THE PROCESSES, CHALLENGES, AND OPPORTUNITIES OF ESTABLISHING A BUSINESS IN BRAZIL: THE CASE OF PACCAR INC.

DR. GILBERT J. WEREMA*
BARRY CRAIG**
ROB FRANZ***
JAMES GOSSARD****
LYNDSEY GUAJARDO*****
LAURIE HARTMAN******

*Assistant Professor of Economics, School of Management, Texas Woman's University, Denton, Texas, USA
**Graduate Student, School of Management, Texas Woman's University, Denton, Texas, USA
***Graduate Student, School of Management, Texas Woman's University, Denton, Texas, USA
****Graduate Student, School of Management, Texas Woman's University, Denton, Texas, USA
*****Graduate Student, School of Management, Texas Woman's University, Denton, Texas, USA
******Graduate Student, School of Management, Texas Woman's University, Denton, Texas, USA

ABSTRACT
This Case Study examines and analyzes the processes, challenges, and opportunities a Fortune 150 corporation, PACCAR Inc experienced when entering the Brazilian market. Starting with a corporate brief, the paper delves into the historical market position of PACCAR and explains how this major corporation consciously avoided this market due to the high costs of entry and the risk posed by decades of government instability and financial crises in Brasil. To achieve better market coverage in Latin America and low cost supply for other markets, the discussion defines the competitive threats that compelled PACCAR to develop Brazilian market coverage through foreign direct investment with their Dutch subsidiary, DAF Trucks NV as opposed to their U. S. divisions, Kenworth Truck Company or Peterbilt Motors Company, both of whom had small prior presence in the country. The major hurdles of entering into business in Brasil are outlined, and PACCAR’s responses to these are critiqued. The major decision paths undertaken by the company are analyzed and their final solution is presented, along with a recap of the current status of their operating plan.

KEY WORDS: Entry Mode, FDI, Import, Export, Wholly Owned Subsidiary

INTRODUCTION
This case study examines the entry of PACCAR Inc, a major U. S. based Fortune 150 commercial truck manufacturer, into the Brazilian market. PACCAR is the fourth largest truck maker and the most profitable of any global automotive company. PACCAR has 73 consecutive
years of net profit and has paid a dividend every year since 1941 (PACCAR, 2012). It is run by a 4th generation family member, Mark Pigott who is Chairman and CEO. Organic growth in North America and Europe, its primary markets, will not produce increasing shareholder return because demographics point to smaller population growth and less future consumer spending in these developed countries, which in turn will require fewer trucks. To increase its growth potential, the Board of Directors has challenged the company’s leadership team to break into BRIC (Brazil, Russia, India and China) countries in the next five years. “PACCAR has increased its investment in the BRIC countries (Brazil, Russia, India, and China). The company has begun construction of the new DAF factory in Ponta Grossa, Brazil, which is planned to commence truck production in 2013” (Pigott, 2012). These are markets of rapid population expansion, a rising middle class, and will have a need for more commercial vehicles for the foreseeable future. The company is conservatively managed and is highly risk adverse, which has caused them to be a later entrant to these BRIC countries, by choice. Part of their reluctance to enter early was to avoid the high “pioneering costs” incurred by several “first mover” competitors like Mercedes and Volvo when they entered China. “Research seems to confirm that the probability of survival increases if an international business enters a national market after several other foreign firms have already done so” (Hill, 2011, p. 471). While PACCAR may have avoided some risk by delaying market entry, many U. S. and European companies already established “beach-heads” in these growth markets, making PACCAR’s entry challenges even more acute. Alliances have already been formed with several of the state-owned commercial vehicle enterprises in China including Daimler’s joint venture with Beijing Foton (Daimler, 2012) and Volvo’s relationship with Dongfeng (Volvo Trucks, 2012). Most companies in India are in acquisition-mode, leaving Russia and Brazil as the prime candidates for expansion within the time horizon specified by the Board of Directors. Russian market coverage was achieved in 2011 through a subsidiary sales and service network that involves PACCAR’s European truck division, DAF Trucks N.V. Brasil is the company’s next major expansion target and is the subject of this case study.

BACKGROUND

PACCAR Inc was first founded in 1905 as a railcar and logging equipment manufacturer in Seattle, Washington. In 1945, it acquired its first truck manufacturing company, Kenworth Truck Company of Seattle, Washington (Groner, 2005). In 1958, it purchased its second truck
company, Peterbilt Motors Company in Newark, California (Rasmussen, 1989). Foden Trucks of the United Kingdom was its first non-North American truck acquisition in 1980 (Groner, 2005). In 1985, PACCAR entered into a joint venture with Volkswagen do Brasil to produce and import medium duty vehicles into North America, a relationship that ended in 1990 due to hyper-inflation in Brasil and a subsequent joint venture between Ford and Volkswagen called Auto Latina (Bradshier, 1997). In 1996, PACCAR purchased DAF Trucks of Eindhoven, the Netherlands and in 1998, the company purchased Leyland trucks based in the United Kingdom (PACCAR, 2012).

PACCAR’s brands are of the highest quality and are the premium products in their respective markets. PACCAR has ranked highest by J. D. Power and Associates in their heavy- and medium truck surveys 33 times in the last 13 years. DAF has earned the International Truck of the Year three times, and PACCAR has been named the best engine manufacturer in Asia for five consecutive years (PACCAR, 2012). In 2011, the company had $16.4 billion in consolidated sales and revenues, $1.0 billion net income, $5.4 billion in stockholders’ equity, 10 year average shareholder return of 14.6 percent, and dividends have increased by 200 percent in the last 10 years (PACCAR, 2012).

PACCAR formed PACCAR International, Inc. in 1973, to export U. S., Canadian, and Mexican-built products to its global markets. Sales were limited because independent agent/dealers were typically multiple-line and had “divided loyalties” (Hill, 2011, p. 476) and import duties in many countries were onerous. With the proximity of Europe to the Soviet Union, North Africa, the Middle East, and India, many European commercial truck manufacturers like Mercedes and Volvo expanded into these continents. Cultural ties between southern Europe (Spain and Portugal) yielded truck preferences for the cab-over-engine products from these same European manufacturers. Cab-over-engine configurations (COE) mount the cab on top of the engine to meet stringent overall length laws which are necessary due to the roads in Europe, many which traverse through medieval cities. These requirements shutout the long-hood styles built by North American manufacturers like Kenworth and Peterbilt, which are not as strictly regulated in their domestic markets. Additionally, domestic content requirements of 60% in the Mercosur trade pact of Argentina, Brasil, Paraguay and Uruguay (Compilation of Foreign Motor Vehicle Import Requirements, 2008) made it unprofitable to import products into these countries because these are subject to a 35% duty. This duty created a further disincentive for
PACCAR to export trucks for sale into the Mercosur region. Finally, Brasil in particular has evolved from an import-based economy to local production, as explained in the Product Life Cycle Theory adapted from Raymond Vernon (Hill, 2011, p. 177). Their low-cost labor and duty structure eliminated the advantage that PACCAR had with its export products. As a result, PACCAR abandoned its sales efforts in Mercosur countries and concentrated on the Andean countries in western South America, Mexico, and Central America.

**BRAZILIAN MARKET OVERVIEW AND ANALYSIS**

Brazil represents one of the strongest commercial vehicle growth markets in the world. In 2002, Brazil was estimated to have less than 60,000 commercial vehicles of 6 metric tons (medium to large commercial trucks carrying 26,000 pounds or greater of payload) or greater sold into their market each year. By 2011, this number had jumped to 168,000, which is 80% of the U. S. and Canadian market of 210,000 units. The forecast for 2015 is 200,000, a record (PACCAR, 2012). This compares to India which is forecast to have commercial truck production of approximately 380,000 units, and China which will have around 1,200,000 trucks built in 2015. While the latter two countries eclipse Brasil’s forecast in unit volume, it is noted that India’s 2011 production was estimated at 340,000 units and China’s was estimated at 1,170,000 units. The growth projection from 2011 to 2015 for Brasil is 15% compared to India at 11% and China at 3%, a saturated market. Therefore, expansion opportunities for Brasilian entry are somewhat better than India and significantly greater than China.

The competitive commercial products landscape in South America is complex. Mercedes, Iveco, Scania, Volkswagen, and Volvo are European COE brands that have been manufacturing in Brasil for local use and low-cost product and component export back home. Ford also has a long-standing automotive and commercial truck manufacturing presence in Brasil. Of these “Mercosur” companies, Volkswagen has leading share, followed by Ford and Mercedes. All are reproduced in Brasil with domestic content and labour (Compilation of Foreign Motor Vehicle Import Requirements, 2008). U. S. manufacturers sell a few specialty products imported into Brasil from the U.S., including Kenworth Truck Company (a division of PACCAR), Freightliner (a division of Daimler), and Mack (a division of Renault). They are subject to the stiff 35% duty associated with a non-Mercosur manufacture. International Harvester (Navistar) is unusual because they build engines in Brazil and ship them back to the U.S. for use in its North American
trucks. They also install this Brazilian engine in a COE model exported to Brasil. Even with the Brazilian engine in this truck, it does not meet the localization requirements of 60 percent and therefore they incur the 35 percent duty. With its high price point due to the 35 percent duty, U. S. labor costs, shipping to Brasil and a low quality perception, they have low market share (International Trucks, 2012). Japanese manufacturers import Fuso, Hino, Isuzu, and Nissan small COE trucks into Brasil through the reduced tariff rate of 22.5 percent because they all have automotive assembly in Brasil. Chinese products from Foton and Dongfeng are being sold directly into these markets but because they do not have manufacturing in Brasil, even their very low cost is marginally competitive once the 35 percent duty is added. Figure 1 shows Brasilian commercial truck manufacturers, their annual volume in 2010, and the duties they pay.

The 35 percent duty associated with importing premium-priced PACCAR products (DAF trucks from the Netherlands or Kenworth or Peterbilt Trucks from the U. S.) places the company in an uncompetitive price position when importing trucks into Brasil compared to other manufacturers who have either established local manufacturing in Brasil or are importing trucks at a more favorable duty due to affiliated automotive manufacturing relationships. To enter this market space, PACCAR concluded that local manufacturing is required and selected the DAF cab-over-engine brand as its product. Figure 2 shows DAF’s current price position with the 35 percent duty penalty compared to Kenworth’s price position (also with the duty penalty), the competitive price range in U. S. dollars, and the market share leader’s price position. By
avoiding the 35 percent duty, DAF products will fall in at the top of the competitive retail price range (the top of the red bars shown below in Figure 2). The DAF price point without the duty penalty maintains DAF’s premium quality image, superior product margins, and the market share target of 10 percent to 15 percent, consistent with other PACCAR divisions. This price point will also provide PACCAR with an opportunity to eventually export these lower-cost vehicles to Europe and other emerging countries that are served by DAF.

Figure 2: Brazilian Truck Price Position

![Graph showing Brazilian Truck Price Position](image)

**BRAZILIAN BUSINESS DYNAMICS**

Starting business in Brasil has presented some interesting challenges to PACCAR. On August 31, 2011 the company issued the following press release: “PACCAR announced plans to construct its new DAF Brasil assembly facility on a 500-acre site in the city of Ponta Grossa in the state of Paraná. "PACCAR is pleased to invest $200 million in its DAF facility in the dynamic and progressive state of Paraná," commented Mark Pigott, chairman and chief executive officer. Construction of the 330,000-square-foot assembly facility is projected to begin in 2011 and be completed in 2013. The new facility will be designed to assemble the DAF LF, CF and XF models, to meet current and future requirements of the Brasilian transport industry. (PACCAR Inc, 2011).

The process to start a business in Brasil is complex and time consuming. The World Bank outlines 17 steps that should be taken by companies who launch a business in Brasil, taking
an average of 152 days to complete. These are contrasted to the United States, which has only six steps (International Finance Corp, 2012). The Brasilian steps range from registering with Federal, State, and Municipal tax agencies, having physical inspections, enrolling with the federal social integration agencies, setting up unemployment reserves, and registering with the two main employee unions, the Patronal Union and the Employee’s Union. The steps require a high degree of social interaction between the applicant and the officials, and small “grease payments” (Hill, 2011, p. 130) are obligatory to avoid delays. To avoid the delays, PACCAR hired local agents, local corporate counsel and a local Human Resources director to reduce the time for incorporation to just over four months.

A major challenge to the Brasilian start-up team has been the set-up of dealer franchises. PACCAR sells its products exclusively through independent dealers or subsidiaries, depending on country laws and practices. For example, all North American products are sold through independent dealerships while in Europe, DAF trucks are sold through company subsidiaries. Brasil follows the U. S. model with independent dealerships, which are more difficult to establish than subsidiary companies because the candidates must be recruited, have experience selling commercial vehicles, access to working capital to fund the business, and finally, must meet two PACCAR requirements: (1) they must exclusively represent DAF trucks and (2) they must build a dedicated facility for sales, parts, and service according to PACCAR standards. PACCAR through DAF Brazil Caminhoes (Caminhoes means Trucks in Portuguese) is recruiting the initial 27 dealer franchises to represent the company for each of the states and the Federal District. The challenge that PACCAR has been facing is that well-run truck dealers already represent multiple brands in their stores. PACCAR has the challenge of attracting high-quality entrepreneurs who want to invest in a new product line, who have the experience to make this work, and who will agree to drop their current truck lines. To get this high quality dealer in Brazil is not likely to happen and PACCAR will probably be compelled to amend its exclusivity policy in Brazil.

A second major challenge has been the recruitment of plant workers from the local community of Ponto Grosso in the state of Parana, Brasil. Ponto Grosso is situated on the “Hall of Mercosur”, the main highway that connects Sao Paolo, the capital, to the other Mercosur countries of Uruguay, Paraguay, and Argentina. It has become known as a “truck city” with many skilled mechanics who repair and service commercial truck vehicles in small, independent
“shade tree” shops. The city is also home to UTFPR, the Universidade Tecnológica Federal do Paraná, a local technical university where PACCAR and DAF have established their offices until the plant is opened in late 2013 or early 2014. PACCAR has embarked on recruiting new employees in anticipation of the opening of the new plant. The challenge that the company faces however is that, while the area is blessed with mechanically-skilled personnel, literacy rates are low and their formal training in truck assembly is lacking. The company has thus developed a new training curriculum similar to that used by East Mississippi Community College in Jackson, MS for PACCAR’s new engine plant. The curriculum provides the skills to pass an aptitude and reading test that indicates an applicant’s suitability for the position. The test is a rigorous, 4-hour battery that has been deployed at all PACCAR facilities worldwide which assesses aptitude, speed, and manual dexterity to ensure that high quality products are the global standard. Pass rates are typically in the 60 percent range.

1. KEY DECISIONS

In entering the Brazilian market to meet the timeline established by PACCAR’s Board of Directors, the company has decided to phase in the products over a period of time. DAF products for the European market are assembled in Eindhoven, Netherlands using a proprietary engine built at the same plant, axles built in Belgium, the transmission built in Switzerland, and the cab built in Belgium or France. None of these suppliers have Brazilian manufacturing experience. However, Kenworth and Peterbilt trucks are built in North America using engines from Cummins Engine Company, axles and brakes from Eaton Corporation and Bendix, and transmissions from Eaton and Allison. All have Brazilian manufacturing for truck OEMs (original equipment manufacturers). They also import these Brazilian-made components for assembly in trucks in the U.S. and South America, including Brazil. Using these existing relationships the DAF plant will initially assemble a chassis and powertrain using Brazilian-built components from North American suppliers and an imported cab from DAF in Europe. This narrowly meets the 60% domestic content rule to remain duty-free for the domestic market. While this may initially seem favourable, European cabs and sleepers (the apartment-style living spaces behind the cab that are used for long-distance travel) are highly tooled and expensive, and these cabs will incur parts import duties of 18% when entering Brazil (Compilation of Foreign Motor Vehicle Import Requirements, 2008, p. 14). The duty paid for each imported cab from DAF will reduce the profit margin of the initial products.
The second phase of DAF’s Brasilian manufacturing plan envisions sourcing and assembling the cabs in Brasil. The new facility has room to add cab framers and the capital investments have been identified. Using Brasilian labour will reduce the cab cost substantially, and the 18% parts duty will be eliminated. This will place DAF Brasil Caminhoe in a competitive market position (see Figure 2) and the company will meet target return-on-investment goals. Final decisions to add cab manufacturing will be based on market acceptance of the new DAFs that are assembled in Brasil starting in 2014.

2. OPPORTUNITIES, CHALLENGES AND ALTERNATIVES

The upside of entry to Brazil is enormous because, as explained earlier, despite its late entry to the market PACCAR has an opportunity to leverage existing North American suppliers with local Brasilian manufacturing to gain market share in a country with 15 percent growth opportunity. Adding lower cost cab manufacturing will further reduce costs through Brasilian labour, improve product margins, and the product will be even more closely aligned with Brasilian market requirements. Finally, PACCAR can eventually export these Brasilian-built products to high cost countries in Europe, as explained in Vernon’s Product Life-Cycle Theory (Hill, 2011, p. 177) where developing countries segue to export status as they mature.

One of the risks associated with PACCAR’s entry into Brasil is the reaction expected by competitors, particularly Ford, Mercedes and Volkswagen. All are formidable in size and have extensive global manufacturing capabilities in many low cost countries around the world. They will not give up their market share without a fight, and both are able to flex their pricing, achieved through automotive-scale sourcing, to maintain share. DAF’s pricing position is less flexible. With its premium price point, initial import of its cab and a newly established dealer network, market share targets of 10 percent to 15 percent will be hard fought. PACCAR must plan for even lower-cost sourcing of components since they occupy the premium segment of the market and have less pricing elasticity than the lower-quality competing brands from Brasil. PACCAR should explore strategies with its key component suppliers Cummins Engine Company and Eaton Corporation to source in lower-cost Andean countries like Bolivia and Peru, both of which have trade agreements with Brasil and Mercosur (Compilation of Foreign Motor Vehicle Import Requirements, 2008, p. 13). PACCAR should also evaluate the cost-effectiveness of manufacturing the PACCAR proprietary engine in Brasil, both for domestic and
export use. This would provide a lower-cost product to go head-to-head with Ford, Mercedes and Volkswagen.

Another risk is Brasil’s financial history and its political instability. While the current business climate is stable and the long-term prognosis for growth is strong, history has proven that Brasil is a fairly risk-prone country. A review of Brasilian GDP (gross domestic product) year-over-year change since 1996 shows eight downturns to negative growth, or one every 2.25 years (Tradingeconomics.com, 2012).

As a result of these concerns, PACCAR has developed confidential contingency plans to manage a wide variety of scenarios. These range from currency hedging to market exit, depending on the severity of the financial crisis or the political situation.

3. CONCLUSION

Brasil is a growth market, consumer spending is exploding with its emerging middle class, and truck demand is expected to be very high over the next decade. PACCAR has strategically entered the Brasilian market to expand shareholder return. DAF products are well suited for Brasilian use, and the company has the financial capability to make balanced, long-term foreign direct investment in local manufacturing. Starting with experienced local hires and a small U. S. team, they have successfully navigated the intricacies of establishing the company in this very complicated country with its exhaustive steps of incorporation. It is actively training and hiring workers, has charted a long-term product plan that includes cab assembly, and is recruiting a new, independent dealer network to sell and service its products throughout Brasil.
Lastly, it has engaged in contingency planning for future financial crises since experience has proven that Brasil tends to be unstable over the long term.

REFERENCES