

# **Harvard University**

## **The Clothing Industry Cluster in Goiás – Brazil**

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## 1 Introduction

Brazil has undergone great economic growth, and its origin as a colony for exploitation of riches, asylum for criminals and slave manpower (both black and indigenous) served as the scene for widespread racial and religious miscegenation (with respect to beliefs and syncretism), great capacity for production of primary products, territorial expansion and, unfortunately, widespread corruption, delay in implementing social priorities (education, healthcare, housing and public safety) leading to a manpower structure incapable of taking advantage of the country's strengths.

As it has grown in importance on the global scene, Brazil has seen its industrial development move inland, creating development in micro-regions which have frequently arisen due to their natural vocation or to segments developing and causing many companies in the same sector to come together geographically, forming clusters, as described by one of the most renowned experts on the topic, Michael Porter (1989)

Due to its continental size, Brazil has the potential for producing a wide range of products on a huge scale, and it has sufficient internal demand to absorb much of its own production. Many segments have formed clusters throughout the country. This article presents the Goiás Cluster in the Clothing Manufacturing Segment. Goiás is ninth in economic growth nationally, and the manufacturing cluster is the 2<sup>nd</sup> largest employer in the state; it is estimated together with informal labour, it accounts for 85 thousand jobs, 8% of the entire Goiás workforce.

Using the Diamond Model as a guide, this article aims to follow the established methodology, using a deductive model as an option for establishment of premises through a macro environmental system of logic (the emerging countries being the basic panorama used) along with the minor premise for Goiania, the capital of Goiás. After clarifying the definition of regional development and cluster, an analysis of the scene of the segment in Brazil is made, finalizing with data collection for Goiás. The article ends with a closer look at the city of Goiania, and the Goiania Station case, presenting in conclusion its SWOT matrix, the Diamond Model and proposals for improving the sector.

## 1.1 Research Methodology

Method consists in the ways adopted to reach the proposed objective, while methodology corresponds to the procedures and rules used for a certain method.

From the many methods of scientific approach, and after extensive bibliographical search, Quantitative and Qualitative Research was the method chosen. It was considered that quantitative method is characterized by the employment of quantification, both in the gathering of information as well as in the processing of data through statistical techniques, thus assuring the accuracy of the results and preventing discrepancies in analysis and interpretation.

The choice of the qualitative method was justified in that it is seen as appropriate to research related to subjectivity, values and beliefs that motivate human action; thus the content of the answers, opinions and level of confidence are interesting; not quantity but what and how the people feel, think, defend their views and values.

In order to carry out the quantitative research, it was necessary to establish the universe to be investigated. Global search means the group, the totality of elements which have certain characteristics, as defined in a study. We define the sample as a convenient portion selected from the universe (population); it is a subgroup of the universe. Intentional non-probabilistic sampling was employed in this research, as was non-probabilistic sampling of convention, where the elements are not selected randomly. This means the research adopts an approach aimed at the more accessible components of the universe.

In order to seek a better understanding of the Clothing Manufacturing Industry in Goiás State, an exploratory quantitative research into 587 manufacturing units was undertaken in the cities of Goiania, Jaraguá, Pontalina and Taquaral de Goiás. Considering the number of inhabitants of the cities, the four cities chosen corresponds to 46,95% of the habitants of all the cities of which the clusters consist. As to the number of companies investigated, they correspond to 4,33% of the number of clothing manufacturing companies in the state. The objective of the research was to establish the

most relevant factors concerning each competitor. The interviews took place in August, 2012, were conducted in person, using structured questionnaires with closed questions.

Along with the qualitative research, an analysis on perspectives and the leadership experience curve in the manufacturing segment was attempted. Interviews were held with the Secretary of state for Industry and Commerce, Mr. Alexandre Baldy; the president of the Trade Union for the Clothing Manufacturing industries of the State of Goiás (SINVEST) Mr. José Divino Arruda; the president of the Trade Union for General Manufacturing Industries of Goiania (SINDROUPAS) and the president of the Goiania Clothes Manufacturing Industries Association (AGICON) Mr. Edilson Borges Souza; Superintendent of Microenterprises of the State Secretariat for Industry and Commerce of the State of Goiás (GO-SIC), Mr. Tiago Peixoto.

## **2 Regional and Cluster Development**

The classic localization theories formulated by economists and German geographers during the 19<sup>th</sup> Century and the beginning of 20<sup>th</sup> are regarded as the first studies on regional development. The localization of economic activities in a geographical space was a central theme of this current of thought, which sought to explain, among other questions arising, the determining factor for the economic use of land, the reasons which lead an industry to be located in a certain region and the causes which lead the commercial sector and services to be more thriving and diversified in some cities than in others. Emphasizing this from the point of the firm, these theories advocated that a company basically seeks to determine its 'best location' by taking into account the role of transportation and labor costs (CAVALCANTE, 2004, p. 59).

From the second half of 20<sup>th</sup> Century, Regional Development Theories began to appear focused on agglomeration factors, in other words, on deriving advantages from the infrastructure, flow of information and proximity to suppliers. While the classic theories basically emphasize the role of transport and labor costs for ascertaining better location of economic activities, new theories started to incorporate, along with location, the way firms and sectors could complement each other (LOPES, 2001) as a growth factor.

It is well known that economic activities tend to group themselves territorially in the same countries, regions or localities, instead of there being an equal distribution around the globe. Thus it became necessary to understand the phenomenon of grouping or agglomeration of economic activities in order to identify the advantages of firms being near to each other, in other words, the advantages of proximity as a central factor for competitiveness (FERNANDES; LIMA, 2007).

Recognizing the possibilities and vocation for location via company agglomeration became the corporative goal 'par excellence' for coordinating actions and stimulating innovation (WITTMANN, 2003).

## **2.1 Clusters**

Much literature is devoted to the pertinent questions of regional development and cluster formation. By these labels are understood all and any type of grouping or agglomeration of companies of the same sector, in the same geographical region. Some authors utilize the term to refer to company commercial grouping (commercial clusters) or company industrial grouping (industrial clusters) (SZAFIR-GOLDSTEIN; TOLEDO, 2006).

Clusters are common agglomerates in the current economy. However, the phenomenon has been the object of many research studies, including: Saxenian in 1994; Porter in 1998; Swann in 1998; and, Owen in 1999. Historically, the clusters have been found in a large variety of traditional industries: textile in the north of Italy; naval construction in Glasgow, steel in Pittsburgh, automobile manufacture in Detroit (KUAH, 2002).

The cluster concept is found in the literature, when looking for more recent network-related formations between companies. This concept is associated with the development of flexible specialization processes, and has been adopted from experience analysis in Italy. The main characteristics of clusters are:

- a) Geographical concentration of companies of the same industrial segment, with the establishment predominantly of the medium, micro and small companies (MPE) (GRAMKOW, 2000);
- b) Production specialization between different organizations;
- c) Great quantitative and differentiation flexibility (GRAMKOW, 2000);
- d) Facility for new companies to enter the market.
- e) Access to information and service networks. (GRAMKOW, 2000);
- f) “Not necessarily to take into account other entities, outside the companies, such as organizations in education, research and development, technical support, financing, promotion, and others.” (LASTRES; CASSIOLATO, 2005).

The cluster initiatives can facilitate and speed up innovation, as well as stimulating commercial maturity and ensuring, over time, the economic success of the companies involved in these initiatives. These inter-organizational groupings represent an efficient instrument for the concentration of resources, dissemination of knowledge, strengthening of local factors and economies of scale (FERNANDES; LIMA, 2007).

According to Porter (1999), competitive success worldwide does not occur in individual and isolated cases, but usually stems from the strategies of clusters of many industries and related companies working in the same place. These industries are mutually reinforcing, and meet and converse constantly. Also, they are based on global trends.

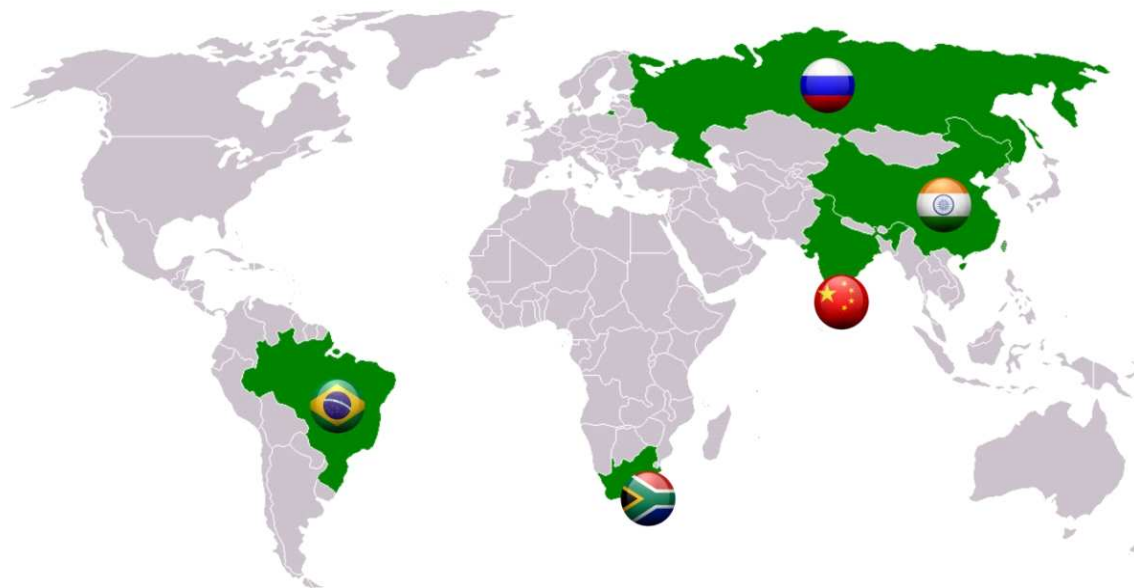
Porter (1998) argues that cluster strategy represents new insight into the new economic map of the current globalized world. These clusters have remarkable virtual characteristics, nationwide, regionally, and at state or local level, both in advanced economies as well as in the so-called emerging countries. Clusters, with their characteristics, are a highly typical paradox, in having lasting competitive advantages.

## 2.2 BRICS Acronym and the Cluster Dynamic

The acronym BRIC was established in 2001 to include four countries: Brazil, Russia, India and China. These countries were classified as emerging economies, according to development scenarios of the time, which would probably would have accelerated growth in the next decade. These countries are considered to be no longer only as 'developing countries', but as nations which will play an increasingly important role on the world stage (BAUMANN, 2010).

In 2011, the letter "S" was added to this group, in reference to entry of South Africa - the English name South Africa -, so the term changed to BRICS, the countries that are part of the acronym BRICS, which are shown in Figure 1.

Figure 1: Map of the World with highlights for the countries that make up the BRICS



Source: MV-Experience (2012)

Together, these countries account for approximately 40% of world population. According to the analysis, by 2015, 800 million consumers in these countries will have a per capita income above \$ 3000; this means increasing the social condition of the people rising to the middle class. Each country has the economic potential to be a leader in some sectors. The Brazilians are important producers in agribusiness, have large mineral reserves, energy and a diversified industrial base; Russians have large oil



reserves and natural gas; Indians excel in technological areas in general and the Chinese, in addition to having a legion of workers, have invested for the purpose of perfecting their technology and expanding their infrastructure (BAUMANN, 2010).

Apart from this, countries that make up the BRICS have several things in common; among them, we may highlight : recent economic stability, Gross Domestic Product (GDP) in constant growth; consumer markets at high levels, wide availability of natural resources, increased rates in the Human Development Index (HDI); value in the capital markets, investment companies in the various sectors of the economy; stable political situation; manual labor in great supply and in the process of improving qualifications; levels of production and export growth; good reserves of mineral resources; investments in sectors of infrastructure (roads, railways, ports, airports, power plants, among others); decline, albeit slow, in social inequality, rapid population access to communication systems, and capital markets (Stock Exchanges) receiving large foreign investments, investments by foreign companies in diverse industries; (BAUMANN, 2010).

All these factors contribute to the expectations of these countries becoming economic powerhouses in the medium term. The consumer market is a very important element in this process. Putting the members of BRICS together, approximately 42% of the world population resides in these countries. In the next sections the acronym BRICS will be discussed for each country; due to the fact that the core matter of this study is centered on Brazil, specifically in the state of Goiás, the option has been made to reverse the BRICS order, starting by the "S" of South Africa.

### **2.2.1 South Africa**

Located in the south of the African continent, The Republic of South Africa is bordered by Namibia, Botswana, Zimbabwe, Mozambique, Swaziland, Lesotho and the Atlantic Ocean. South Africa has coastline on the Atlantic and Indian Oceans. Its climate is tropical (mostly), extreme south Mediterranean, arid tropical and of mountains. It has an area of 85,000 km<sup>2</sup> of forest, and about 2798 km of coastline (VISENTINI et al., 2010).

Natural resources include coal, gold, iron ore, phosphates, diamonds and copper. The discovery of diamonds in 1867 and gold in 1886 stimulated economic growth. The city of Johannesburg is the economic hub of the country and Cape Town is a regional economic hub key in the Western Cape (VISENTINI et al., 2010).

Its population in 2008 was ranked 25th in the world, with approximately 47.9 million inhabitants, and it is composed of many ethnic groups, such as Zulus, Europeans, Euro Africans, Indians, and others. The country has a life expectancy range between 44 and 48 years. Apart from this, the African continent is home to countries with low socioeconomic status; of the 42 nations with very low IDH, 35 are in Africa. The South Africa IDH was 0.683 in 2008 (CHADDHA et al., 2009).

Looking at the African continent as a whole, a great diversity of languages can be seen. In addition, the living conditions of the population are poor. The African continent is economically underdeveloped. Some growth poles are due to mining, such as in South Africa, Libya, Nigeria and Algeria, and to a lesser extent, industrialization, as in the case of South Africa, one of the few nations that achieved relative political stability and which itself holds one-fifth of GDP across Africa (CHADDHA et al., 2009).

The African continent is primarily agricultural. The monoculture export crops (coffee, cocoa, cotton, peanuts, etc.) alternate with subsistence crops - which are rudimentary and extensive — planted on large tracts of land and in successive years, until the soil is exhausted; another area is then sought where the same process is repeated. Produce includes: millet, sorghum, cassava, banana, beans, pepper, potatoes and yams.

Africa has one of the richest subsoil in the world, with 30% of world reserves of mineral resources. Among the minerals are included: gold (South Africa, Zimbabwe and Ghana), diamonds (Democratic Republic of Congo, Botswana and South Africa), copper (Zambia and the Democratic Republic of Congo), manganese (Gabon and South Africa), uranium (produces 35% of world total), platinum (90% of world reserves are in

Africa), titanium (75% of world reserves), oil (Libya, Algeria, Nigeria, Angola and Gabon), natural gas (Nigeria, Gabon, Libya, Algeria and Egypt), antimony (South Africa), phosphate (Morocco) and coal (South Africa) (CHADDHA et al., 2009).

All African countries except South Africa are part of the Third World, exhibiting the same problems that characterize the members of this bloc, compounded by the fact that in much of Africa, decolonization occurred only recently. African industry is one of the world's poorest; its participation in the economy of the continent is limited to approximately 26% of GDP.

The textile and food industries, focused on the domestic market, are found in all countries of the continent, while in South Africa, Egypt and the Democratic Republic of Congo the main industries installed are the base industries — steel, metallurgical, power plants, and others. This circumstance underlines the fact that South Africa and Egypt are the continent's most industrialized countries (VISENTINI et al., 2010).

South Africa is a member of the *Southern African Development Community* (SADC) and the *Southern African Customs Union* (SACU). With the latter, South Africa was negotiating a free trade agreement with the United States. With the European Union, the country already has a free trade agreement (IMF, 2009).

In terms of logistics, infrastructure and business environment, South Africa has shown some good results; the Logistics Performance Index (ranging from 1 to 5) was 3.5 in 2008, traceability of shipments highlighted as positive and cost of domestic transportation as negative. In 2008, the cost per container to export and import was U.S. \$ 1,445 and U.S. \$ 1,721 respectively. And whilst on one hand, the use of mobile phones has increased rapidly, Internet use is still very low.

South African foreign trade has increased substantially in recent years. Exports grew, on average, 13.4% per year between 2000 and 2008. Imports in the same period increased on average by 16.3% per year.

Another factor to be considered is that the labor market is characterized by a low level of flexibility. According to the World Bank assessment, the score of South Africa on the labor inflexibility index (42/100) was significantly higher than the average of

OECD countries (31.4). There are restrictions to be considered in the hiring and firing of employees and rigidities in wage determination. Moreover, Trades Unions have a strong presence in South Africa.

### **2.2.2 China**

The People's Republic of China was founded in 1949. The country is divided into 22 provinces, 5 autonomous regions and 4 municipalities, and has an area of 9,561,000 km<sup>2</sup> and a population of 1.35 billion according to the official estimate of 2011 (ECONOMIC INTELLIGENCE UNIT, 2012).

China is a country with one party, the Chinese Communist Party (CCP), formed in 1949, which has remained in power until the present (ECONOMIC INTELLIGENCE UNIT, 2012). With the death of Mao, Deng Xiaoping became general secretary of the PCC, becoming thus the ultimate leader of China, and ruling the country from 1976 to 1997.

When Deng Xiaoping came to power the country was in chaos, no money, no food and the institutions did not work. To change this, various measures were adopted: Decentralization of power, changing from a planned economy to a market economy, conversion of state enterprises into mixed organizations, seeking foreign investment, and other elements. Deng Xiaoping implemented economic reforms that would make China the country with the highest economic growth in the world.

Through economic changes and modernization in the sectors of agriculture, industry and trade, military, science and technology, China has been striving for the development of clusters and political collaboration. The largest clusters observed in that country, include the following areas: i) Information Technology (IT), ii) communications equipment, iii) Mining and iv) Clothing. Of the 43 groups identified, 42 present a positive Compound Annual Growth Rate (Compound Annual Growth Rate - CAGR) in terms of participation in national exports from 1997 to 2007, which showed Chinese industries' great ability to compete globally.

The most critical factors involving the business environment of the Clusters in China are: difficult access to financing, political instability and government bureaucracy. On the other hand, China has sought for productivity and innovation. In

addition to technical training programs, the state council of China has created a plan for the medium and long term for the development of science and technology in the period from 2006 to 2020. 52 scientific zones have been developed to help in promoting entrepreneurship and technology. About 800 companies have established R & D operations in China, in increasing numbers.

A favorable factor in the clusters formation is that foreign companies that are established in the country can take advantage of low tax levels (corporation tax rate for foreign companies is substantially lower than for domestic companies), and also low wages. However, many companies may fail in selling products and services to local markets due to lack of local knowledge and connections with the government; this can be critical to business success.

Another relevant factor that deserves mention is that China also has a large number of local suppliers and manufacturers, but the cost advantage of these suppliers is decreasing due to rising wages and currency appreciation. The efficiency and product quality are inferior when compared to equivalent products produced in Japan. These qualitative weaknesses may impair product quality in the evolution of the value chain, since the availability of new production technologies is relatively low.

### **2.2.3 India**

A country with over five thousand years of existence, India today is the world's largest democracy with a population of 1.2 billion people. India covers 3,287,263 km<sup>2</sup> of land area, extends from the Himalayas Range in the north to tropical forests in the south, and is located entirely in the northern hemisphere.

Today India is a parliamentary democratic republic containing 28 states and 7 union territories, with the union territories being administered by the President through an administrator appointed by the President of India. The Indian constitution, which is the most extensive in the world, and which came into force on January 26th, 1950, defines the republic as sovereign, secular and democratic. The parliamentary structure is composed of two legislative chambers; the model for Indian parliamentary system is based on the British system, whose seat is at Westminster.

The reforms implemented in the early 1990s, led to a breakthrough for the Indian economy after its insertion in the global market. Active in the global economy and accumulating exports of \$ 5 billions in foreign exchange, the country has, after just over a decade, accumulated 300 billions of foreign exchange earnings through its greater participation in world trade; this has included investing in industrialized countries. From 2005, even with the financial crisis, the country has maintained a growth of over 7% per year (pa), a Growth-rate achieved by the country's greater participation in world trade and its stunning population growth rate of around 1.5% pa.

Viewed from the perspective of purchasing power parity (PPP), India in 30 years has increased its participation in world GDP from 2,5% in the 80's to 5,5% in the year 2010, a performance second only to China, while developed economies declined, some dramatically, such as the U.S and the EU economies.

Compared with the major economies of the industrial sector, India's performance has been excellent; in the last decade, Indian industrial production was higher than the major economies of the world, being second only to China, with the U.S. and EU clothing sector retractions significant in the last few years. The year of 2011, however, ended with growth on a lower level compared with the year 2008.

The Indian population is known as the world's largest democracy, with a population of over 1.2 billion people. In absolute numbers in the last decade from 2001 to 2011, there was an increase of 181 million people. Despite an average growth rate of 1.5% pa, in recent decades there has been a net decline in the rate of growth, causing the population to stabilize. Average growth for the decades from 1971 changed from declining growth of 24.80% between 1961 and 1971 to 17.64% between 2001-2011.

The IDH is lower than in other emerging countries; India currently ranks 134th place in a ranking of 169 countries, with a level of 0.547 in 2011. But the performance of the Indian IDH has shown constant improvement, if performance in the index is analyzed in a historic context, since the country has maintained an average growth of 1.38% p.a. in the period from 1990 to 2011, which is one of the best performances for developed and developing countries, and well above the world average.

According to *Economist Intelligence* (2011) 55% of the wealth generated by the country comes from the service sector, but 52% of the Indian workforce is concentrated in agriculture. Many Indians are clearly producing little, but 34% of the workforce is responsible for more than half of GDP.

To stay competitive there is an immense need for more investment in infrastructure. The World Bank (2011) estimates that by 2030, around 40% of the population will be living in urban areas, leading to twice of the total population currently living in urban centers. And the actions taken by the government regarding infrastructure investment will determine the level of sustainability and quality of life of Indians in the future.

The Indian government in recent years has been seeking investment in infrastructure through public private partnerships (PPP); the government estimates that the need for investment is about \$ 1 trillion and that 50% of this capital must come from private investment..

#### **2.2.4 Russia**

With approximately 17,075,400 km<sup>2</sup>, Russia is the largest country in the world, covering more than a ninth of the total land area. Russia is also the ninth most populous nation with about 142 million people.

The country's history is rich in detail and began with the Eastern Slavs, who gained recognition and power in Europe between the 3rd and 8th centuries. This period, which was dominated by the Kiev Principality, which adopted Orthodox Christianity from the Byzantine Empire and began the synthesis of Byzantine and Slavic cultures that defined Russian culture, ended with the break-up of this principality and its lands were divided into many small feudal states. The successor state of the Kiev Principality was the Muscovy state which reunified the Russian principalities.

By the eighteenth century, the nation had greatly expanded to become the Russian Empire, which was the third largest empire in history. From the beginnings of the Empire (1721-1917), Russia established power and influence around the world, becoming the largest and leading constituent state of the Soviet Union, which lasted

from 1922 to 1991, and was the first and largest socialist constitutional state recognized as a superpower, which along with western countries played a key role in II World War.

With the end of the Soviet Union in 1991, the Russian Federation, a Federal Democracy with a bicameral legislative body, was created consisting of the Federal Council and the State Duma, which is the Russian parliament with 450 deputies.

Nowadays the office of President is held by Vladimir Putin, with Dmitry Medvedev as Prime Minister. Despite the success of Putin in elections and the weakening of opposition protests, this successful period which he enjoyed has ended in discontent of the middle classes in Moscow, the capital, and this may spread to the rest of society. Vladimir Putin in power may lead to weakening of the efforts to improve the investment and privatization climate, compounded by tense Russian-Western relations, mainly USA-Russia.

With a GDP of U.S. \$ 1,858 trillion and GDP per capita of U.S. \$ 10,400 in 2011 there was an increase of 4.3%, and 4% is being projected for the period 2012-16. With regard to inflation, an increase in the period of 2010, which registered 6.9 (annual %), to 8.4% in 2011 (EIU, 2012, WORLD BANK, 2012) was recorded. Concerning Russia's external debt, according to the World Bank (2012) in 2010, which is the last record, the value corresponded to 9.3% GDP; according to the EIU (2012), this is stable and it predicts that in the period 2012 -13 there will be a limited need for external financing due to small forecasted budget deficits.

Russia's energy capacity has been highlighted on the world stage. At the beginning of the XXI century Russia already had three fifths of energy produced from a coal base in the world. Currently the country is among the major producers of oil, about a fifth of the world total, and is also responsible for over a quarter of natural gas extraction. There are about six hundred thermal plants (mainly generated by oil and gas), a hundred stations and several hydro power plants. The Russian Federation is also responsible for the extraction of large quantities of iron ore (an average of one-sixth of iron ore extracted in the world) and between one-tenth and one-fifth of all non-ferrous, rare and precious metals (ENCYCLOPEDIA BRITANNICA, 2012).



Regarding human development, Russia occupies the 66th position in the ranking of the United Nations (2011), the highest position of all the BRICS countries.

Despite a good overall picture, the Russian Federation needs to be preoccupied with certain factors and to foresee some possible risks. In the banking sector, the situation is stable, but deterioration of the global environment poses a risk to the sector. The economy continues to be highly dependent on export of energy and this may pose a risk if Putin continues for a third mandate, because this may complicate the situation for the investments and privatization.

The business environment will improve in the period 2012 to 2016 compared with the previous five years; however, the improvement is on a reduced scale (from 5.48 to 5.86 on a scale of 10) and this modest score should be due largely to recuperation from the negative impact of the economic crisis of 2009. It is expected that the investment environment will continue weak; however it is probable that some steps will be taken to attract foreign investment, such as energy projects which require special technologies and are high cost.

### **2.2.5 Brazil**

Brazil is located in the east of South America, and was discovered in 1500 by the Portuguese. The country occupies approximately 47% in land area of this portion of the Americas, and is the fifth largest in the world. The Brazilian territory is one of the most extensive in the world, with an area of 8,514,876 km<sup>2</sup>.

Bathed by the Atlantic Ocean, the only South American countries which do not border it are Ecuador and Chile, as shown in Figure 2. The country is formed by the union of the Federal District and 26 states. There is great climate diversity, due to the size of the country, with six major subtypes of climate: equatorial, tropical, semi-arid, highland tropical, temperate and subtropical (IBGE, 2012). The country is also responsible for more than 14% of global biodiversity, including the Amazon forest and the Amazon River (considered the longest river in the world); it is the only country in the Americas to have Portuguese as its official language, and as the result of intense immigration, has significant cultural and ethnic diversity (IBGE, 2006).

According to the IBGE (Geostatistics Institute), in 2012 Brazil had 196,655,014 inhabitants. And its population is made up racially of whites, blacks and crossbred whites, blacks and Amerindians. The predominant religion is Catholicism with approximately 65% of the population; approximately 22% are Protestant, 3.2% other religions, spiritualism accounts for 2% and 8%, no religion (IBGE, 2010).

Figure 2: Politic Map of South America with focus on Brazil



Source: **Brazilian Institute of Geography and Statistics. (IBGE, 2012)**

Brazil's current legal currency is the Real (R\$) and in the 21st century, after years of social and economic problems, Brazil has established itself as one of the largest economies in Latin America. Today it has hundreds of trading partners and around 60% of exports are of manufactured and semi-manufactured products (FREITAS, 2012).

The *United Nations Educational, Scientific and Cultural Organization* (UNESCO) lists important World Heritages in Brazil; for example, the historic cities of Ouro Preto (Minas Gerais), Olinda (Pernambuco), Jesuit/Guarani Missions (Rio Grande

do Sul), the Pilot Plan in Brasilia (Federal District); Iguaçú National Park (Iguassu Falls on the border with Argentina), Pantanal Mato-Grossense (Flood Plain), among several others.

#### **2.2.5.1 The performance of Brazilian Economy**

Brazil has a free market economy which follows free competitive concepts, and was ranked sixth biggest economy in the world in 2011, seventh biggest economy according to the World Bank and the CIA *World Fact book* and the second biggest economy in America, with the U.S in first place, according to the *World Economic Forum*, published in 2011 (FMI, 2011).

Agriculture and Brazilian agribusiness has significantly improved its commercial balance. The WTO (World Trade Organization) in 2010 showed Brazil as the third largest agricultural exporter in the world, with a growth rate of 9.2% in 2008 and 3.5% of total GDP..

Industry, representing 28,5% of Brazil's GDP operates in various sectors, including the automobile, steel, petrochemical, computer, aircraft, and durable consumer sectors. It has the second largest industrial park in the Americas. The country also has extensive reserves of mineral resources; reserves of iron and manganese are essential for the production of raw materials and generation of export. Nickel, tin, chromite, uranium, bauxite, beryllium, copper, lead, tungsten, zinc, gold, niobium and other minerals are also extracted. According to information published by BNDES(Development Agency) in 2012, Brazil is one of the largest steel producers in the world, and has remained in the top ten in recent years.

#### **2.2.5.2 Assessment of the country's competitiveness**

Brazil today is a country that has received a great deal of attention throughout the world. The ranking of the World Economic Forum's competitiveness index measures each country in a general comparison with other countries. In 2011 there were 142 countries and Brazil was ranked in 53rd position. Brazil thus ranked higher than India which was 56th, but was still behind China in 26th and South Africa in 50th among the BRICS group (FEM, 2012). The country rose five places in the 2012 ranking,

from 53rd to 48th. Among the BRICS countries, Brazil was ahead of South Africa, India and Russia, but still behind China, as shown in Table 1.

Table 1 – BRICS countries position in the global ranking of competitiveness

COUNTRY	POSITION
China	29°
Brazil	48°
South Africa	52°
India	59°
Russia	67°

Source: **FEM (2012)**

The country's strengths which also deserve mentioning are; the size of its consumer market (196,655,014 inhabitants), the diversity of its land which, due to its size, covers three time zones and various types of vegetation, soil and climate, and this does not include the Amazon region, which is the world's largest watershed area, besides being the home of species of flora unique to this region. Brazil is also involved in space research and it is also a pioneer in the development of a biofuel, ethanol.

Agro energy, where Brazil is the world leader, is already responsible for approximately 32% of Brazil's energy. Its competitive advantage lies in the large territory and natural resources that make it possible to expand production. Table 2 lists the top 10 challenges on the issue of competitiveness of Brazil, according to the report of the World Economic Forum (WEF) published in 2012.

Table 2 – The 10 challenges in the issue of competitiveness of Brazil

CRITERION	PERCENTAGE OF THE ANSWERS
Tax Rules	18,70%
Inadequate Infrastructure	17,50%
Number of Taxes	17,20%

Bureaucracy	11,10%
Restrictive Labor Laws	10,10%
Lack of Skilled Labor	7,40%
Corruption	6%
Access to finance	3,90%
Exchange Rules	2,10%
Insufficient Capacity for Innovation	1,80%

Source: FEM (2012)

Besides the above challenges, the Report of the United Nations Organization (ONU, 2010), points to Brazil as having the third worst rate of inequality in the world. In terms of the distance between rich and poor people, this country ties with Ecuador and is second only to Bolivia, Haiti, Madagascar, Cameroon, Thailand and South Africa. It has one of the worst income distribution levels in the world. Women (who receive lower wages than men), blacks and Indians are the most affected by social inequality. In Brazil, 5.1% only of whites live on the equivalent of \$ 30 per month (approximately R\$ 54.00). The percentage rises to 10.6% for Indians and blacks.

The United Nations Organization points to the main causes of social inequality as being lack of access to education, unfair taxation policies, low wages and the difficulty of accessing basic services such as health, sanitation and transportation. According to the UN, 58% of the population maintains the same social profile of poverty from one generation to another. In Canada and the Scandinavian countries this ratio is 19%. This potentializes a reduction of inequality and in particular, access to quality of education.

In Brazil, for every 100 inhabitants, only 9 have a university degree (in 2010). The IDH, when adjusted for Brazilian social inequality, falls from 0.718 (a level that would put the country in the group of countries with high human development) to 0.519 (index of countries with lower human development), that is, it has an impact of 30%. In 2011, Brazil ranked in the 84th place in the IDH ranking, a very disappointing position for a country with many opportunities to rise in world importance.

The IBOPE survey (2012) found that 40% of 5th grade students are functionally illiterate. Inequality in the country is huge. The Secretariat of Strategic Affairs of the Presidency of the Republic (SAE), believes that people with a per capita family income of about R\$ 291 and R\$ 1,019 - the Brazilian middle class - represent 54% of the country. The extremely poor have a per capita income of R\$ 81 and the poor, from R\$81 to R\$162.

### **2.2.5.3 Textile Sector in the country**

According to the Brazilian Textile and Clothing Association (ABIT, 2008), the Brazilian textile sector finished the year 2008 with a turnover of \$ 43 billion, an increase of 4% over 2007 and with US\$ 41.3 billion invested . The increase was attributed to the boom in the domestic market, which accounted for 92% of consumption. Also in 2007, the sector invested US\$ 500 million, making the textile industry responsible for 17.5% of the GDP of the entire manufacturing sector and about 3.5% of total Brazil's GDP.

From January to May 2008, exports were US\$ 929.7 million, an increase of 8.8% in relation to the same period of 2007, and from January to November, the clothing segment grew 4.07%. A few years ago, Brazil invested in renovation of its manufacturing park, increasing its competitive capacity in relation to other countries. Currently, the country's exports account for 1% of world exports, with a total of about US\$ 1.3 billion (ABIT, 2012).

According to the IBGE (2012), the physical production of the national textile and clothing industry suffered a slight drop in the first quarter of 2012 compared to the same period in 2011 - 7.5% and -14.08 %, respectively. The main exported products are made from natural fibers (apart from cotton) such as woven fabrics and Home Line, while the main imported products are filaments of polyester and the plan-synthetic-tissues. The main destination of Brazilian exports is Argentina, with 27.5% of total exports in 2007, followed by the United States, with 26.2%. The Textile and Clothing Industry is the 2nd largest generator of first jobs and the 2nd largest employer in the manufacturing industry - in 2010 1.7 million employees were recorded, of which 75% consisted of female labor. This represented about 3.5% of total Brazilian GDP and a large production volume of around 9.8 billion pieces (BNDES, 2009).

The textile and the clothing industry in Brazil faced many economic difficulties in the 1980s, due to a cotton-pest outbreak in the North East that made the country a net importer rather than exporter of cotton. These difficulties were worse in the 1990s with the opening of the market as the entry of imported products competed directly with the national product, which was being produced with stagnant technology and low quality professionals.

However, in 2005 Brazil gained prominence as the fifth largest textile producer in the world. In the clothing sector, it was producing approximately 7.2 billion garments a year; it was the 3rd largest producer of mesh/net; the 5th largest producer of cloth; the 7th largest producer of wire and filaments and the 8th largest producer of cloth. In 2004, it was in 8th position among the largest producers of manufactured textiles, but in 2007 Brazil had already jumped to 7th place and 6th place as a producer of clothing, while in 2004 it occupied the 7th position. In this segment, Brazil's market is dominated by the C and D classes (68% of the population). The largest slice of the consumer market for garments and Home Line is in B and C classes (70% of national consumption). The A class, which represents 6% of the population, is the third largest market slice, with 18% of national consumption.

The adult female market represents 41% and children, 32%. This increased consumption is due to the variety of products with short lifespan such as panties and stockings, for example. The factors that most influence the production process and demand are the seasonality of the production and fluctuations of fashion. These factors contribute to the competitiveness of the sector and the existence of outsourcing relationships (VIANA, ROCK, NUNES, 2008). Figure 3 presents the Clothing Manufacturing Clusters in Brazil, identified by regions, states and cities. According to Souza (2007) the main ones are:

- **São Paulo:** the city is the intellectual and financial center of the industry, concentrating the main bases of fashion and marketing and the control of national productive activities. Here are the headquarters of retail stores Zoomp, Forum, Rosa Chá and even international names like Louis Vuitton, Giorgio Armani, Hugo Boss, as well as the two clothing centers, the districts of Brás and Bom Retiro, and the city of

Americana, which has developed technology specializing in artificial and synthetic fabrics production.

- **Rio de Janeiro:** the main center is in Nova Friburgo which produces mainly lingerie and is headquarters of the German company *Triumph*, and Petropolis, specializing in knitwear and winter clothing.

- **Santa Catarina:** Vale do Itajai, the main town of which is Blumenau, is one of the most advanced textile hubs in Latin America and the Brazilian center with greatest integration into the international market, being the main national exporter of knitwear and home line.

- **Ceará:** with the trend towards regional displacement of large companies, it has the stimulus of tax incentives and infrastructure provided by the state government, and is becoming increasingly relevant on the national stage. The strong presence of companies specializing in the denim fabrics branch (jeans fabric) and cotton yarn should be highlighted. In addition to these clusters, there has also been growth towards the Midwest, where the state of Goiás and its capital Goiânia are located, focusing on research; however, its share is still very small (increased from 1.4% in 2003 to 1.9% in 2007).

According to BNDES (2009) the main characteristics of the clothes manufacturing segment are:

- a) Entry of mass imports of cheaper products into the domestic market;
- b) Insignificant participation in world exports and also concentration on cotton;
- c) Specialization in products made from natural fibers, despite the quick increase in world's consumption of chemical fibers and blended fabrics;
- d) Factory machines with a high average age, unsuited to global competitiveness; a situation where many companies are just aim for the domestic market;
- e) Lack of coordination of the production chain; lacking management;
- f) Wide dispersion;
- g) Low personal capacity of technical and managerial staff;



- h) Widespread informality, mainly in the clothing industry workforce;
- i) Difficult access to credit, especially for micro, small and medium companies, which become dependent on suppliers and,
- j) Existence of regional clusters of production.

It is also necessary look at some intrinsic questions. Analyzing the environmental variables, according to ABIT (2012) the main strong points of the segment are:

- Brazil has a complete productivity chain, consisting of fiber production such as cotton planting right through to fashion shows, via spinning, weaving, dressmaking;
- Investment in the sector: \$ 2.5 billion (estimative), compared with \$ 2 billion in 2010;
- Average clothing production figures: 9.8 billion pieces; (clothing, bedroom items, table and bath items);
- Workers: 1.7 million direct employees; add to this 8 million(of whom 75% are female labor) whose income is indirectly dependent on the industry;
- The second largest employer in the transformation industry, losing out only to food and drink (together);
- The second largest generator of the first job;
- The fourth biggest clothing production sector in the world;
- Fifth biggest textile producer in the world;
- Second biggest producer and third biggest consumer of denim in the world;
- Represents 16,4% of all employment and 5,5% of the Transformation Industry billing;
- Brazilian fashion provides one of the five major Fashion Weeks in the world;
- We have more than 100 schools and colleges of fashion;
- The second largest producer of denim (indigo serves as raw material for jeans). Today, the textile sector in Brazil makes about a 500 million of meters of denim, but exports less than 10%.

According to BNDES (2009) the main challenges of the segment are:

- a) Entry of mass imports of cheaper products and cheaper clothing into the domestic market; frequently these products are of dubious origin.
- b) Low participation in world exports, with focus mainly on the cotton chain; and based on textile link products, a less dynamic area with lower added value.
- c) Specialization in products made from natural fibers, despite the rapid increase in world consumption of chemical fibers and blended fabrics;
- d) Industry machinery in general old/outdated, with low global competitive capability;
- e) Lack of coordination of the production chain, not offering an effective supply chain to business leaders and / or large retailers;
  - f) Low personal technical and managerial capacity and high level of informality, mainly in the clothing manufacture link;
  - g) Difficult access to credit that is affected by the low interest rate;
  - h) Drop in Brazilian exports.

### **3 The Diamond Model**

The Diamond Model was created by Michael Porter and presented in 1989 in his book 'The Competitive Advantage of Nations'. The purpose of the model is to increase the analysis and understanding of the competitiveness of companies and what justifies the success of some in relation to others. The Diamond model emphasizes the determining principles of national competitive advantage. According to Porter (1989) these principles are listed in four categories:

- 1) Factor conditions: positioning the country or region in terms of resources such as skilled labor and services with expertise, energy infrastructure and logistics, among other aspects.

2) Demand Conditions: according to the nature of the demand for the products or services offered by the companies.

3) Related Industries: related to the existence of industries which are connected and are in activities that contribute directly or indirectly the activities of the company in analysis.

4) Strategy, Structure and Rival Companies: represented by factors which are structured in the creation, organization and management of organizations in the country in analysis, combined with factors influencing internal rivalry.

### 3.1 The BRICS Diamond Model in the Clothing Manufacturing Sector

To show the extent of the evolution of the Clothing Manufacturing sector in the BRICS countries, each Porter Diamond Model variable (1989) is shown in Table 3, which compares countries.

In this analysis it is important to assess how far countries have similar characteristics which go beyond economic issues. The political questions, social as well as those of economic growth, reveal serious problems of corruption, bureaucracy and informality.

Another aspect that merits attention is the low qualification level of the agents in the process, which in turn leads to lower possibilities of innovation and technology.

Table 3: The BRICS Diamond Model consolidation in the Clothing Manufacture Sector

	Brazil	Russia	India	China	South Africa
Context of strategy and rivalry	<p>Massive influx of imports of cheaper products onto the domestic market;</p> <p>Insignificant participation in world exports and also concentrated in cotton;</p> <p>Difficult access to credit, especially for micro, small</p>	<p>In banking sector, the situation is stable, but the instability of the global environment poses a risk to the sector;</p> <p>Corruption.</p>	<p>Are weakened by the complex regulatory regime and its poor implementation, corruption, and protectionist policies.</p>	<p>Companies Restructure;</p> <p>raising Foreign investment;</p> <p>Bureaucracy;</p> <p>Governmental and political instability.</p>	<p>Problem in dealing with imported products;</p> <p>Illegal dumping of foreign products is also a threat to local producers.</p>

	and medium enterprises, which become dependent on suppliers.				
Demand Conditions	<p>Large spraying consumption;</p> <p>High informality, mainly in the manufacturing link.</p>	<p>Large domestic market;</p> <p>An increase of 4,3% and projections of 4% for the period of 2012-16.</p>	<p>Large and sophisticated consumer population, and the success of the government in promoting key industries. But the local demand is limited by the poor implementation of quality, safety and environmental standards and consumer protection laws are too weak.</p>	<p>Populacional size;</p> <p>Demographic and Psychographic Profile;</p> <p>Presence of sophisticated consumers;</p> <p>Low level of private consumption.</p>	<p>The domestic market has a growing population of black middle class that is increasingly sophisticated in their consumption decisions;</p> <p>The cluster companies increasingly develop unique products that can improve their capacity to penetrate these markets.</p>
Related and Support Industries	<p>Specialization in products made from natural fibers, despite the rapid increase in world consumption of chemical fibers and blended fabrics;</p> <p>Machinery old/outdated, without global competitiveness, where many companies just produce for the domestic market.</p>	<p>Large number of local suppliers;</p> <p>Lack of specialists in Research and Development.</p>	<p>They are also advantages to India with many local suppliers, and consistent availability both agricultural products, as industrialized regions with good machineries. However, the ICAs are weakened by the lack of specialists in research and development.</p>	<p>Sector in development;</p> <p>Large number of suppliers and of poor quality; availability of new production technologies.</p>	<p>The lack of trust and cooperation among clothing producers and textile producers hinders the ability of companies to compete effectively.</p>
Factors Conditions	<p>Low technical and managerial active capacity;</p> <p>Lack of coordination of actions of the production chain, lacking management.</p>	<p>Large energy capacity;</p> <p>The economy continues highly dependent on energy exportation and this can represent a risk;</p> <p>Tense Russian-Western relations;</p> <p>The Investment environment continues weak, however it is probable that some steps to attract foreign investment, such as stamp energy projects that require special</p>	<p>Are helped by capital markets growth, financial services, education and administrative installations (colonial heritage), but has been severely undermined by the exaggerated public infrastructure (energy, roads, ports) and low Internet penetration (3% of the total population). While India provides strong investor protection and effective anti-trust policies.</p>	<p>The biggest population and consequently large number of workers;</p> <p>Low labor cost;</p> <p>High investments in physical infrastructure;</p> <p>Increased investments in patents;</p> <p>Heavy investment in education.</p>	<p>High cost factor (specially in labor costs);</p> <p>Limited access to raw materials is another major challenge for access to <i>high-end</i> market;</p> <p>Long lead times for delivery, reliability and poor performance, quality deterioration;</p> <p>Low quality of infrastructure and logistics is an additional</p>

		technologies besides having a high cost.			challenge.
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Source: Elaborated by research (2012)

Regarding the internal market, these countries are going through a consumption explosion with the expansion in the lower classes and as these nations are highly populated, this impacts positively for high production today: there are people to produce and people to buy in the same country.

## 4 The State of Goiás

The State of Goiás has a population of 6,003,788 inhabitants, with 246 cities, and is located in the Midwest region of the country. The state capital is the city of Goiânia, whose foundation stone was laid on October 24, 1933 by Pedro Ludovico Teixeira, but the actual transfer of the state capital to Goiânia, came in 1937 and its official opening took place only on July 5th, 1942 (IBGE, 2010).

Until the end of the 1950s, industry in Goiás was extractive. Diamond mining emerged in the Southwest. To the north, in the Araguaia region, the rock crystal extraction reached its high-point during the 2nd World War, due to export. In recent years, as a reflection of its growth and visibility in the global market, the State of Goiás has attracted several other industry models (IBGE, 2010).

### 4.1 The history of Clothing Manufacture in Goiás

Goiania's first clothing manufacturers started up at the end of the 1960s; the first reported was 'Planalto Confecção', founded in 1967, which produced synthetic fabric pants, imported from Asia and produced shirts from Brazilian cotton mills. Shortly after

came the 'Bulck' mfg. company; its main proposition was the manufacture of products which were different from the traditional ones, with a feminine blouses, dresses and pants mix made from knitted cotton, viscose and linen. The pieces were well prepared with cutouts and embroidery, and the small factory gained market with products called 'fad' (SOUZA, 2007).

In the 1970s the Hippie Fair appeared in Goiania state capital. It was considered the largest street fair for clothing in Latin America. It originated with local home-based producers who made their pieces at home and resold them on Sunday. Today, according to Goiânia City Hall, there are more than 5000 registered stalls selling clothes of all styles, and they receive a crowd of people coming on tours from various regions of Brazil. Apart from the fair, there was also the successful case called 'Goiania Station' which concentrated 655 stores (see figure 4) (SOUZA, 2007).

Figure 4 – Satellite photo of the Hippie Fair and Goiânia Station



Source: Google Maps (2012)

This concern started with small family businesses and began to grow due to its strategic position, since the state is located in the center of Brazil with roads linking the North and Northeast to the Southeast.

At the beginning of the 1980s there was an explosion of jeans-style clothes. The state of Goiás was booming in cotton production, Goiás' clothing manufacture and took advantage of its facility for training manpower for this segment. It invested in laundries and production machinery and conquered other states by selling products different from those produced in São Paulo. One of the first companies to conquer the national jeans market was Mister Seven Jeans. This industry has achieved a good level of production with its own laundry and the products, 100% developed by Goiás designers, made the company grow.

With the crisis in the Brazilian economy, which led to hyperinflation and rising costs of production in 1997, there was a downturn in the economy and various industries which invested in machinery and domestic production had financial difficulties. Outsourcing production began in this period, because with the overvalued Brazilian currency, the cost of production almost doubled. Then came the 'factions' (make-up workshops) market, which are small sewing shops that receive cut cloth and then make up the final pieces, which are then taken to an outsourced laundry and finally return to the manufacturing unit just for finishing; by working with this system, industries which had 500 employees, reduced the number to less than 50 people (SOUZA, 2007).

Goiania's jeans products manufactured that way fueled the markets for two decades in the center west, north and northeastern regions - this fact was only possible due to the privileged logistics situation of the state of Goiás (see Figure 5). These markets, before served only by São Paulo and Paraná, now started to arouse interest, due to the stability of the economy (SOUZA, 2007).

Figure 5 – Privileged Logistics and the Cluster in Goiás



Source: Produced by the research based on data from SEGPLAN-GO (2012)

The Goiás Clothing Clusters progressed into several cities in the state, and the city of Jaraguá was key to strengthening this sector and creating jobs. Initially known for making copies of models of major brands of Jeanswear, today it is dedicated to brands. The Jaraguá Cluster involves companies in the sectors of manufacture, make-up workshops, laundries, finishing and post-washing, embroidery, stamping, as well as distributors of fabrics, trim providers, carriers, and sector cutting, styling and modeling (SOUZA, 2007). The distribution of cities where Clothing clusters in Goiás occur can be seen with the cities in Table 4:

Table 4 – Distribution of cities with clothing clusters in Goiás

CITY'S NAME	INHABITANTS	DISTANCE FROM THE CAPIAL
Goiânia	1.256.514	0
Anápolis	324.303	56 km



Aparecida de Goiânia	442.978	15 km
Jaraguá	41.314	120 km
Trindade	98.159	26 km
Taquaral de Goiás	3.514	78 km
Pontalina	16.846	120 km
Catalão	84.964	230 km
São Francisco de Goiás	6.109	96 km
Petrolina de Goiás	10.237	70 km
Inhumas	47.572	28 km
Jataí	86.926	330 km
Rio Verde	169.611	230 km
Palmeiras de Goiás	23.245	80 km
Mineiros	51.077	430 km
Itapuranga	25.278	130 km
Hidrolina	4.029	200 km
Goianópolis	10.562	25 km
Uruana	13.816	140 km
Senador Canedo	82.712	15 km
Sanclerlândia	7.500	70 km

Source: IBGE (2010)

The clothing manufacture sector in Goiás is the 2nd largest employer in the state, and with the highest rate of job informality (SEGPLAN-GO). Its participation in creating jobs in Brazil in the segment has been 4.3%. According to the Goiânia Sedem register, there are 6875 of informal clothing vendors. Considering that the other rural towns do not have any data on informality, the estimate is that for every 1,1 formal business in the state of Goiás, there are 11 informal businesses . It is thus estimated that

informality generates 85 000 jobs created in the clothing sector, making up 8% of the entire workforce of Goiás (RAIS 2008).

The monthly production according to Sinvest is 26 million pieces per month, accounting for a third of GDP. The average selling price of pieces is R\$ 15.00, giving a total monthly revenue of R\$ 90.000.000, which represents 8.6% of the state GDP.

Goiás has experienced high economic growth over the years. The economy's performance in Goiás in the second quarter of 2012 can be confirmed by the results in farming, with higher production and productivity in the major cultures. Industry also expanded due to the transformation industry; moreover, Goiás led industrial growth throughout the country (IBGE, 2010). The state also ranked fifth among the federal units that generated more jobs and trade balance, with a surplus balance of US\$ 778.3 million, which explained Goiania's good economic phase for all segments and especially clothes manufacture. The clothing segment, with its related industries, is present in most municipalities in the State of Goiás; however the main agglomerations are Goiânia, along with Trinity, Trindade, Jaraguá, Pontalina, Aparecida de Goiânia and Taquaral.

To understand better the Clothing Industry in Goiás State, a quantitative exploratory survey with 587 manufacturers was carried out, in the cities of Goiânia, Jaragua, Pontalina and Taquaral. Considering the number of inhabitants of the cities, the four chosen corresponded to 46.95% of the inhabitants of all the cities participating in the cluster. Considering the amount of business investigated, they corresponded to 4.33% of the number of state clothing manufacturers. The object of the research was to outline the most relevant points for each competitor. The interviews were conducted in August 2012, in person, through a structured questionnaire with closed questions.

Of the companies surveyed, all of them are formalized with all regulatory agencies of the Brazilian economy. 49% of them are configured within the Simplified Tax Contribution System, 25% as Micro-companies, 21% as Individual Micro-enterprises and 5% in other schemes. The lifetime of the companies interviewed was investigated. Most companies surveyed (52%) are more than 5 years old and only 7% have less than 1 year (the others, representing 48% are between 1 and 5 years old).

This data is of great relevance and is encouraging to the sector in showing that most businesses have survived for more than 5 years; according to data from SEBRAE (2007 *apud* ARAUJO 2009) this is the period where the micro companies and small businesses in Goiás show a 21.3% mortality rate. According to the Vox Populi survey (commissioned by SEBRAE, 2007 *apud* ARAUJO, 2009) they go bankrupt within two years of start-up.

Clothing manufacture in Goiás is concentrated in the production of women's clothing; more than 70% of industries have articles in their collection which focus on adult women.

This data is a very rich source of information for Goiânia Station marketing, which is able to direct its activities at the female audience by optimizing resources which are actually insufficient to cover investment in all areas. Feminine products are marketed in 82% of the stores. Most stores will be focusing on women's activities

The question as to how companies advertise their products was also asked, and it is clear that respondents believe that marketing is an essential tool for promoting products; and the tools that Goiás clothing manufacturers are using are the internet and merchandising at point of sale (POS) . There is, therefore, a conflict between the use of a modern tool and a very traditional one (POS).

The Marketing Department of Goiânia Station should stimulate the search for contacts through registration and actions on social and digital media. This is interesting because in addition to being a tool that provides more metrics for identifying return on investment, it is more accessible than media like TV in Brazil.

The most important were: the difficulty in hiring skilled labor (35.48%), the heavy tax burden (27.96%) and, whilst less of a burden but no less important, management (and lack of) of working capital (13.44%) and the need for high investments in marketing (12.37%).

The fact that entrepreneurs consider that management knowledge has low impact on business and, in seeming contradiction, emphasize the difficulties in hiring skilled

labor and lack of working capital, may be a reflection of this lack of management knowledge.

Companies that cater to the international market are still insignificant in number (8%); most of the production serves the domestic market and 22% the city itself, 38%, the state and 57% goes to the national domestic market.

Most of the production is not in the city itself and so it is necessary for the segment to organize itself in the city by sign-posting (because many caravans of products arrive), and maintaining websites with updated information; it may also establish links with commercial representations and strengthen brands, including increasing the *market share* in the rural areas of Goiás state and other Brazilian states.

Parallel to the above surveys, interviews were conducted with leaders of the segment and the considerations of each were analyzed on matters of relevance. Those interviewed were: the State Secretary for Trade and Industry, Mr. Alexander Baldy, the President of the Goiânia Trade Union of Clothing Manufacturers and Clothing Industries in general (SINDROUPAS) and President of the Association of Manufacturing Industries of Goiana and the State of Goiás (AGICON); Mr. Edilson Borges de Souza, Superintendent of Microcompanies of Goiânia, the Secretary of State for Industry and Commerce of the State of Goiás (GO-SIC), Mr. Tiago Peixoto. The leaders above were interviewed at the International Jeans Fair, on August 15th, 2012. Also interviewed was the President of the Union of Industries of the State of Goiás (SINVEST) Mr José Divino Arrudao on July 25th, 2010; this interview took place at the Union's own center (located at Avenida Anhanguera, in the building of the Palace of Trade in downtown Goiânia).

Table 5: Opinions: Consolidation of Clothing Manufacturing Sector Leaders

MANPOWER	
Alexandre Baldy	The leading segment today, clothing manufacture, is a very representative segment for Goiás state and generates many jobs; we have thousands of companies located in various districts of the State; it is one of the economic sectors that is developing in the most diverse regions of our state, and we here in the Secretariat of Industry and Trade see that it is necessary to support and unite the business interests, demands and trade unions in an effort to bring together and attract greater benefits. Benefits in the

	sense of those that lead to higher aggregate knowledge, not only here from our region but from different regions of Brazil. So that we can receive buyers who will drive growth and maintain all the manufacturing sector.
José Divino Arruda	Concerning qualifications, there is the SENAI, the Federal Government program, the FADE. But what is needed is to create a mechanism for obtaining higher qualification, especially during this time of growth across all the sectors. Brazil does not have this and the clothing industry is lacking this manpower capacity. Another issue, I think, is the question of salary; today for example SENAI offers a course for industrial stitchers, the last offer of 80 places had 18 enrolled, because the salary for a seamstress is not attractive. She works in construction, earns R\$ 1,000 Reais.
Edilson Borges de Souza	Today we are at a moment of transition, from the family-based industry to bigger industrial units; today Goiânia is an important center of the clothing industry in Brazil, with most companies, around 96%, micro and small businesses that are backyard enterprises. They are improving their potential through knowledge supplied by SEBRAE (Brazilian Service of Support for Micro and Small Companies) and SENAI (National Support Service for Industry of the National Confederation of Industry - CNI) entities which are giving technological support on how to manage an industry.
Tiago Peixoto	Nowadays a skilled workforce is scarce in all segments of the economy; the Government of Goiás has developed several work qualification processes in partnership with the Secretary of State for Science and Technology which develop job skills, and we know that many companies are qualifying their own employees, creating schools in their own businesses to bring quality to their work and jobs, like the HERING company which has several empowering entrepreneurs who will work with make-up / workshops who work both for the company and for other companies. We have worked hard in this direction and we really believe that qualifying people brings results to the economy. We have been in a partnership with the SEBRAE (Brazilian Service of Support for Micro and Small Companies) and SENAI (National Support Service Industry System of the National Confederation of Industry - CNI) in qualifying many entrepreneurs in many cities of Goiás
<b>INFORMALITY</b>	
Alexandre Baldy	We know it is very challenging to formalize the clothing sector, but we have used a number of tools increase the level of formal employment. The State Government reached the national simple level, sub-level, so we can improve too much in this question. We are working with the Board of Trade in many municipalities so we can have the companies formalized, working with the State Program " <b>Goiás grows and appears</b> " so that we can make it clear to business people that formalization is important and necessary for access the credit. We have the People's Bank, Productive Credit which are credit lines that being offered now to the clothing sector, showing the need to be formal entrepreneurs to gain access to this credit. Informality is very high in this segment in Goiás
José Divino Arruda	<p>We work today with an estimate of 9,500 companies. But officially in the JUCEG (Commercial Association of Goiás) registry we work with the industry average of 4,000 companies in the state and 3,700 in Goiania, forming around just over 8000. We are working with 9,500, though JUCEG does not have an exact measure of how many businesses open and close, and we have no estimate.</p> <p>Also our estimate is that we are talking in terms of an average of 120,000 jobs and 200,000 in informality.</p> <p>These informal companies, we say companies, but if we look at the entire textile chain, the entire production chain including informal production, as I said, maybe is bigger than formal labor. Why is this? Because it is not just one company; when the company is formal it employs 2, it employs 10, it employs 500; most informal units employ fewer, but there are make-up operations, sometimes not existing legally, but employing 20 people, 100 employees. These people are unregistered, working with production, so if you take for example the supply chain of these factions/make-up units being formal or informal they are the force behind the screen printing, for example, which is used in cloth manufacture, textile wholesale, all of this is part of the clothing production chain, and if we consider as well the direct and indirect jobs that the clothing industry supports by the making of jeweled &amp; embroidered pieces, mannequins, we can see further this industry creates so many jobs.</p>

CLUSTER	
Alexandre Baldy	The clusters in the fashion segment as a whole have not worked as they should work; obviously several cities have grown with their the productive sector units, and have invested in accordance with demands from the public sector; here we have good projects of work in the segment, with Senator Lúcia Vânia organizing the construction of 24 (twenty four) industrial warehouses with funds from the Ministry of Development, Industry and Trade of Brazil in 24 (twenty four) different counties which we can benefit those who wants to produce and also those who want to qualify those who want to add value to their products. The Department of Trade and Industry has actively participated in the Clothing industry in several respects, with support for fairs and events, carrying the brand and the consolidation of our products, attracting buyers to take our clothing to events outside the State of Goiás. The unions have also received support, being greatly strengthened by the State Government and are also part of our preoccupation with qualification and improvement of the quality of our products.
Edilson Borges de Souza	Today in Goiás State, 70% of towns are organized as poles of the clothing industry, and each city has its own specific trend; it may be underwear, jeans, fad, swimwear, children's clothes and general. Each city has its style of production.
Tiago Peixoto	Today open fairs, closed fairs are organized in malls, but Goiás is focusing on organizing vocational poles of competitiveness and clusters where the Secretary of State of Trade and Industry is supporting and building sheds so that the entrepreneur can produce his own product within these poles; these poles will be used to operate starting from the receipt of raw materials to the final product. The intention is that the entire production process is handled in these poles. This will modernize and enhance the competitiveness of the sector. We also have industrial buildings being built throughout the state, with an investment of around R\$ 18,000,000.00 (eighteen million reais) obtained by Senator Lúcia Vânia through parliamentary amendment. These sheds aims to attend the large clothing industries which are going to install people who will provide service to large companies such as HERING Brazil and MARISA and others that are coming to Brazil, we believe that the vocational poles will be a great support in this work. We have great faith in the clothing sector and we know that it is of great importance for the state; we also realize that during the year 2011 and 2012 there were gaps(of understanding) between the syndicates, associations and/or federations ;there is no union among representative bodies in Goiás. We believe that with greater union the segment will get stronger; this division of interests makes it very difficult for the Superintendency to deal with the demands, because divergent demands come from all the representative bodies. We seek to meet all demands, but it is difficult and sometimes the demands do not reach us for lack of this union between the entities.
TECNOLOGY	
Alexandre Baldy	The clothing sector is improving and evolving, applying new technologies, but we are far from the ideal; we need much innovation, mainly to add value to our products and be more competitive. Important today is to innovate to compete more with increasingly higher quality products and innovative products are a result of competing with many products; we need to collaborate with innovation, reformulation of incentive laws in Goiás State. We will be defining a percentage to be invested in people skills training which can also lead to technology and innovation in the productive sectors.
Edilson Borges de Souza	With the SENAI, SEBRAE and the Union itself offering training courses for growth of the clothing industry, some industries intend to invest in the domestic and international market; these entities seek to glimpse a new reality and compete in this globalized world, because if you do not have infrastructure and modernization of your industry you're out of the market, and you just work to survive and in fact you work for domestic sales and today you see your company only operating internally; it's not going forward, it is stagnating to the point where in a few years it'll disappear from the market because new companies are emerging and it is becoming apathetic in the market. Today we have to compete worldwide and if the company does not become professional and does not adjust to the new reality with innovation, new technologies of equipment, organizational technology, administrative and production business, the tendency will be to stagnate or disappear from the market. Companies that are making the choice for modernization are able to achieve their goals and may grow

	<p>5% or 6% per year and before long become medium to large companies; the percentage is very small but the number is big because today we have in Goiânia 4070 (Four thousand and seventy) companies registered in Goiânia and we have over 10,000 (Ten thousand) who are in 'hiding' in fairs such as Hippie Fairs, Moon Fair in many points of sale around 44th Street in Goiânia Center. Today the industry employs around 40 thousand registered people and 100 000 unregistered people who are 'Factions' (make-up workshops) that are industrial clothing workshops, specialists that provide service to the clothing industry. These specialized workshops exist around the world and they're only making the cloth and not retailing. In Goiania today we've already evolved to this level, because formerly the all industries throughout the state had internally registered employees and the cost was very high; with the creation of workshops brought the cost of goods down, so the option today of the entire clothing industry is increasing its industry by increasing the workshops. Today we have workshops throughout Goiás State, every city has workshops; the HERING Industry of Brazil moved to Goiás, why did it move from the South? Because labor is easily available, our labor force has a gift for sewing; everyone in Goiás is born with the gift of sewing so everyone here already has much facility as those in the interior of Goiás in the Capital; it is easy for large companies to attract them. Today HERING is present in more than 55 cities, with large workshops in Goiás working exclusively for it, and there are other large companies in the city of Goiânia which have several workshops; this is generation of direct employment. They take the raw material, produce and deliver ready to sell.</p>
<p>Tiago Peixoto</p>	<p>What we see today is that there is a large amount of machinery and equipment that can make production more efficient; we believe that the clothing market has sought better technology, has sought to improve. But we know that the cost for this is very high and large firms that are in Goiás state and producing large-scale certainly have the latest equipment as well as quality equipment and skilled labor. We believe that over time more companies will seek further advancement because it brings more productivity and reduces fixed costs.</p>
<p>MARKET AND IMAGE SECTOR</p>	
<p>Alexandre Baldy</p>	<p>The image of the clothing sector when we started here in the Secretariat of Industry and Commerce I believe was misplaced and poorly positioned nationally; we've been among the four (4) biggest at national level and now we are below tenth (10th )place. We need to greatly improve the industry's image. Our quality is good but we need to learn from other regions that have good quality products, be competitive and be able to attract buyers or get products into various regions.</p>
<p>Edilson Borges de Souza</p>	<p>Goiás had been in 3<sup>rd</sup> place in the national ranking of the largest clothing industries, mainly in the jeans manufacture. Today we are nationally recognized for the Jeans that we produce because we produce a differentiated value-added jeans that are hand-crafted products, clothes with handmade designs that distinguish them from those of all other states of Brazil; in reality this product is not on a production line and some a few people enjoy doing it, so we work and we are all now considered in terms of jeans - Brazil is first in creation of fashion jeans. In view of this, the industries that work with jeans and which today hold the largest financial slice of the jeans industry market are stabilizing in terms of modernization, creating new trends. Today we already have a fashion college which designs for big fashion designers.</p> <p>Non-support by the government for the segment meant Goiás was losing ground to the states of northern Brazilian regions which began to invest heavily in marketing. The governments of these states began investing heavily in marketing of their confections industries, this led buyers to regions distributing to the market with low prices. The Government of Goiás did not understand this threat, so we lose more and more ground and fell to 13th in the national ranking, all due to lack of management by state agencies in terms of marketing. Fashion is really very simple; you are in or you die, you're forgotten. From three years back we have been able to reverse the picture a little and we are in 7th place in the national ranking of the largest producers of clothes in Brazil and this was done with major buyers paying the big buyers to come and visit the city of Goiânia, all this without any support from any public agency or entity. Today in Goiania we are considered the only tourism business because from Thursday to Monday hotels and bars are all full because of the clothing industry; there's no other attraction in Goiania to fill the hotels. The City Hall of Goiânia, and all their managers never helped industry growth at all; it simply took advantage of this tourism industry. The State Government always promised to help with marketing structure but never helped and does not give any support and is only saying that will help and nothing happens, while other states have moved in front a long time ago. The only thing we received from Government of the State of Goiás which was very helpful was about 5 years ago when it exempted the clothing industries from out of state sales tax; lowering the tax meant that industries could gain competition traction against other states which were already using this strategy. We are always slow on this, yet we have everything possibility to be first or second in</p>

	<p>the national rankings; we have a privileged location in the country by being in the center of Brazil, we can supply all Brazil with less effort than other states in Brazil. Government programs do not prepare the foundation of the company to export and this discourages the entrepreneur. Today we have large companies that sell their products through representation. Today we are the largest employer in Goiás State, with more than 200,000 people working directly and indirectly for the confection segment. We believe we can duplicate this in 10 years, becoming the world's greatest, because we have the vocation to be the best in Brazil and the world; the government simply needs to rethink its policy on taxes, jobs and centralize vocational activities like marketing for the clothing industry; this would bring tourism, business tourism, increase the income of local people. The government does not give incentives for companies to grow and structure themselves. The current Secretary of the Ministry of Industry and Trade is better than his predecessors because he has more overall business vision and has been trying to bring in this new phase of development; we need to move forward in this new phase of marketing and production. The more marketing the government makes for our clothing industry, the more return it'll have with taxes and income. We have good infrastructure for distribution of products but what we lack is the marketing and the political desire.</p>
<p>Tiago Peixoto</p>	<p>The state is very well regarded, what is published about our state is that it has lots of jeans, several models of underwear and bikinis. We know that the Goiás state is very strong in these models. We sell throughout Brazil and even outside the country.</p>
<p><b>PROSPECTS OF THE SECTOR LEADERS</b></p>	
<p>Alexandre Baldy</p>	<p>In this year of 2012 we have the prospect of investing R\$ 1,500,000.00 (One million and a half reais) which represents more than 30% of the budget of the Secretary of Industry and Commerce to support, events and attract buyers in the clothing sector. With this we hope to be among the five (5) largest of the clothing segment in Brazil. The governor has pledged to act in a solid way in the segment and today we have negotiated with the unions the creation of the Superintendency of Manufacturing of the Secretary of State of Trade and Industry, this is a personal dream of mine, to create this Superintendency and collaborate with this sector which generates thousands of jobs and adopt public policies focused and detailed to satisfy the clothing segment.</p>
<p>José Divino Arruda</p>	<p>I think this research shows, by experience, a thing we really need in our country, and not only for the clothing industry; a system of work, labor legislation. I think every industry ought to unite and demand of the government a project similar to that of a country with greater experience, Japan, for example. An employee enters a factory at seven in the morning and he can work until eight in the morning; so you work for one hour a day and earn at an hourly rate. But no one can survive by working only one hour a day or four hours a day. There no one works less than twelve hours a day and has a n excellent living standard. If he has a good quality of life, he does not think he has to work five hours, but he's registered in that company. The professional who knows that area and works per hour.....</p>
<p>Edilson Borges de Souza</p>	<p>The largest and most important single industry in Goiás is the clothing industry. When the current governor came to our union he promised before more than 800 entrepreneurs of the segment to create a State Superintendency of the Clothing Industry subordinate to the Ministry of Industry and Trade, and it has existed for two years and failed. The clothing segment under state government management is finished. And when another government comes in it changes everything. There has already been a meeting with the current mayor of the city of Goiânia and a Secretary of Industry and Commerce for Clothing was requested and we were ignored by the current administration of the City Hall. Our request received no reply, different from the current Secretary of State for Trade and Industry we are always meeting with, and we know that the governor is committed to clothing segment of Goiás and is structured so that the Superintendency can be deployed. There is a very large supply chain in the clothing segment.</p>
<p>Tiago Peixoto</p>	<p>We do not know the real benefit offered by the Unions to their members; we are not aware of any real service to their members. There are two or more trade unions and individual events are organized and they should unite to get better results. We do not know what they actually do for their members and even less so for the sector, but we believe that if there were more unions they could demand better</p>



results for the sector.

Today we focus on the construction of industrial estates and on the qualification of the entrepreneur to manage in a professional way, whether for business plan, cash flow, customer service, to sell his product and from there we give credit to those who qualify with us because we believe it will bring better results and generate wealth and development for the state.

Source: Qualitative Research Survey (2012)

The Qualitative research above presents quite compelling issues for the clothing cluster. With regard to manual labor, the fragility of the sector is made clear. Despite the training programs offered by Sebrae and Senai cited by the respondents, professional training is still on a limited scale in the universe involved. Training needs to be of technical, human, conceptual and management order.

Both the informal leadership and government representatives are unanimous about the number of companies in that position in Goiás state. The importance and scope of the segment make formal structuring of the industry necessary. Investments in qualification will benefit not only the issue of manual labor, but also reduce informal working conditions as seen over the past ten years; see Institute of Applied Economic Research (IPEA, 2012).

The importance of the Cluster is perceived by everyone who believes that the segment needs more attention. Technology must receive greater investment in general in its search for innovation. Machinery, some even quite modern, is operating on a large scale, but in the general context, it's far from ideal.

Finally, industry leaders are quite optimistic about production and are looking for investment. However, it is common in Brazil to hear political speeches promising investment, promises never fulfilled but which would be so beneficial for the segment; there should be less politics less and more commitment, strategy, and investment management.

## 4.2 SWOT Analysis of Goiás State

To analyze the environment where the clothing sector is installed, both from an internal and an external viewpoint, one of the tools commonly used in the strategic management of companies is the SWOT matrix, which consists of collecting important data characterizing the internal environment (strengths and weaknesses) and external

environment (opportunities and threats) of the company. Considering these aspects, internal variables (strengths and weaknesses) of the clothing sector in Goiás State are as follows:

I. Strengths: differentiated products manufactured in the large centers; excellent creativity; easy access to raw material due to geographical location of the state; Presence of wholesale dealers, registered trademarks, good product quality, and entrepreneurial orientation of business owners.

II. Weakness: unskilled manpower, low investment in marketing, low working capital, high production costs; disorganized class trade unions; short supply of qualified professionals; low management capacity, outdated machinery, low production scale, low loyalty level with purchaser.

As to the external aspects and its variables (opportunities and threats) for the clothing sector in Goiás state, we conclude that they are the following:

I. Opportunity: Investing in innovation; becoming a reference in fashion products; international economic agreements; potential of the domestic market; booming economy; wide range of suppliers, new technologies, expansion of class C and its purchasing volume; economic growth in Brazil and in Goiás, improved logistics.

II. Threats: high taxes, little government support, large informal segment; imported products; little access to credit; substitute products, new technologies, and low barrier to new entrants.

### **4.3 Diamond Clothing Sector Model in Goiás**

A) **Make-up Workshop Conditions:** the manual labor available to the Goiás clothing sector is low-skill. While there are a range of courses in the National Service of Industrial Education (SENAI) - for example, courses in production management in the clothing industry, production assistant in the clothing sector, shoe manufacture, cutters in the clothing sector, fabric cutters/tailors for the clothing sector, leather cutters/shoemakers in footwear manufacture, seamstresses in the clothing sector, management of production in the clothing industry, production management in the clothing industry, industrial modelers/tailors — meshnet seamstresses, operation of the cad audaces system for manufacture, operation of the cad lectra system for manufacture,

operator of the cad / audaces system for clothing manufacture, work quality is still at a low level.

Regarding logistics in the state, the multimodal system has evolved considerably. Besides an extensive road network which connects Goiás to many Brazilian states, in the city of Anápolis (60 km from Goiânia) there is a dry port and the city has a plan for development of a cargo airport.

**B) Demand Conditions:** Goiás state distributes its production countrywide. The state is thus becoming increasingly well-known and recognized for its clothing clusters; the cities which are manufacturing centers are targets for caravan-style visits from shopping wholesalers. There are several events for promoting brands and attracting buyers and some of these events are: Expo Vestir, Cerrado Fashion Week, Goiás Vive and recently an international event at Goiana Fashion Week, the 1st International Jeans Fair. Investments in marketing, market research, development of research and development and advertising campaigns, focus on the objectives of the Market Place, making Goiás well known and attractive to clothing trade visitors.

**C) Related Industries:** Goiás has no cloth or trimming industries, but has good distributors and support facilities: good make-up workshops, silk-screen printing/stamping, application services for jewels and embroidery, label industries, packaging industries and a variety of transport companies for products. It needs to structure the process elements to improve cost efficiency in production and sales.

In 2012 the Senate announced the creation of a fund that aims to boost production in Goiania's clothing sector; the goal is to attract textile industries. R\$ 8.8 million was allocated for the construction of industrial buildings in 28 municipalities in Goiás with the function of receiving clothing manufacturing units, which in many cases operate under precarious conditions.

**D) Strategy, structure and company rivalry:** the creation of a company in Brazil is a major challenge for any entrepreneur. Not only for all the reasons already mentioned in this research, but also due to the heavy bureaucratic machinery that makes the country one of the most difficult to do business in.

Another negative point is the way companies are set up in Brazil. According to SEBRAE research (2007 *apud* ARAUJO 2009, p. 14), before starting their companies, 51% of Brazilian entrepreneurs held positions in other private companies, 19% were self-employed and 15% were already entrepreneurs. "The entrepreneurial organization in these small businesses is mounted on a very simple structure, with very little formal structure, lack of standardization, few hierarchical levels and centered on the figure of the chief executive, not making use of planning procedures or training routines."

#### **4.4 Cluster Profile in Goiânia: Origin, Characterization and Development**

It is believed that the first clothing industries appeared in Goiânia during the 1960s. Some of the pioneering companies are still operating today, like, for example, 'Planalto Confecções', established in 1964, which currently manufactures pants and shirts; also 'Confecções Nova Plan' set up in 1966, producing articles of clothing, and bedroom and table items - today it only sells these products to retail. There is also 'Confecção Scala', founded in 1967 by Antonio Meneguello, today known as 'Bulk Confecções', which started the 'fad', selling to wholesale only, and which today also serves the retail market (CASTRO, 2004).

As they have emerged, companies have focused heavily on three areas of the city. One in Campinas sector, at Rua Miguel Alberto, formerly Bahia Avenue; another around Avenida Bernardo Sayão, in Fama sector, and a third on Avenue 85, in Marista sector, and its surroundings. In the 1980s, even with the recession which the country was facing, the clothing sector was consolidated in Goiania, mainly on Avenue 85 in Marista sector, and on Avenida Bernardo Sayão, in Fama sector (CASTRO, 2004).

This dynamism concentrated in sectors in Goiania contributed to the spread of clothing manufacture in the municipalities of Greater Goiânia. In the municipalities of Aparecida de Goiânia and Trindade in particular, there was significant growth in the segment (CASTRO, 2004).

Goiás state has 7864 companies in the clothing segment employing 73,435; of these, the city of Goiânia has 5,678 companies employing 57,278 in the segment (see table 4) (SEPLAN-GO, 2011).

In the period from 1997 to 2004, expansion of employment in the clothing industry environment was 72%, slightly higher than that of the State of Goiás as a whole (70.39%) and well above that recorded in Brazil (30.11 %). The municipalities with clusters that contributed most to this important increase were Aparecida de Goiânia (346.47%) and Goiânia (68.48%). (SEPLAN GO-2011).

The Clothing Manufacture sector is one of the fastest growing industrial sectors in Goiânia and it has become a national reference point in recent years. Besides being a major employer this segment is highly interactive locally and a dynamic participant within the economies into which it is inserted. Table 6 shows the clothing industries and the employment capacity in Goiás and Goiânia.

Table 6 – Formal companies versus jobs in the clothing segment

PLACE	TOTAL NO. OF COMPANIES	TOTAL JOBS	CLOTHING COMPANIES	JOBS IN THE CLOTHING SECTOR
Goiás	176.945	1.124.416	7.864	73.435
Goiânia	60.082	504.642	5.678	57.278

Font: SEPLAN-GO (2011)

Significant clothing industry participation in employment figures in the cluster municipalities and the large number of companies with related activities, mainly dense urban network services (UNS) that result from industrial development, reveal the high impact of the cluster on local economies.

Fairs taking place monthly in the capital of Goiás attract dealers from the north, northeast and mid-west of the country, looking for products with reasonable prices and good quality. This has greatly contributed to boosting the economy of the Goiânia region and stimulated an increase in worker yields in the clothing sector and related activities.

The geographical concentration of clothing companies in the region has attracted other chain segments and contributed to an intensification in productive relations, business and technology; for example, business associations, universities, HR (Human

Resources) training institutions and state and federal support, thus showing how the existence of a Cluster has great development potential.

#### **4.5 Proposed Improvement: Goiânia Station Case**

Considering that the many of the problems identified in this research are of a structural and management order, it is proposed that ventures as described below can be encouraged and implemented in municipal industrial agglomerations. To this suggestion may be added a planning idea similar to the business incubator model, based mainly on organization, training, training of entrepreneurs, consultants and may in the future be based on ‘coopetition’ (cooperate to compete).

Inaugurated in end of 2007 as the Feira da Estação, this fair came to be an extension of the Hippie Fair, which is considered to be one of the largest fairs in the world and takes place in the square nearby. The Feira Hippie, as previously mentioned, is a large collection of informal clothing operations. The Feira da Estação took two years to build, and after it was opened, it was expanded to become the largest in the world. During the week the fair served as a conference center and venue for concerts and private events with a capacity for 150 thousand people and on weekends as a fashion fair with nearly 4000 stalls for street-vendors (or ‘camelôs’ as they are called in Brazil) . However, this was not seen as very advantageous to the participants; so their managers had to reinvent the proposal, and the challenge was to reposition itself, getting away from its image as a huge barn with stalls of street vendors (peddlers), and moving towards a space for fashion.

The name was thus changed and started to be called Goiânia Station, remodeled from the beginning of 2012 and aimed at increasing influence on **fashion in the Midwest**. For entrepreneurs, the result of repositioning was a doubling of their turnover; there was better space utilization and streets were turned into stores, with a greater level of utilization than in the original design. Today Goiânia Station has **655 stores** with sales in wholesale and retail packed into a covered space of **35 thousand m<sup>2</sup>**. There is direct generation of 1800 jobs and another 3,000 indirect jobs linked to clothing article manufacturers, spread throughout the capital in family manufacturing set-ups. On observing how the groups of stores are arranged in Goiânia Station

Shopping Center, it can be seen that more than 80% of the mix focuses on feminine products.

The managers of the enterprise have invested in training courses and qualification for new tenants and their attendants; where in the past 100% of stalls were informal, with the process of qualification, the figure for duly formalized staff reached 96% of the stores in 2012.

With its wide variety of feminine products, Goiânia Station (see chart 2) won the preference of the Class C consumer purchasers, the ‘bagwomen’ (called ‘sacoleiras’ in Brazil) who come from many states in search of novelty, variety and competitive price at the shops which offer some of the lowest costs in the region, and potential for competitive *mark-up* of the product.

To stimulate shopping, the enterprise also offers **shopping carts**, radio system, cleaning equipment and a **security specialist**, plus space for firefighters, fire prevention and a monitoring center with trained professionals. Structurally, **large and comfortable** bathrooms, comfort station, children's play area with **supervisors** and lockers are available to customers.

All the surveys from the above research are represented in the Table 7; the consolidation of the Brazilian, Goiás State and Goiania City scenarios and the prospects for the Diamond Model Clothing Cluster .

Table 7: Consolidation of the Diamond Model Brazil X Goiás X Goiânia in the Clothing Cluster

	BRASIL	GOIÁS	GOIÂNIA
Context for strategy and rivalry	<p>Massive influx of imports of cheaper products on the domestic market;</p> <p>Insignificant participation in world exports and also concentrated in cotton;</p> <p>Hard access to credit, especially for micro, small and medium companies, which become dependent on suppliers.</p>	<p>The big challenge of these companies is to compete with companies from the capital and other states and they are taking advantage of their labor (cheaper than in the capital) and lower running cost of their industries, while they are still growing</p>	<p>Setting up a business in Brazil is a major challenge for any entrepreneur.</p>
Demand Conditions	<p>Consumption very fragmented;</p> <p>High informality, mainly in clothing</p>	<p>With the exception of the city of Jaragua and Goiânia the others do not receive caravans of buyers.</p>	<p>Known and recognized for its clothing clusters, and the visits of caravans of wholesalers shopping has become frequent in the</p>

	sector.		capital.  There are several events for promotion of brands and to attract buyers.
Co-related and Support Industries	Specialization in products made from natural fibers, despite the rapid increase in world consumption of chemical fibers and blended fabrics;  Machinery/equipment with high average age, incapable of global competitiveness, where many companies are just meant for the domestic market.	There is a major difficulty for these clothing manufacturers since the state has no textile industries; they acquire their raw materials in capital through various retail textile stores and other companies in the production chain. Some face complicated logistics to bring their pieces weekly to laundry and other more complex processes that are not offered in their city.	In Goiânia has no textile or trim industries, but there are good distributors and support facilities: good make-up shops, screen printing / stamping, application services in jewels and embroidery, label industries, packaging industries and a variety of transport company products .
Conditions in make-up workshops	Low personal capacity in technical and managerial activities  Lack of coordination of actions of the production chain, lacking management.	If there are problems in the capital for labor, the other rural cities suffer more from a lack of skilled labor, but there is an abundant supply of unskilled workers. Some successful entrepreneurs train their labor with the technicians coming from the capital to train lay people.	The manual labor operating in the Goiânia clothing sector is low-skilled. While there are a range of courses in the National Service of Industrial Education (SENAD), quality of service provision is still minimal.  Regarding the logistics of the state this has evolved greatly with multimodal. Besides an extensive road network that connects Goiás to many other Brazilian states.

Source: Elaborated for the research (2012)

Per week the Goiânia Station receives an estimated flow of 50 thousand people. As Goiânia receives many caravan-group buyers, the Goiânia Station has become the second largest bus terminal in the state (see Figure 6); its parking gets more than 200 buses and hundreds of cars from several states in Brazil for shopping. So a special service for the tour guides with an air conditioned room of 450m<sup>2</sup> with bathroom, pantry, televisions and gaming tables is offered.



Figure 6 – Goiânia Station parking lot.



Source: Based on fieldwork

The Marketing Department of the Station invests in constant research into customer satisfaction; in the last evaluation, perception of the buyer is that the Station is great for prices, is clean, safe, is a great place for food and is in an excellent location. It was through this research that the Station discovered the need to build a hotel for its thousands of buyers coming from other states, using their own resources; in January 2013 Goiânia's largest hotel, with 214 rooms, will be inaugurated inside the Station.

While store vacancy is very small (below 1%), and *turnover* of the stores is high, the future challenges of the Station are still big. Where only women's articles exist in more than 400 stores, this means that many tenants are not ready for domestic competitiveness. Diversification and qualification are what are needed to correct these flaws.

## 5 Conclusion

The main challenges for the clothing industry in Brazil are: imported products, low export of clothing items, outdated machinery, lack of organization in the supply chain, much informality, low technical and managerial capacity and poor access to

credit. Despite being the sixth largest producer of textiles and clothing, which corresponds to 2.5% of total production, 27.2% for China, in 2006 Brazil occupied the 46th place among the largest exporters.

Appreciation of the Real, at the same time as having difficulties in exportation, made imports more viable, promoting the provision of the internal market with products from China and a challenge to local production.

One of the variables to be urgently worked on is the issue of developing products with higher added and differentiated value, meeting the demand needs quickly. This requires heavy investment in innovation.

Brazil, being the largest market in the segment, offers a favorable scenario for strengthening the sector. Forecasts show a lower level of poverty, income inequality and an increase in the average level of Brazilian schooling; but there is still poor evolution in the quality of education. There is a need for a higher level of education of entrepreneurs, including the long-awaited insertion of entrepreneurship as a subject in schools.

It is believed that by 2022 Brazil will be among the four major economies and the trend will be of credit growth to GDP ratio and improved access for micro and small companies to credit, because there will be an increase in public and private investment in the economy. However, it is believed that low investment in the international trade will continue. It is likely that Brazil will resemble India.

It is hoped that there will be greater organization of clothing manufacturers into associations for greater competitiveness, and to exploit opportunities in the virtual environment. Higher tax exemption is also expected, along with modernization of labor relations and increased outsourcing.

Goiás State should take advantage of every opportunity presented, strengthen the points that provide their companies with some sort of competitive advantage and develop with urgency efforts to eliminate or neutralize the weak points encountered in the clothing segment. One of the alternatives is to make the State Secretariat for the Clothing Industry viable; this research encouraged this in the Department of Trade and Industry

as a project to promote the segment. The opportunities appear to be there, and even if the State is the main protagonist of several of them, if the developments are not made viable, no advantage will be gained from them.

As for the threats, in an environment where there are more weaknesses than strengths, defenses are raised and their impact is not so devastating. However, in environments with many weaknesses, threats can be critical factors of failure.

The Diamond Model in the Clothing sector in Goiás State points to the need for strong Government action regarding the formalization of the labor force and tax relief, as well as strong investment in worker training and facilitating logistics. We must also encourage developments like the Goiânia Station to appear throughout the state for better segment management. Thus, as a conclusion to this study, it is suggested that every development like this should provide something similar to the business incubator model, which, apart from the physical aspects, contributes to consulting, training and research, with the involvement of Higher Education Institutions, organs like the Trade Unions, and trade associations, as well, of course, as the Municipal, State and Federal Governments.

Thus several issues raised in this survey regarding the management of the business, planning habits and control tools must be solved, as well as giving importance to strategic vision and market analysis.

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