IB750 Brazil Business Seminar

Training and Marketing High-Tech Products to Brazil's Lower Economic Tiers

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Summary

Brazil has traditionally been divided along socioeconomic lines. Whoever has money lives comfortably and prospers; whoever doesn't have money remains rooted in poverty. The technological and trade developments in the late twentieth century show a way to dissolve some of the economic and social disparity. However, many of the prejudices and insularity of the highest socioeconomic groups threatens to slow the dissolution of this disparity.

The economy in Brazil is recovering from the shocks it has received over much of its history. The global trend toward trade agreements and foreign direct investment gives Brazil an opportunity to discard its unbalanced economic past and create a stable future. Brazil's citizens might also get a chance to build and nourish their personal accounts. This could create a group of consumers suddenly able and willing to invest in products that will enhance their future—such as computers, high-tech training, or communication devices.

As Brazilian corporations reach out beyond their borders to trade with their neighbors and the rest of the world, they discover a shortage of trained skilled labor. The Brazilian education system is just beginning to realize its shortcomings, and may not produce enough technically-educated graduates in time to meet manufacturing demand. Meanwhile, the general marketing population learns about high-tech devices, and tries to consume them in any way possible.

How can high-tech companies reach out beyond the familiar pool of wealthy, highly-educated, but numerically dwarfed, workers and consumers? Will the growing group of empowered consumers buy from Brazilian companies, MNCs working in Brazil, or from whomever appeals to them most?

What does the future hold for Brazil's high-tech industries if they draw in consumers and workers from beyond the highest economic tiers? What does the future hold if these tiers are not courted? The time has come for industry to work with all willing participants to create a desire for Brazil's citizens to get high-tech skills, work for high-tech companies, and consume high-tech goods.

In This Paper

This paper includes:

- A historical look at Brazil's economic tiers,
- Economic trends and forecasts for Brazil,
- Comments and issues regarding education and technical training,
- Theories about training and marketing communication in South America,
- A proposal for attracting and training for technical jobs, and
- Projected results of training and marketing to Brazil's lower economic tiers.

Recommendations

- Non-governmental organizations should establish closer relationships with multinational corporations to identify quality technical students.
- High-tech product manufacturers and distributors should use examples of people raising their economic status and quality of life in their recruiting, training, and marketing.
- The target cohort is young, curious, and mobile. NGOs and MNCs should capture this group's attention to simultaneously sell products and raise Brazil's economic standard.

Brazil's Economic Tiers: a History

Brazil is both a very young and a very old nation. Its influences come from deep within its borders, and from very far beyond. These factors have perhaps created some of the economic conflict that exists in Brazil today.

Brazil's main influence is from its Portugese colonizers. Portugal began to settle in Brazil in 1532, near present-day São Paulo. Very soon after, the Brazilian economy depended on slave labor to support mining, plantation farming, and domestic service.[1] Brazil continued to support slavery until 1888. After slavery ended, Brazil did not enter the industrial age, which might have provided a means to improve the economic status of the former slaves. Brazil remained agrarian, especially in the northern, rural regions. The South developed the greater share of industry and urbanization, and attracted much of the investment capital as well.

In recent years, Brazil's government and economy have both experienced extreme changes. Currency in Brazil has been unstable. The inflation rate has soared as high as 2,500 percent in 1993.[2] The current government, led by Fernando Cardoso, introduced the Real in 1994. At first, the Real was pegged to the U.S. Dollar. However, Cardoso ordered a devaluation of the Real in 1998, after he was reelected to the presidency. As the Real plummeted against the Dollar, exports from Brazil dropped accordingly. In 1999, exports of main commodities fell 15.6 percent compared to the same time period in 1998.[3]

Demographics of Brazil Today

Brazil's population and capital investment is located mainly in the South and Southeast. The Northern regions experience a much higher birth rate, but this seems to be cancelled out by an equally disproportionate infant mortality rate. Brazil's population,

largest in South America, boomed until the late 1990s, as the life expectancy has been pushed out due to twentieth century medicines and better overall sanitation. Men in Brazil live to an average age of 62 years old; women live to 68.

Meanwhile, Brazil is getting younger. As of 1992, 62 percent of the population was less than 29 years old.[4] The youth wave underscores the growth rate trend, but also places a strain on Brazil's economic growth, especially where the country is weakest. The age dependency ratio, which measures the ratio of people under-16 and over-65 (typical non-wage earners) to working age adults, wavers between around 50 percent in the South and Southeast to 70 percent or more in the North and Northeast.

Schoolchildren at a zoo in Sao Paulo. The children are taken here regularly, to get exposure to green space and animals.

The population breakdown is as follows:[5]

	Total Population	Average Annual Growth Rate (%)	Urbanization Rate (%)
North	11,290,573	2.4	62.4
Northeast	44,768,201	1.1	65.2
Southeast	67,003,069	1.4	89.3
South	23,516,730	1.2	77.2
Central West	10,501,480	2.2	84.4

Brazil's racial composition consists of whites, blacks, "pardo" (white and black), asian, and indigenous groups. These racial groups are dispersed evenly, except in the South where whites have a much larger majority. A quick look at basic life conditions such as

water and sanitation, where the disparity between whites and non-whites varies between 4 and 35 percent, suggests the persistent legacy of slavery.

Generally, the economic differences are marked by geographic location, not by race. In the Northeast, the illiteracy rate is around 28 percent, while in the South and Southeast illiteracy is much lower, close to 9 percent.[6] The dropout rate for children is around 50 percent, or 24 million.[7]

Given the economic disparity of the geographic regions and consumers, businesses seem to cater their products to either the "elite" class, middle class, or working/non-working poor. The elite class, which is educated and employed in high-paying jobs, is very small. The economic roller coaster of Brazil's recent past affects this group least, because of their economic ties to Europe and the United States.

Products that are marketed to the elite class are made of highest-quality materials, imported from the U.S. or Europe, and command steep prices. Portobello Ceramics, a high-end producer of ceramic tile located in Brazil's South, sells only to consumers who will pay the premium prices. At Banco Itau, a commercial bank headquartered in Sao Paulo, the managing director noted that Brazilian citizenship requires a bank account.[8] Banco Itau's services are probably best suited for the elite class.

The middle class, which is not much bigger than the elite class, fares worse during volatile economic periods. Unemployment, which stood around eight percent during Spring and Summer 1999, fell from nearly 14 percent in 1997. The Real devaluation in 1999 hurt this group. Earlier, before the devaluation, buying a car or fixing up the house, or putting the kids into private school, was affordable. The devaluation pushed these items beyond the reach of the middle class.

The middle class responds to rewards that make them better consumers in the long run. Good service is another marketing tool. At Banco Bradesco, a retail bank in Sao Paulo, the bank tries to lure customers by increasing their satisfaction. Middle class customers can use a "smart" card that earns frequent saver points. Automatic teller machines provide easy access to checking accounts, too, provided that the cards are compatible with the "Caixas."

The working and non-working poor make up the majority of Brazil's economic population. This group is typically not well educated, but works hard to improve personal economic status. At the bottom of the poorest classes, in the makeshift slums surrounding cities and industrial areas, children live in lean-to shacks constructed from found materials. These children often do not attend school, especially if they are old enough to work.

Banco Bradesco markets to the poor by offering convenience: a debit card that can be used like a credit card, for consumers with money but lacking a credit history. The lower-end tile markets, according to the finance director at Portobello, are served by warehouse stores such as Home Depot.

Education Structure in Brazil

Brazil's education system, looked at from a distance, seems equitable for its entire population. When Brazilian educators and students are asked about the system, they describe an unequal situation. Even though primary and secondary education is free, the public schools do not prepare students adequately for university academics. Students in private, but expensive, schools achieve the grades and entrance test scores necessary to enter Brazil's universities and technical schools. Unlike most universities in the United States, Brazil's universities are free. Thus, unless a poor student has low-cost resources

outside of public education, the chances of obtaining a university or technical education are slim.

Meanwhile, technical jobs sit waiting for workers to fill them. Raimundo Ramos, education program manager at Motorola, Inc., said the company experienced over 300 percent growth in two years. Almost all of the engineers and managers are Brazilian, coming from other high-tech companies in the area. Motorola provides money for technical training at local universities to provide engineers with Motorola-ready skills. The company does not promote technical education beyond the university system, however. Ramos noted the extra training required for workers in its Jaguariuna facility. Instead of the standard required 40 hours, workers routinely need 100 or more hours just to come up to speed.

Motorola, Inc. facility in Jaguariuna

Besides technical training, Motorola wants to develop "cultural" skills—Motorola culture, that is. Besides explicit knowledge that its current and potential employees gain from university training, employees also need to understand the reasons for and desire to create communications products. One way Ramos sees this getting done is through the use of "Learning Maps," which explain the importance of customers, communication between engineering and business teams, and high-quality manufacturing. Since Learning Maps were introduced to its employees, the plant has produced at record levels.

Issues Facing Training Organizations

There are three major issues facing training organizations. Will the high-tech industry change Brazil's economic structure, by creating a larger middle class? Can companies respond to a growing economy with a ready-trained workforce? Will jobs requiring technical skills remain primarily in the South and Southeast, or will these jobs start elsewhere in Brazil?

Brazil is part of the MERCOSUR free trade agreement with Paraguay, Uraguay, and Argentina. Some of the high-tech industries near Campinas and Santa Catarina, such as Motorola, will provide a large portion of the high-tech goods in South America. As these industries hire and train more people, will they create a swell in the ranks of the middle class? Some companies are planning for a cycle of employment creating new spending power, which in turn creates more jobs and more wealth in the area. Trade with Brazil's neighbors, the United States, Latin and South America, and Europe will provide even more jobs.

The airport authority near Campinas, in the Southeast, represents both the booming trade and the economic well-being that comes with improved trade. Cargo traffic at its Viracopos facility unexpectedly increased from 64,000 metric tons in 1992 to 424,000 metric tons in 1998. Sao Paulo's airport couldn't handle the cargo moving through its Customs area. Today, the Viracopos airport authority inspects 5000 pieces per day, and efficiently processes orders for large corporations through its "Linha Azur" (Blue Line). Brazil, in general, is one of the top four most efficient import/export processors in the world. Viracopos plans to become even more efficient in the future, by using Linha Azur to ship as well as receive cargo, and by using bar code scanners and computers to document the inventory moving in and out of the facillity.

Companies in the South and Southeast are responding differently to the challenges of providing a trained workforce. In Sao Paulo, the retail bank Banco Bradesco is looking into the lower economic tiers to find customers, while the commercial bank Itau is focusing on investment from the elite class and from abroad, in addition to buyouts or acquisitions of other commercial banks. The Campinas airport authority envisioned enormous growth, and planned to expand its airport receiving area. However, when asked how it will staff the ever-growing facility, port officials acknowledged that they would need to hire from outside the local area. There just aren't enough trained and unemployed workers around. In Itajai, the port authority turned to technology to handle the increased traffic and sophisticated loads.

Smooth sailing for a fishing boat in the Port of Itajai. The port, the first in Latin America to be connected to the Internet, is the fourth largest container cargo port in Brazil (first in frozen goods).[9]

The shrinking available workforce will continue to be a problem in the Brazilian South and Southeast. The public schools are not providing an education capable of producing quality technical workers. Non governmental organizations, and some university programs, will train some of the region. Companies may need to consider recruiting, training, and supporting workers from other areas of the country, such as the North or Northeast—traditionally undereducated areas that lag behind the rest of Brazil.

Issues Facing Marketing Managers

Marketing high-tech items like cellular phones is simple when the target market is restricted to the highest economic tiers. These users want a status symbol, or are so busy juggling careers, friends, and family that any communication advance is welcome.

How do the lower economic tiers perceive the high-tech industry? Are they tuned in to the industry's message, or tuned out because it seems unrealistic to own a high-tech product?

How does the marketing message physically reach the young, poor market? This is a group on the move, looking for work, looking for a better life, and looking for each other. Is there one message to send universally, or a personalized message for a group of people, or a different personalized message for a distinct geographic area? Also, is there a best way to communicate with groups that need to learn how to use a product before they buy it?

Do companies sponsoring education or training programs for the poor benefit from their community participation? What advantage, besides a warm fuzzy feeling, does investing in a training program, or other community service jobs, serve? If the public relations boost translates into higher market share in the target group and beyond, why don't all high-tech companies at least try to provide some training to the local community?

Theories About Communication and Learning

Both training and marketing managers have a riddle to solve: what is the best way to get through to their intended audience? There are several theories, but for communicating with an undereducated audience, personalized, hands-on, direct communication works best.

Raimundo Ramos explained *knowledge management*, a combination of explicit and implicit learning. Explicit knowledge is the material found in instruction books. Implicit knowledge is understanding how and why to learn the material in the instruction book. When high-tech managers are recruiting for factory jobs, actual knowledge of the tools may not be as vital as the aptitude for learning about the tools. Corporate mentors can encourage potential workers, which might make the applicant work harder.

The mentor should provide an example of the work process in action. These processes range from using a computer to working in a technical manufacturing setting. Hands-on training can help overcome the shortcomings in education, because the student and the mentor are communicating with at least three sensations: sight, sound, and touch. Reading a book uses only one sensation, sight to read, which is wasted if the reader is illiterate.

A corporation that is reaching out to spread knowledge about its product can not reach out and affect every person in the target markets. However, it can send multiple, similar messages that explain how using or creating its product would affect different markets. The consumer can pick from several situation descriptions; one may be similar enough to a real-life experience to gain an understanding of how *the consumer* can handle the activity of creating or using the product.

Training the Young and Poor

Private/NGO education and training. Companies like Bradesco, non-government organizations such as Fandacao Odebrecht, and individuals like Rodrigo Baggio decided to create educational programs without waiting for the government to act. If other high-tech manufacturers, such as Motorola, adopted training and education programs, they would assure themselves of a trained workforce and a better community overall.

Bradesco Foundation was created in 1956 to provide schooling and professional training to over 95,000 children, adolescents and adults. The Foundation has schools in every Brazilian state and in the Federal District. It gives children education, plus meals and boarding if necessary. To qualify, children need only live in the area and have parents who will encourage learning. The classes include traditional subjects, social behavior, and educational experiments. For adults, professional courses and adult education are offered to meet community technical workforce needs.[10] After they graduate, Bradesco Foundation students are welcome to go work for Banco Bradesco: however, attending a Foundation school does not obligate a student to work there.[11]

Portobello Ceramics is another private employer providing technical education. The tile company offered the first course for tile setting specialists that is officially recognized as a post-secondary technical degree. In addition, Portobello's "Schooling 2000 Project" provided elementary education in the area, cutting in half the percentage of Portobello's labor force without an elementary degree. After 52,158 hours of training, 162 of the 1,393 employees were able to own their home on land donated by the company.[12]

Other groups also saw a need to provide education, training, and/or social services to the lowest socioeconomic classes. These are known as Non Governmental Organizations, or NGOs. Many of these NGOs work with social groups that are typically overlooked by the majority or the upper economic classes. A list of NGOs on the Internet ranges from homosexual rights to humanizing birth, and from farming and labor research to ecological protection.

One such NGO, the Committee for Computer Science Democratization (CDI), was created in 1995 with financing from a U.S. group promoting social entrepreneurship. Baggio, the founder, was teaching computer skills to wealthy students, then decided to

teach poor and disenfranchised students instead. His NGO has grown from one to eight *favelas* (slum neighborhood) in Rio de Janeiro. There are 600 students paying around US$8 per month to learn about computers and the Internet. Recently, the NGO expanded to include a program for prison inmates at a maximum security prison; around 100 are preparing for careers using or fixing computers. One inmate saw his future tied to computers, communication, and transportation: "with their new (PC repair) skills, a cell phone and a car, they say, they can set up their own business."[13]

University education in the country's interior. There are now more students in small and medium size schools than in the state capitals. Besides being close to home, this gives students the opportunity to find jobs in the area. In eight years, "interior" universities will matriculate 44 percent of Brazil's students; the universities in state capitals will have 31 percent.[14] Proximity to students isn't the only reason for small-to-medium university appeal: these universities also offer training that is relevant to the local economy.

The University of Vale do Itajai (UNIVALI) uses its Trade Junior program to provide on the job practice in foreign trade for selected students, and provide inexpensive consulting services for companies willing to use nonprofessional help. These services include cost analysis, market research, negotiations, quotes for freight, insurance and shipping, market consulting, documentation, and Internet networking to maintain a reliable data bank. The Trade Junior program has a limited enrollment , but is slowly expanding to accommodate more students.[15]

Computer-based Training. Computers and the Internet have created a versatile means of reaching out and training interested students. Schools far from the city need only run a computer disk on a local computer to test for the highest skills. Once identified, the

student can learn at a personal pace using more software. A local instructor might be on hand to provide individual guidance, but with an Internet connection, the "local" might be on the other side of the state or even Brazil. Computer-based training does have faults, including being impersonal. However, it also provides the visual and touch sensation (perhaps audio, too) that gives hands-on instruction such an advantage over remote learning by reading. For the undereducated but bright recruit, computer-based training with many visual aids gives the student a chance to catch up. The recruiter, meanwhile, gets the chance to cast a wider net to find qualified applicants. Those who can complete the training deserve to be hired. Those who can't make it through the program are not invited to work at the company, but did learn some valuable skills.

Marketing to the Young and Poor

Cellular phone manufacturers have two advantages when marketing to young or poor Brazilians. One, Telebras (the nationalized telephone system) can not or will not install fixed phone lines where this group lives, and cellular phones are being installed four times as often as fixed telephone lines, with anticipated 1800 percent growth in the next four years.[16] Two, everyone—EVERYONE—has a cellular phone. Trina Bauling, a consultant for a U.S.-based foundation, who has lived and traveled in Brazil for nearly 20 years, pointed this out repeatedly. People use them everywhere, even in movie theaters, she noted. "I don't know where some users get the money to pay for the phone or their phone bills," she said, but remembered that in Brazil the caller pays for the call, so frugal users might not initiate calls, but keep their phone turned on in their pocket or bag.[17] Users without adequate credit can buy or lease cellular phones with prepaid accounts.

Similarly, computer use is rising rapidly in Brazil. As soon as student skills improve, the students ask for more. Entire families are spending time in front of the computer screen, up to 700,000 households by the end of 1999.[18]

According to research conducted in South America, high concept communication is not received well. A more effective method of influencing behavior is by using personalized, detailed narrative. This creates the impression of communicating flexibly with each person in the target market. The marketing effort should provide as many examples of the product in use as possible. Vague, generic descriptions of a product will not make the consumer think, "this is directed at me."[19]

Veja magazine displayed four advertisements for cellular phones in its September 1 and 8 issues. One ad leaned toward high concept, abstract ideas. Another ad shows Pele playing with the phone—a tie-in to the feature being advertised, four new games. The connection is obvious, but the games are not displayed. The other two ads, in varying intensity, displayed actual features of the phone or displayed how the phone could be used. [see attachments for Motorola, Samsung, and Nokia]

Even if the Motorola ad did well in the U.S., it is too vague and removed from everyday situations to do well in Brazil, especially among the lower socioeconomic level that may not be thinking that far into the conceptualized future. The Samsung ad that walks the reader through some of its displays will sell more Samsung cellular phones. Another Samsung ad humanizes the product even further. If the research about communication in South America is correct, the typical reader will look at this ad and become the model in the picture. Then, while wearing the device as the model does, the user can imagine accomplishing the tasks that the phone demands.

An even more effective, but technology-dependent, way to appeal directly to the young and poor market is one-to-one interaction on a computer. There are several ways to give a customer one-to-one interaction. A kiosk near a schoolyard or bus terminal will catch young consumers on their way to school, work, or home. In the school, high-tech companies can donate computers for as long as the school agrees to allow students to "play" a game in which they are virtual users of the high-tech product. Most children's museums have similar interactive virtual games and exercises; this pushes the idea into a commercial application.

A marketing appeal that resonates with the youth market, and perhaps the lower socioeconomic tier, is the idea of changing one's life. A prisoner in the Rio CDI program believes that a cellular phone (and a car, and computer repair skills) can prevent him from returning to prison. And, once the idea of change is planted, it is hard to turn back. A somewhat related offering is in plastic surgery. One look through a plastic surgery magazine (which, according to a Brazilian employee at Motorola, is popular) comes up with dozens of testimonials: "this surgery changed my life!" These surgeries are expensive, and are obviously irreversible. However, people are finding some way to pay for the changes, says Ms. Bauling. Buying a high-tech device doesn't change a person's physical appearance, but it can alter their lifestyle. The computer simulation can show the consumer how the product will affect home, business, and social activities.

Projected Training Results

In one to five years, high-tech companies will still be building a labor pool of trained workers. This effort will be isolated but effective in the short run. A worker may only know how to use one company's equipment, but the worker will be proficient and effective. This isolated knowledge will not produce a surplus of trained workers.

Companies with competitors in the area will need to recruit trained workers from each other, or convince trainees to move to the South or Southeast. Another option, hiring bright but untrained workers, will be an inefficient way to build the workforce. Motorola will continue to make 150 percent of the usual effort to train engineers and managers to work in its manufacturing facility. The training department may eventually be forced to limit training to 40 hours. If there are still no supporting university or youth programs taking care of the rudimentary information, companies like Motorola should strongly consider establishing such a program.

In five to ten years, the cross-pollenation of knowledge and experience will be common. Certified training centers, such as Portobello's SENAI school, could be contracted by competitors(!) to provide reliable training for standard industry practices. If there are enough competitors in an area who are not willing to share knowledge, a university or a NGO program can address the needs and perhaps offer standard training.

The long-term future for training is uncertain. If private funding continues to replace public school education and training, the Brazilian education system may be permanently undermined. Perhaps NGO and private sector sponsors should collaborate with the public schools now, identify the training and education required to get high-tech jobs, then jointly promote the training programs. A joint effort may be necessary to attract cynical students who have given up on public school formal primary and secondary education.

Projected Marketing Results

In one to five years, high-tech producers will continue to build market share as the youth market continues to expand, and as the middle class of high-tech manufacturing workers grows. Products that will appeal to these groups are cellular phones and computers.

However, there is a good chance that these target groups (or the combined group of youthful new high-tech workers) will not understand the technology at first. The companies which use a personalized, instructive approach will reach this market best. Pictures of everyday users, which illustrate how to use the product properly, will appeal to this group while it becomes more educated and familiar with the product. Of course, this marketing approach is distinctly South/Latin American. The influence of internal trading partners may drive a company's marketing effort toward the low-concept, personalized, concrete, narrative or even oral communication. External trading partners, such as the United States or Europe, but especially the U.S., may push the marketing communication toward acontextual, universal, abstract, and analytical messages.

In five to ten years, if the youth and lower economic tier markets are successful, companies should continue to push downward into the poorest, most disenfranchised groups. This group may be the older relatives of the youth market—they could have been too old or too undereducated to participate in private or NGO programs before, but will not be forgotten by the youth market. High-tech products are the ideal means for this group to emerge from extreme poverty. For example, banks and high-tech manufacturers could team up to provide one product to share in a village, neighborhood, or favella. This is similar to a successful program in Bangladesh, where the phone is purchased by a group using a loan, then is paid off from the collective efforts of the people in that group.

In the long-term future, high-tech communications will expand to include people in all socioeconomic segments. Small fishing boats might use the Internet as much as the Port Authority to find the best fishing conditions, then the best buyer for the fresh catch. The widespread use of technology, even in formerly non-technical professions, could cause a sea change in the Brazilian attitude toward education. The importance of

learning high-tech skills will encourage children to develop these skills—or face their parents if they don't learn the skills. Pressure from children, parents, potential employers and trading partners might foment a change in Brazil's education infrastructure.

Some observers are wary of an even larger split between the "haves" and "have nots" because of the non-availability of high-tech products in very poor communities. True, some people may have a much more difficult time acquiring these products, then learning the skills to work with the products. However, once these skills are learned, these people will have their best chance ever of breaking out of poverty's cycle.

The challenges are similar to a bridge under repair in Florianopolis: from a distance, the bridge looks fine. A closer look reveals that the bridge is crumbling, and no one is using it to get where they want to be. The bridge will be ready for the future, though, if it is reconstructed without further delay.

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[2] Bastian/Hatfield, p. 74.
[3] Swartz, p. 3.
[4] BrazilInfo
[5] IBGE MNSDS
[6] IBGE MNSDS
[7] Bradesco, August 31
[8] Carvalho, August 31.
[9] Port of Itajai statistics
[10] BradescoNet, March 10.
[11] Bradesco, August 31.
[12] Portobello, p. 8.
[13] Goering, p. 8.
[14] Lima, p. 105
[15] UNIVALI brochure
[16] Veja, September 1, p. 37.
[17] Bauling, September 9.
[18] Veja, September 22.
[19] Thatcher, p. 194.