

The internationalization of the Brazilian video-game industry

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Abstract

This study investigates the internationalization process of Brazilian videogame development firms. The study, of a technical nature, is based on secondary sources, complemented by personal interviews with specialists. The results show that the videogame sector in Brazil is still in its early stages, and that internationalization of videogame firms is incipient. Firms have to face several barriers to their internationalization, both external and internal.

1 Introduction

Once considered just a form of entertainment for children, the games industry is today increasingly diverse, and the use of games in the business environment is becoming more common. Revenues from games and consoles were of approximately US\$52 billion in 2012, surpassing the film industry, with sales of \$ 50.6 billion in the same year (Machado, 2013). The Brazilian consumer market for games also showed an enormous growth, even rising above the world's average growth rate, and becoming the fourth largest market for games in the world. In fact, according to ACIGames (the Brazilian Commercial, Industrial, and Cultural Association of Games), Brazil has presently more 40 million game players, around 25% of the country's population (Graef, 2013). Expectations are for continuous market growth in the next five years, with an accumulated growth rate over 35% (Murno and Drska, 2013).

However, the same dramatic increase was not observed in the Brazilian games industry, where growth was quite modest. Several reasons have been raised to explain for the low growth rate of this industry, including high taxation in the country, which eventually encourages piracy. Thus, in order to circumvent the problems encountered in Brazil, several small companies producing games are seeking the international market as an alternative to the Brazilian market, which is still too inhospitable for the production of electronic games.

This paper aimed to analyze the present situation of the Brazilian games industry, with special emphasis on the internationalization process of Brazilian games developers. The study is based on secondary sources, complemented by personal interviews with two Brazilian entrepreneurs of the videogames sector, who have successfully internationalized their firms.

After this introduction, the paper presents the products developed by the industry, and describes the characteristics of the Brazilian games industry and the many problems faced by game developers in the country. Subsequently, public policies used by Brazil and other countries in the world are described. The next section describes the present state of the

internationalization of Brazilian games developers and the barriers faced by these firms in the process. Finally, we present our final considerations.

2 The Product: The Videogame

The first electronic games were segmented according to their purpose; the games were initially divided into entertainment games and serious games. Within the category of entertainment games several subcategories emerged based on different platforms (Querette et al., 2012): video game consoles (Playstation, Xbox, Wii), offline PC, mobile devices (phones, tablets, portable consoles), massively multiplayer online game (MMO), and casual games. In “Newzoo,” (n.d.) there is also a division within platforms, which includes a further subcategory for social games, representing the games developed for social networking.

Serious games can be used for several purposes such as education, training, simulation, team building, collaboration, social networking, advertising, investigation, and business modeling. They are also used in various industries and sectors such as: military defense, education, business, scientific exploration, health, emergency management, urban planning, engineering, religion, politics, tourism, cultural patrimony and virtual conference. They can be classified according to their purpose: advergaming, edutainment, game-based learning, newsgame, training and simulation games, persuasive games, organizational-dynamic games, games for health, and edumarket, which are games that combine purposes of more than one subcategory of serious games (Serious Game University, 2013).

Each segment is said to have a different culture with different media production and market access (Querette et al., 2012). For example, producers of console games need specific proprietary development kits to each console and with restricted distribution rules. As for the developers of casual games, they have independent and shorter cycles of development, that involve lower risks and costs of production, but they have greater difficulty in marketing their games, and have to face more fragmented and competitive markets.

3 A Portrait of the Brazilian Game Industry

The Brazilian gaming industry is characterized by the dominance of small and micro enterprises. In fact, according to a report by ACIGames (2013), the large majority (around 70%) of Brazilian game producing firms are formed by their founders, with one or two employees. These firms face severe difficulties, since they are undercapitalized. The founders are often quite young and have no business backgrounds. Many survive making advergaming, and only a few actually create games for both the retail market and digital stores, such as Apple Store, Steam, etc. Very few (less than 10) produce games for consoles (or portable).

In terms of legal status, many game developers are not incorporated, but produce good games and get revenues from digital sales. These companies do not operate in the formal economy mainly due to the high costs and bureaucratic impediments to open and maintain a company in Brazil. Also, the costs and bureaucracy faced to close a business if the venture does not succeed are even greater.

The cost of producing a game in Brazil can vary greatly, depending on the type of game. An independent game can cost from \$200,000, with a production time of five years, to \$15,000 or \$30,000 and a production period of four to six months of production, which is the average

time needed to create a typical successful game for the iPhone. In Brazil, a production with a budget of \$200,000 can be considered as a "super production". Brazilian companies have released games on the Apple Store that cost less than \$ 1,000, with an average production time from four to six months.

Brazilian companies have difficulties in accessing development kits for game consoles, but this reality is changing, since the percentage of revenue from console games has increased dramatically; while in 2005 the revenue was only 11%, in 2008 it reached 40% (Rocha, 2010).

Startup costs are considerably high (ACIGames, 2013). A team of three people (a programmer, a photographer and a game designer) may require an investment of five thousand dollars just to buy equipment and software licenses to start the business. In addition, a startup has to face the costs of of renting property, buying furniture and maintain a functioning office. Firms incorporated also suffer from the high tax burden on human resources, who are the main asset of the firm.

Labor laws and the tax burden in the production of a game are impediments to the development of large size games, because they make it unfeasible to a firm to keep a highly skilled team (5-10 years experience) and large enough (50 to 200 people in average), that is committed to the project from start to finish (with formal contract and benefits) (ACIGames, 2013).

Wages in the Brazilian games industry are related to the levels practiced in the information technology market, where, for example, it is common to consider professionals working in the graphic design of games as if they were web designers. Since the market for games, as well as for IT in general, is still quite narrow, prices in Brazil can be less than half of those practiced, for example, in the United States.

Piracy is probably the most disturbing characteristic of the Brazilian market, acting both as a lack of stimuli for investments by the private sector, and lack of interest of educational institutions to further invest in the offer of special programs. Piracy has a very negative impact on the interest of both educators and students in investing their time and efforts in developing the field in Brazil.

There is no "gamer culture" fully established, which makes the market of games development an 'subculture', where only the people directly involved in the production of games know the difficulties, the process, benefits and prospects of this market. (ACIGames, 2013).

Another huge problem faced by the industry is the lack of educational and training programs. There are not enough university courses to meet demand for qualified professionals, where most courses are not specific to the development of video games. A study by Rocha (2010) analyzed a cluster of game development in Brazil, located in the state of Pernambuco, Northeastern Brazil. It was found that there are good professionals in the technology area, but without specific training in games, so all the professionals who work in the cluster had to undergo some kind of training. In the state of Pernambuco just four institutions offer specific courses on the development of electronic games. As a result, specific courses on games have recently been introduced in undergraduate courses to try to meet the market demand for game professionals. In addition, some firms in the cluster have invested in internal training of their

employees and they are also working with educational institutions improving the availability of courses and disciplines in the area of games.

The unpreparedness of educational institutions in the country to meet the needs and expectations of the game development industry is also well established in the ACIGames (2013) report. After all, educational institutions are directly influenced by the market and directly influence the quality of the game courses offered. However, in most cases, courses are built without much concern for the practice and without significant theoretical foundation.

The lack of adequate equipment and facilities to develop courses on gaming in the universities are also a concern. Only a few institutions of private education provide the infrastructure and the equipment required to teach these courses. In fact, most public educational institutions do not offer state-of-the-art equipment and the required infrastructures for the development of gaming courses. As a result, according to the report, often the charges to acquire adequate equipment for the courses are shared by students and professors.

Nevertheless, the picture is not as somber as it may appear at first glance. Recently, the number of educational institutions offering courses in game development has increased, as the demand for these courses has grown significantly in recent years. However, according to the report, there is no Brazilian university, so far, able to meet international standards for the production of large games.

The major reason for the failure of Brazilian universities to offer consistent curricula on game development has to do, to a large extent, to the attempt of fitting these programs (and the three major areas related to game development, art, programming and design), into a traditional or technological undergraduate approach. Currently, courses in game development offer heterogeneous curriculum arrays, which, distinctly from what happens internationally, try to condense multidisciplinary knowledge and totally distinct fields in a program of three or four years.

The programs that offer multidisciplinary curricula make available to the industry professionals with superficial knowledge in several areas. Therefore, these programs do not meet the real needs of the industry. On the other side, the few courses that emphasize one of the three specific areas needed for game development (i.e. art, programming and design) provide highly skilled professionals in only one area, but these professionals are not able to create a consistent portfolio due to the lack of knowledge in the other areas.

Another problem raised by Rocha (2010) is the difficulty in retaining talent in the game development industry, where many professionals end up leaving the country to work abroad, attracted by better opportunities to learn, better facilities and equipment to develop games, and better remuneration.

4 Public Policies to Foster the Brazilian Games Industry

Many countries offer strong support to the development of an indigenous games industry, recognizing its importance as part of the creative economy. Support mechanism vary, depending on whether game developers are seen as part of the information technology and communications industry (e.g. Ireland), or as part of the content industries (for example, France).

Some countries have regional, or state policies to support the games industry, while other have national industrial policies that prioritize game developers among the key industries to develop.

Both in the U.S. and Canada there are differences between regions or states. In several regions of Canada, there are subsidies to game developers. For example, depending on the region, 30% to 45% of workers' wages are subsidized. In addition, local governments also provide loans, grants and tax exemptions to cover production costs. In the U.S., incentives vary from state to state and are usually in the form of tax exemptions.

In France, several instruments have been created to stimulate the development of games such as: a tax credit of 20% for games approved by a committee of the French cinema department; a fund to support the video game industry, which subsidizes part of the production of prototype games; and an award given in the form of tax incentives to encourage innovation in small startups. In addition, other support is given such as loan guarantees, export subsidies, and incubators for gaming and multimedia startups.

South Korea has developed the Korean Game Development and Promotion Institute (KGDI), which centralizes promotion policies of the South Korean games industry. KGDI has among its functions to support online games, to support the development of multi-platform engines, and of other technologies such as computer graphics and 3D animation. In addition, the institute seeks to improve cooperation between research institutes in order to promote innovation in games.

Brazil is far behind these countries in fostering its indigenous game industry. Currently there are some measures to promote the development and the internationalization of the Brazilian games industry, such as lines of nonrefundable credit, and projects such as the "Brazilian Export Game Developers Program" specifically created to promote the exporting of Brazilian games.

Public instruments of non-reimbursable financing of technological innovations were created in the early 2000s with the goal of encouraging innovation in the private sector. In spite of the importance of this type of financing to foster research, development, and innovation, industry specialists note that important activities such as marketing and sales, the hiring of executives and buying or renting physical space cannot use these funds. As a result, game companies end up having to seek other forms of financing (Rocha, 2010).

The "Brazilian Export Game Developers Program" is a nonprofit program, created by the developers of the Brazilian Association of Electronic Games (Aragames) in partnership with the Brazilian Agency for the Promotion of Exports and Investments (Apex-Brasil), with the aim of strengthening the Brazilian digital games industry, enabling and creating new business opportunities for Brazilian companies in the international market.

Nevertheless, according to ACI, government incentives proved insufficient, insignificant, superficial, and totally oblivious to the reality of the development of the games industry in Brazil. Moreover, the incentives offered favor only a small portion of developers, due to lack of disclosure, or the paperwork involved in using these incentives process (ACIGames, 2013).

Despite the efforts to foster the development of the Brazilian games industry, it still faces barriers to connectivity, inadequate regulation, lack of availability of qualified personnel, limited access to financing, lack of new models of corporate governance, and limitations regarding knowledge transfer (Querette et al., 2012).

ACI, one of the associations representing the industry, suggested some measures that could be helpful to consolidate and promote the industry (ACIGames, 2013):

- Promote cooperation within the industry – Firms need incentives to work together. Therefore, to foster cooperation, the Brazilian government should offer financial advantages (such as lines of credit) for products created by several different companies.
- Support to human capital development – It is necessary to train specialists in order to enable the creation of products and services of higher quality and higher value-added. Since human capital is the main asset of gaming companies, government should subsidize the development of human capital by offering scholarships.
- Minimum share of content policy – The association suggests that the Brazilian government uses the fact that Brazil is the fourth largest market in the world for games to open the access of domestic game developers to online networks (such as PSN, XBLA, and others). This could be done by adopting a policy of minimum share of local content.
- Creation of an incentive to sell games 100% localized – Such an incentive would permit the reduction of costs for local production and encourage the coming of foreign games producers.

Another factor that could help to increase the competitiveness of the Brazilian games industry is the presence of multinational game companies in the country, since the presence of multinationals in Brazil can accelerate the learning curve in the industry and also improve its image abroad (Lemos & Quandt, 2008).

5 The Internationalization of Brazilian Game Developers

Possibly, the main reason for the internationalization of the gaming industry comes from the fact that nowadays it is quite simple to offer games to the international market, due to the availability of several very large corporations that act as publishers¹ (such as Nintendo, Electronic Arts, Microsoft Game Studios). In fact, to export a game can be as easy as selling in the domestic market.

Piracy is another reason for firms to go international. High taxes in Brazil are believed to directly stimulate piracy. In addition, the dominant culture of not paying for games end up by making the domestic market less attractive to game developers. Therefore, Brazilian game developers seek niches that are less vulnerable to piracy, such as serious games (targeting businesses), or seek new markets through internationalization (Rocha, 2010).

Game developers face an additional interesting challenge. For these firms, it is not enough to be innovative; they also need to be fast in marketing their products. If they fail, products may end up not being sold due to the speed of innovations and consequently may end up being

replaced by other games, newest and best. Piracy may also be a factor in speeding the process of taking a product to market. Due to often very short life cycles, specific games, to be profitable, need to reach a certain sales volume in a short period of time (i.e. companies need to reach the breakeven point for the game). Therefore, international markets can be an attractive option to increase sales volume (Lemos & Quandt, 2008), especially if one can easily have access to foreign markets using publishers.

Other reasons may also contribute to the internationalization of game developers. One is the desire of game developers to have their products available in other countries. In some cases, the exposure to international markets adds to the attractiveness of the products in the domestic market. Also, many developers feel that international presence may help to improve their products by complying with international standards of product quality, and production processes. It can also help the firm in discovering and developing competitive advantages.

At the present time, game developers have to face several barriers to their internationalization. One of the most important comes from the fact that Brazil does not have a reputation in technology and game development. A report on the subject (Relatório..., 2011) stated that foreign specialists were not aware of Brazilian game developers; those that had a better knowledge were typically people that visited or worked previously in Brazil or Latin America.

Another issue relates to the high costs of hiring business consulting in foreign markets to help with contracts and tax intricacies. Small entrepreneurial firms in the high-technology segment are often faced with legal problems in their international activities. However, the costs involved in this type of consultancy are very high and can easily lead a firm into insolvency. This stems, to a large extent, from the imbalance of power between the small Brazilian gaming firms and their giant partners (either publishers or large producers of content) in developed countries. Such imbalance, combined with the inexperience and lack of resources to hire law firms abroad, can lead to the signing of critically weak contracts or worse, unenforceable contracts, that can even damage the image of Brazilian game developers abroad.

Another barrier to the expansion of international sales are high taxes, especially when the games are exported to the United States, which is the main gaming market in the world. To export games as a product to the U.S., firms have to pay taxes paid in addition to those already paid in Brazil, making it impossible for a small firm to compete.

Therefore, several Brazilian firms have chosen outsourcing activities as a more promising avenue than the exporting of products (Querette et al., 2012). Outsourcing is conducted by firms in partnership contracts with international companies. Typically, the Brazilian firm is in charge of developing specific elements to be included into larger projects. These partnerships are at this point not only a viable form of internationalization, but also one in which Brazilian developers have the opportunity of engaging in a joint project that gives them access to state-of-the-art technology.

Outsourcing activities in the Brazilian game industry are booming in some areas, such as the city of Sao Paulo, which has a large contingent of skilled programmers with good language capabilities in English. This workforce is capable of developing several activities, such as game development, at a lower cost than those in developed countries. In fact, Brazil has the largest number of Java programmers in the world and the country is the second largest in

number of programmers for mainframes, according to Brasscom, the Brazilian Association of Information Technology and Communications Firms.

Another factor favoring outsourcing services is the proximity of time zones between South and North America. This proximity allows for easier interaction between North American companies and outsourcing companies in South America (Helyar, 2012). Game developers providing outsourcing services to companies in the U.S. and Canada can interact daily and in real time with their customers during most business hours. This interaction ends up creating a significant advantage for the Brazilian game industry, compared to other competitors with longer outsourcing tradition such as India, China, and Eastern Europe. Companies located in these areas operate in time zones that are very different from the U.S., the largest gaming market in the world.

To meet potential customers, Brazilian firms often use international fairs and exhibitions, which are to a large extent supported by the Brazilian government. These fairs are seen by game developers as a major way of prospecting and generating new business.

6 Final Considerations

The Brazilian games industry is in its infancy. Nevertheless, the industry is growing, in spite of the many problems and difficulties it has to face, both in the domestic and the international markets. In fact, specialists and industry associations converge in agreeing that the Brazilian government offers insufficient support to the development of the industry, basically ignoring its needs. Major efforts are necessary in developing the infrastructure and human capital that would permit the industry to have a more sustainable growth.

The internationalization of Brazilian game developers, nevertheless, has two major forms: the exporting of games and the outsourcing of game development services. Each type of internationalization has its strengths and weaknesses, but both are promising paths for the development of the industry internationally. The exporting of games is increasingly simple due to the efficiency of large international publishers and online stores; and Brazil has a great potential to provide services via outsourcing to large North American gaming firms.

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ⁱ A video game publisher is a firm that publishes video games that were either developed internally or by a game developer. The main functions of a publisher (Pelizzari, 2009) are: distribution of games, physical or digital; financing of game development teams; selection of games based on marketing studies; and the definition and implementation of marketing strategies. Publishers should have a team of quality assurance to test games and ensure that customer expectations are met.