fruits, the agricultural jobs are supported indirectly, as suppliers and trade partners of the System procure agricultural goods from Serbian farmers. In addition to the direct and indirect effects, one could also consider the induced employment effects related to the Coca-Cola System. These effects relate to the re-spending of salaries by the employees of the Coca-Cola System and its suppliers, trade partners, and their suppliers on goods and services produced in Serbia. The induced effects add another 6,400 jobs. These are however less strongly attributable to the System as they are not closely related to its value chain and have therefore not been included in the graphs.

Exhibit 8: Jobs supported in the value chain

Exhibit 9: Breakdown of supported jobs by sector in thousands

<table>
<thead>
<tr>
<th>SUPPLIERS &amp; TRADE PARTNERS</th>
<th>SUPPLIERS OF SUPPLIER</th>
<th>THE COCA-COLA SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>670</td>
<td>170</td>
<td>210</td>
</tr>
</tbody>
</table>

Of which 150 farmers growing fruit & sugar beet used as ingredients in Coca-Cola Beverages

<table>
<thead>
<tr>
<th>INDIRECT</th>
<th>SYSTEM</th>
<th>INDUCED</th>
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<tbody>
<tr>
<td>1.5</td>
<td>1.0</td>
<td>0.15</td>
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<tr>
<th>Agriculture</th>
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<th>Other Industry</th>
<th>Business services</th>
<th>Public services</th>
<th>Total</th>
<th>Transport</th>
<th>Trade</th>
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<td>0.2</td>
<td>1.2</td>
<td>0.5</td>
<td>0.5</td>
<td>1.3</td>
<td>0.7</td>
<td>1</td>
<td>0.4</td>
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</table>

670
170
210
450
As explained in the introduction of this report, this study was done based on the 2015 financial figures. Table 1 provides a comparison of the key results from the current study and the results of the 2014 assessment (based on 2013 financial data). To offset the effect of currency fluctuations, the 2013 results have been converted based on 2015 constant currency.

Between 2013 and 2015, the volume produced by the System in Serbia increased by 10%, from 370 to 407 million litres. CCH’s net sales revenues grew 7%, while margins for traders increased by approximately 14%. Despite the increasing production, the monetary value of local procurement of the System decreased by 25%. This is due to (I) a substantial decrease in the price of key ingredients (such as sugar and chemicals) and (II) restructuring of the System in the region, which led to centralization of sourcing.

As a result of these developments (increase in sale revenues and margins, decrease in local procurement), the value added supported by the Coca-Cola System in Serbia increased from €211 million (based on 2015 FX) to €225 million, or 7%. An interesting development is the decrease of household incomes and profits of local companies and the increase in tax payments as share of the total value added. This shift of incomes from household and firms to government reflects the overall trend in the Serbian economy of increased tax collection. \(^\text{10}\)

The total supported employment in the System’s value chain remained stable over the period. The number of jobs supported at the level of first-tier suppliers declined as the value of local sourcing decreased and productivity in most sectors of the economy increased.\(^\text{11}\) Jobs at trade partners increased driven by higher volumes sold. At the same time, jobs supported at a level further (at suppliers of suppliers and the trade partners) went up by nearly by a quarter, driven by an indication of higher local procurement among key sectors in the System’s value chain.\(^\text{12}\)

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\(^\text{10}\) The shift is observed looking at input-output table used in the 2014 study and the table used for this study. Comparing the two tables, the majority of the Serbian economic sectors are reported to have increased their tax payments as share of their reported value added, while their payments to households and retained profits have decreased.

\(^\text{11}\) As indicated by statistical data on the number of jobs per RSD output per sector in Serbia.

\(^\text{12}\) This increase is observed comparing the input output tables, as mentioned in footnote 11. Comparing the two tables, key sectors supplying the System (such as sugar processing) and the trade sector, have increased their sourcing from local suppliers, driving increase in the jobs supported at the level of the suppliers of the System’s suppliers and trade partners.
Exhibit 10 gives more details on the employment changes. The decline in employment in the agricultural sector can be explained by the drop in the sugar price (which translates in our model as reduced monetary value of sugar procurement), and reduced use of sugar in the recipe. The drop in manufacturing jobs is driven by lower levels of (monetary value of) local procurement from suppliers and increased productivity. In the services sectors jobs supported at the level of suppliers went down as the System slightly decreased its spending on marketing and other professional services. The higher number of jobs supported at the level of the suppliers of the suppliers and trade partners is due to an indication of larger demand from these sectors from firms elsewhere in the economy. The transport sector is influenced by increased labour productivity.

Exhibit 10: Changes in supported jobs between 2013 and 2015, in thousands
CONTRIBUTION TO THE LOCAL COMMUNITY
The Coca-Cola System’s business operations are inseparably linked to success and growth of the community. As growth is possible in the environment that constantly develops only, the System provides its contribution through four key areas which are highly relevant for development of the society and future generations:

- Support to professional youth development
- Improvement of the community’s quality of life
- Assistance in emergency situations via donor and volunteer activities
- Environmental protection

Support to professional youth development

The future of business and the community relies on new generations and therefore the System strategically supports professional youth development, both through independent programs and cooperation with universities and other organisations.

In 2015, the Coke Summership internship program was successfully executed, having attracted more than 1,500 university students. The program was attended by 30 students, who were provided with an opportunity to acquire practical skills and learn about good examples from business practice. The employees invested more than 2,000 mentor hours in work with university students across the country in 2015. As a result of continuous investments in youth, the System was recognised as the first choice of university students in Serbia, within a large-scale survey of AIESEC, the largest global student organisation.

Improvement of the community’s quality of life

Coca-Cola System established numerous partnerships, aiming to contribute to the community’s quality of life. Through the Movement for Joy platform, with support of the Ministry of Sports and Youth and in cooperation with partners – the Sports Association of Serbia, the Olympic Committee, the Association for School Sports of Serbia, the Institute for Sports and Sports Medicine of the Republic of Serbia, etc. – the System strives to inspire people to be active, as well as to respond to specific needs of local communities. In the course of 2015 only, the Coca-Cola System inspired thousands of people in Serbia to be active, and within 45 Coca-Cola Active Zones, set up across the country, people were enabled to exercise, socialise and spend quality time together.

Assistance in emergency situations

Wishing to help re-establish regular living conditions in the flood-affected communities, the Coca-Cola System provided sports equipment in the value of USD 1mn for all the damaged schools. Sports accessories welcomed around 80,000 pupils in 140 schools across the country at the beginning of the new school year and the assistance was organised in cooperation with the Red Cross of Serbia and the Office for Reconstruction and Flood Relief.

As members of the Coca-Cola Volunteer Club, the employees provide assistance and support to the population via numerous volunteer campaigns, promoting social responsibility as an integral part of day-to-day business operations. Through their personal example, they motivate their families and friends to be more active. So far, Coca-Cola volunteers have provided assistance during natural disasters, renovated children’s hospitals, kindergartens and orphanages and participated in humanitarian tournaments and matches. Furthermore, the System donates its products to a large number of organisations, and it is especially committed to cooperation with the Food Bank, which helps beverages reach those in need.
Coca-Cola HBC’s 2020 Sustainability commitments

Coca-Cola HBC announces ambitious new sustainability targets to inspire a better future. These targets are part of our strategy to grow our business responsibly, profitably and sustainably.

- 40% of our total energy will be from renewable and clean sources
- We will reduce water use intensity by 30%*
- We will reduce direct carbon emissions intensity by 50%*
- Recover for recycling at least 40% on average of total packaging placed on our markets
- We will reduce our packaging by 25% per litre of beverage produced
- We will source 20% of the total PET used from recycled PET and/or PET from renewable materials.
- We will invest at least 2% of our annual pre-tax profit in communities and double the number of employees participating in volunteering initiatives to 10% of the total, during work time
- Over 95% of key agricultural ingredients will be certified against the Coca-Cola System’s Sustainable Agricultural Guiding Principles

*Water consumption and direct carbon emissions per litre of beverage produced, versus 2010

Environmental protection

As the leader in the non-alcoholic beverages industry, the System is aware of its responsibility in using natural resources, primarily water, which is the basic ingredient of all products. In addition, special attention is focused on motivating people to protect natural resources themselves through various activities, such as the traditional celebration of the Danube Day and development of unique eco parks in the Danube basin cities.

Within the company, innovative technologies and solutions are constantly introduced, aiming to reduce the impact on the living environment and contribute to its preservation.

The primary focus is on the following key areas:

- Energy resources and climate protection
- Water resources management
- Sustainable packaging design

In these areas, business operations are executed in compliance with the adopted local and international codes and regulations, which the System also applies in its cooperation with local suppliers. In the bottling plants, energy and water consumption, waste volume and recycling rate are continuously monitored. As a result of monitoring all the parameters on a daily basis, excellent results in reducing the environmental impact have been accomplished year after year.

- Total energy consumption per litre of produced beverage was reduced by as much as 35 percent in 2007-2015
- Water consumption in production was reduced by 50 percent in the same period
- 96.36 percent of generated waste was recycled
- 6.46 percent of recycled materials reused in production
- All bottling plants in the country have waste water treatment systems, with treated water returned to nature safe for plants and animals
- Globally, the Coca-Cola System is on the right track to return 100 percent of water it uses in producing its beverages

Coca-Cola HBC Group was pronounced the leader in the beverages sector by the global Dow Jones Sustainability Indices. Achievements in Serbia in the area of environmental protection and support to the community contributed to this significant result.
The following conclusions can be drawn from the analyses presented in this report:

1. The Coca-Cola System is a significant contributor to the Serbian economy:
   a. €29 million direct value added;
   b. €225 million economy-wide value added equivalent to 0.7% of total GDP;
   c. Every euro of value added at Coca-Cola supports additional €7 of value added in the broader economy.

2. The Coca-Cola System contributes substantially to the tax income of Serbia:
   a. €9 million in tax revenues were generated directly by the System;
   b. €139 million tax revenues were supported in the System’s total value chain, equivalent to 1.1% of total tax income in the country.

3. The System’s impact on employment goes well beyond its direct employees:
   a. The System employs 1,000 people directly and supports another 10,700 jobs throughout its value chain for a total of 11,700 jobs, equal to 0.6% of the Serbian labour force;
   b. Local procurement supports 1,500 jobs at the System’s direct suppliers, and an additional 1,350 at the System’s suppliers’ suppliers;
   c. Induced, the sale of Coca-Cola beverages supports 5,300 jobs at the System’s direct trade partners, and a further 2,500 jobs at the traders’ suppliers;
   d. Every job at Coca-Cola supports 11 indirect jobs in the broader economy.

The following recommendations should also be considered:

1. The Coca-Cola System should work closely with the private sector and the Government to ensure that Serbia maintains its economic momentum and its attractiveness as a place to invest;
2. In support of that effort, the System should seek to disseminate the findings of this study and encourage dialogue on the role of private firms in Serbia’s economic development;
3. The Coca-Cola System should work with its value chain in Serbia to ensure the competitiveness of its suppliers and partners.
A. Methodology

In the process of producing, packaging, promoting and delivering Coca-Cola products to customers, the Coca-Cola System stimulates economic activity throughout the entire value chain. That means its own operations have a supporting effect on indirect as well as induced businesses. The indirect local suppliers and producers are dependent on the production plants’ demand of raw materials, while the distributors and retailers depend on distributing and selling the company’s products. Both the supported indirect and induced activities generate incomes, tax revenues, jobs and in turn stimulate further economic activity in their respective value chains.

The starting point for the analysis is the final consumption of Coca-Cola products that can be traced in monetary terms throughout the economy. When a consumer buys a bottle of Coca-Cola in the supermarket, a part of what he spends is revenue for the supermarket, another part goes to the distributor that transported this bottle from the production plant to the selling point, and a part of it goes to the Coca-Cola System. All of these parties procure goods and services from suppliers, pay salaries and taxes, invest and make a profit.

To capture the impact, the total consumption value of Coca-Cola System’s products serves as an initial injection into a so-called Social Accounting Matrix which represents all sector inter-linkages in a local economy (for details see Model Description B below). In this way the total economic impact related to the presence of Coca-Cola System can be traced and divided into several effects:

• Direct (0th round) impact: effects directly related to expenditures of Coca-Cola System. That includes salary, tax payments, and profits generated that remain in the local economy, as well as direct employment;
• Indirect (1st round) impact – direct suppliers and trade partners: effects arising at upstream suppliers and downstream retailers in the value chain of Coca-Cola System’s products (e.g. jobs and incomes generated by suppliers and retailers);
• Indirect (2nd round) impact – suppliers of suppliers and trade partners: effects that come about as suppliers and retailers inside the original value chain of Coca-Cola System procure goods and services from suppliers outside the original value chain of Coca-Cola System’s products (e.g. employment and incomes generated by suppliers’ suppliers);
• Induced (3rd round) impact – re-spending of salaries: effects caused by the re-spending of salaries by employees of Coca-Cola System, its trade partners and direct and indirect suppliers whose jobs are directly or indirectly supported by Coca-Cola System.

B. Model description

Modelling approach

The model developed for this study combines Coca-Cola System financial data with the so-called Social Accounting Matrix (SAM) of the local economy and the allocation of the work force over the various economic sectors. A SAM describes inter-industry linkages in an economy, depicting how the output of one industry goes to another, where it serves as an input. It therefore essentially makes one industry dependent on another, both as a customer of outputs and as a supplier of inputs. Exhibit 11 shows how the information sources are used to arrive at the two main model outputs.

Exhibit 11: Overview of the modelling approach

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<tr>
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<td>Economic model uses “Social Accounting Matrix” which is based on the Serbian national accounts</td>
<td>Value added impact taxes, salaries, profits in value chain</td>
</tr>
<tr>
<td>Coca-Cola HBC 2015 commercial data</td>
<td>The Coca-Cola Company 2015 expenses</td>
<td>Employment impact in value chain</td>
</tr>
<tr>
<td>National macro-economic 2015 expenses</td>
<td>National macro-economic 2015 expenses</td>
<td></td>
</tr>
</tbody>
</table>

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13 SAMs are valid for a specific year. Economies are subject to change and SAMs must be updated periodically.

14 Global Trade Analysis Project (http://www.gtap.agecon.purdue.edu).
As is indicated in Exhibit 12 the System has been included as a sector in its own right by adding a row and a column in the SAM. The column is the System’s re-allocated cash-flow statement. The last step in constructing the SAM is to normalize it such that all columns add up to one. The final consumption can then be traced in money terms throughout the economy.

**Assumptions**

The main assumption in the model described above is that input-output analysis implicitly assumes that an increase in demand can be met by an increase of production at constant prices in all affected sectors of the economy. In reality however there are sectors that will not “feel” the effect of an increased demand for drinks and therefore will not experience an increase of production. Alternatively, there can also be sectors that are unable to increase production at constant prices because of shortages in, for example, labour, raw materials and production capacity. As we mainly look to a situation that actually and do not run scenarios, it is not perceived as a critical issue.

**Employment estimates**

The National Bureau of Statistical of Serbia regularly publishes information about the condition of the labour market in the country. The latest data available is from 2015. This information, when used in conjunction with GDP data, enables the generation of statistics on the employment intensity (i.e. number of jobs per EUR of output) of the System. At a more disaggregated level, estimates can be provided of employment supported by the System at the sectorial level, indicating which sectors in particular are most “dependent” on the production and sale of Coca-Cola products.

**Social Accounting Matrix**

The key ingredient of the model is the Social Accounting Matrix (SAM). The SAM describes the financial flows associated with all economic transactions that take place within the local economy. It is a statistical and static representation of the economic and social structure of the local economy. As shown in Exhibit 12, in the SAM the number of columns and rows are equal because all sectors or economic actors (industry sectors, households, state and the foreign sector) are both buyers and sellers. Columns represent buyers (expenditures) and rows represent sellers (receipts). Of the four quadrants in the SAM, three are relevant here. Final consumption induces production which leads to financial transfers between the various sectors which subsequently generate incomes for households, state (taxes) and profits (dividends and savings). SAMs are available at the GTAP database.
THANK YOU