



Diversification as a Sustainable Growth Strategy in the Packaging Market: case study of a Brazilian company, Impacta S/A Indústria e Comércio

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Abstract: The diversification strategy is one of the most preferred by companies that search for the sustainable growth of their sales and profits in markets where products appear, grow in demand and become mature in a progressively faster way. This process is strongly perceived in the packaging product market, as packaging are means of product promotion, brand image building and product quality protection, currently more and more important for consumer products. This research aims to verify if the diversifying strategy is a suitable option for companies of such segment. The verification is performed through a case study covering the diversification solution of Impacta S/A, traditional supplier of aluminum collapsible tubes in Brazil and Latin America that added to its portfolio plastic tubes and aluminum monoblock aerosol cans. The conclusion of this study is that such diversification reached its goals of generating sustainable growth, reduce business risk, obtain solid “Market Share” in Brazil for all its products, adequately re-position the company in the market and surpass the results achieved by its competitors in the country. It was also possible to assess the perspective of continuity of the current strategy as a way to increase sales by 85% in US dollars in the next five years, confirming the good quality of the company managers’ strategic choice.

As this conclusion is in part limited by the fact that the study focused on a single case, a suggestion should be left recommending the analysis of other diversification cases of companies in the packaging segments.

Keywords: diversification; sustainability; business strategy.

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INTRODUCTION

In a changing and innovative market, companies that produce consumables, seek to exploit the growing sectors as a way to find solutions that ensure its sustainable growth. In the case of companies that own pharmaceuticals and cosmetics brands, this quest has a deep connection with the packaging used to package their formulations. Sometimes, the cost of packaging exceeds the cost of the content. Thus, the concept of packaging as a simple “container” to package products has been replaced by the concept of packaging as a marketing tool .

According to Mestriner (2007), the roles of sales promoter and support for marketing transformed the packaging into a “branding” agent (brand management), giving support to the work of building the brand image and becoming increasingly used to build relationships with consumers. It is also used as a competitive advantage by incorporating innovation and design as regular components of its project. Thus, companies seek to provide better or more interesting packages to the consumer and that, at the same time, are technically compatible with the conservation of content, which is the ultimate object of the purchase.

For suppliers of packaging that drive means the growth and rise of new types of packaging solutions and the obsolescence of others. This transforms packaging suppliers in an expanded view of business, into suppliers of “packaging solutions” and puts at risk the continuity of more traditional lines, exposing them to the innovation process that occurs on clients. Thus, packaging supplying companies need to follow the trends in order to become economically sustainable in the long term. Following trends, in this case, means to be able to offer products and solutions that the clients need, which may result in diversification.

According to Ansoff (1977), diversification is a strategy that the company must follow when it is targeting a new market or a new product. In some cases, diversification is even regarded as a “last” strategic alternative. Ries and Trout (2009) in their book “Positioning”, say that, “when there are no other brands or the brands that exist are weak, it is possible to extend the product line.” However, companies seek to diversify, according to Marreiros and Gomes (2008) for six basic reasons: skills capitalization, increased bargaining power, generating savings by sharing costs, obtain various sources of revenue, maintenance of growth and reduced business risk.

The diversification processes followed by companies that choose this strategy are not, however, equal. Writings from several authors such as Wood (1971), Rumelt (1974), Tachizawa and Rezende (2000) and Marreiros and Gomes (2008) find several types of diversification, and the eventual choice of typology can mean the difference between the strategic hit or error with good or bad consequences for the company seeking diversification. Among these, Marreiros and Gomes (2008) identify two models of diversification: totally or partially related to the company business, and the non-related to company activities. Authors graphically illustrate such types according to Figure 1.

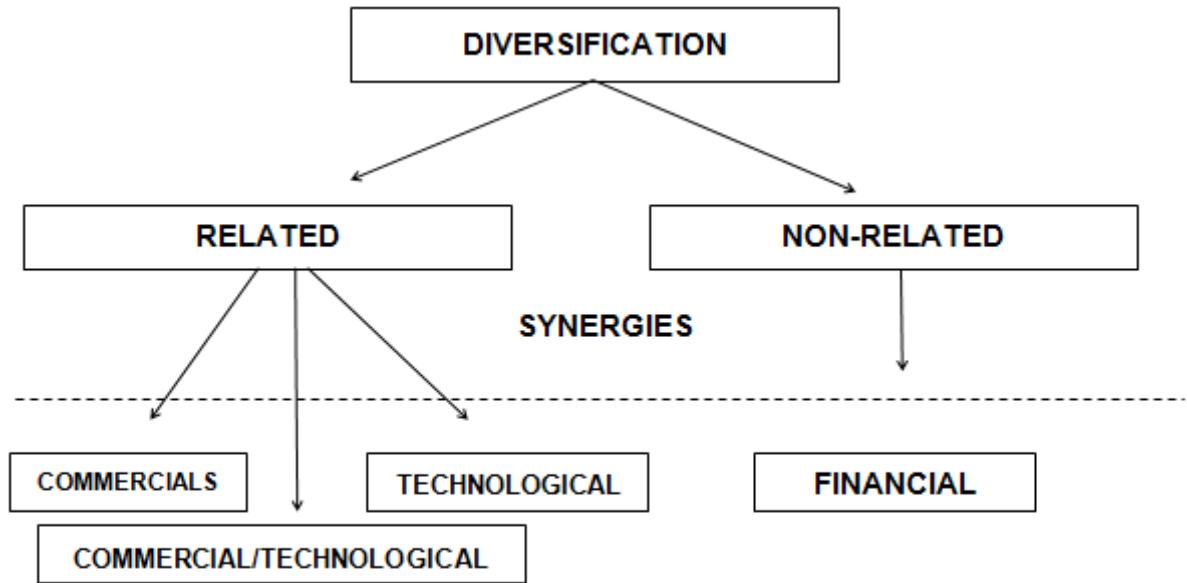


Figure 1. Diagram of diversification types
 Source: Marreiros and Gomes, 2008

As shown in the figure, it is observed that the company that seeks diversification may do so through activities that are unrelated to their current activity or entering into new businesses related to their current activities, seeking commercial, technological or both synergies. From diagram shown in figure 1, Marreiros and Gomes (2008) further provide a diversification matrix linking technology and nature of the use of products or services, considering the possibility of “current” or “new use”, as presented in table 1.

Table 1
Diversification matrix

Technology	Products or services nature			
	Current use		New use	
			No commercial relation	With commercial relation
Current technology	Improved product		Diversification with technological synergies	Diversification with technological and commercial synergies
New technology	Substitute product		Diversification without synergies	Diversification with commercial synergies

Source: Marreiros and Gomes, 2008

In this matrix, it is of particular interest to the packaging producers the “Diversification with technological and commercial synergies,” the one in which the products of the company’s new business relate to the previous ones, both commercially and technologically. This type of diversification has the advantages of technological competences utilization of the company

and the use and expansion of the same customer base. According to the current concepts of Resource Based View - RBV (Barney, 1991) assets, skills and attributes of a company qualify it to produce and market other products that use these technologies and are on the rise in an effort to diversify.

Additionally, some strategies help to understand the reasons behind the choice, synergism and several types of the diversification. According to Wright, Kroll and Parnell (2000), apud Correa et al. (2009) the “related horizontal diversification” is part of one of the eight possible strategies of growth and occurs when a company acquires another outside the scope of their operations, but related to its core competencies. The concept can be extended to companies that, rather than resorting to acquisitions, create new products with similar characteristics to the previous ones. Costa (2006), apud Correa et al (2009) defines four types of diversification, the latest being “Diversification anchored in basic skills.”

In turn, Rogers, Silva and de Paula (2008) quote Hitt, Ireland and Hoskisson (2001), which indicate reasons for related diversification: a) the exploitation of scope economies; b) the transfer of core competencies; c) the increase in market power, among others. They also mention the reduction of exposure to an industry of low performance and reduction of financial risk. Riolfi (2007) refers to the Rumelt’s work (1974), which investigates the relationship between diversification and performance, concluding that companies that diversify in related businesses have outperformed those that do not diversify their activities, or do so through business unrelated to their core business.

Considering mainly the possible use of the synergistic effect that connects customers, technology and ownership of certain intangible assets of the company - linked to the accumulation of experiences for their human capital in the production, development and marketing of products -, should companies in the packaging business seek diversification as a solution to develop sustainable growth?

This study aims to determine whether diversification is a strategic option suitable for companies in the packaging segment, through the study of various aspects of their performance that allow this determination, including the company’s profit growth and product development that become alternative revenue sources, growing market share, improved perception of the company’s image by customer from its new positioning and obtaining results superior to the competition’s.

This paper assumes that the implementation of a strategy of related diversification, with commercial and technological synergies, according to the concept of Marreiros and Gomes (2008), can be successful for companies in the packaging industry.

DIVERSIFICATION STRATEGIES

According to Silva (2005), diversification can be seen as a function of management decisions which are decisive for the future of the company, i.e., as strategy.

Therefore, considering that diversification is a strategic choice, it is necessary to discuss a modeling of diversification to ensure an effective choice of strategy, taking into account several aspects. Initially, according to Michael Porter (2004), it is necessary that this creates a situation in which the company can operate with a unique group of activities difficult to be replicated by

others. Porter states that the strategic positioning arises from three mutually exclusive sources, often overlapped, highlighting among those three the positioning based on needs, which consists of better meeting through an integrated set of activities, several needs of a particular segment of customers. This concept, considering the needs of the pharmaceutical and cosmetics markets regarding their packaging, is summarized in the ability to offer customers a unique combination of solutions to meet those needs. If the company succeeds in this strategy, customers will therefore fill up on more than one product supplied by it, acquiring there other things that they need.

However, in order to obtain the feasibility of this strategy in the packaging segment, in which firms have specialize, develop knowledge in specific technologies and require expensive machines that produce special packaging from processes involving automation, Porter's mentioned strategy requires theoretical complement that is provided by the concept of the Resource Based View, which, according to Carneiro, Cavalcanti and Silva (1997), indicates that the basic source of the profitability of the company are some valuable, scarce, with no substitutes and of difficult imitation resources, also citing Barney (1991).

Carneiro, Cavalcanti and Silva (1997) mention that the Resource Based View suggests that the strategy is initiated by identifying existing resources and expertise in the company, followed by the assessment of sustainability of competitive advantage that they can provide. Considering both concepts, Porter's and the Resource Based View, it can be said that a diversification strategy centered on customer needs should take into account the synergy that the offer of solutions demanded have with the competencies of the company, being necessary for the solutions to be of possible application in a segment of expertise such as packaging.

A second aspect concerns the financial results produced by diversification, in particular, those arising directly from new business, as a result of the adjustment of strategic choice, diversification needs to generate results for the company. In Marreiros and Gomes's (2008) article mentioned in the introduction stage of this study, it appears that the authors relate six basic reasons why companies use a diversification strategy: exploiting its core competencies as a source of competitive advantage (which aligns with the idea of Resource Based View), increasing their bargaining power, reducing unit costs by extending the company's operations into new activities, obtaining revenue from alternative business sources, maintenance of growth when going into businesses with potential expansion to compensate for the stagnation of the base-business and risk reduction. However, the company will only be successful if equipped with the skills needed to win customer preference. Compliance with such basic reasons happens if the diversification brings expansion of the company's revenue from new businesses and if from this it also brings improved profitability.

The other three aspects to be considered relate to the company's performance relative to the competition, and are extracted from the writings of Ries and Trout (1989). These authors claim that the company with the largest market share is more likely to continue to subtract business from that with lower participation, which in this case implies the fact that the company should be able to achieve, after diversification, a robust participation in the markets in which it operates (market share). Then, it should be taken into account, in a process of successful diversification which should result in the recognition of customers when the company's ability to serve them with the adopted solutions of diversification, which should also be an object of confirmation by this study, because building on these authors, marketing battles are fought “

inside customers minds”.

Finally, one must consider the success in the face of competition in different business that the diversified company explores. A company that adopts a diversification strategy based on needs, and the conceptualization of RBV should be able to generate financial results that outperform the competition’s, which will also be subject to confirmation by the present study, since according to Ries and Trout (1989), in order to succeed the company must be “oriented towards the competitor”, by which they mean that the company must overcome their competitors, through strategies designed with that focus.

Therefore, it is possible to build the theoretical basis of this study, with the addition of the concepts mentioned to conduct an analysis of diversification results. Such analysis should include the identification and discussion of the diversification strategy adopted, their typology and positioning, checking the progress of revenue growth due to the new business, the evolution of the overall profitability of the company from the adoption of the diversification strategy, evolution of the “market share” of their products, old and new, after the strategy implementation, evaluation of customers’ perception about the products and services that result from the new strategic positioning, the comparison of the company results that diversifies with the competition’s and the future economic sustainability prospect regarding this process.

This way of verifying the effectiveness of a diversification process, finds support in Mintzbert (1992) which states that while diversification on a framework of generic strategies may help to think about the positioning of an organization, its misuse can put the organization in disadvantage against competitors who have developed their strategies “more creatively”, i.e., diversification implemented must be able to take the company to a position of advantage over the competition ,by aligning the goals of overcoming competition in the various aspects mentioned above from the references of Ries and Trout (1989).

In addition to the theoretical foundations mentioned above, other authors have deepened the theme. Grzebieluckas, Marion, Bandeira de Mello and Alberton (2007) quote four theoretical perspectives addressing reasons for diversification according to table 2.

Table 2
Main currents x reasons for diversification

Theoretical perspective	Reasons for diversification	Main theoretical currents
Traditional management strategy	Companies diversify in a related way to create efficiency and direct synergy. The potential benefit of synergies includes: - economies of scale - saving sketch; - market power Firms diversify in non-related ways to reduce risks and increase stable profits.	Montgomery (1985) Singh and Montgomery (1987) Grant (1991) Porter (1986) Perry (1998) Urdan and Rezende (2004) Bettis (1983) Amit and Livnat (1988) Ramanuam and Varadarajan (1989) Hoskisson and Hitt (1990)
Capital structure	Diversified companies increase the size and reduce the risk of bankruptcy, tending with it, better access to capital markets and reducing the financing costs.	Montgomery and Singh (1984) Barton and Gordon (1987) Chantejee and Wemerfelt (1991) Kochbar and Hitt (1998) Berger and Ofek (1995)

Capital structure	Diversified companies increase the size and reduce the risk of bankruptcy, tending with it, better access to capital markets and reducing the financing costs.	Montgomery and Singh (1984) Barton and Gordon (1987) Chanterjee and Wemerfelt (1991) Kochbar and Hitt (1998) Berger and Ofek (1995)
Agency theory	Managers seek diversification strategies in order to reduce the risk of their jobs and increase profits.	Jensen and Meckling (1976) Hoskisson and Hitt (1990) Berger and Ofek (1995) Hitt Ireland and Hoskisson (2003)
RBV	Companies with highly related businesses lead to high performance, because they have specialized technology, marketing or management skills that will help them gain competitive advantage.	Wemerfelt (1984) Bamey (1991) Peteraf (1993) Robins and Wiersema (1995) Michalisin, Smith and Kline (1997)

Source: Grzebieluckas, Marcon, Bandeira-de-Mello and Alberton (2007)

This table confirms the first, third and fourth theoretical perspective described, the concepts previously captured from the query to other references.

There are also studies that do not confirm in part the material collected in the above theoretical basis: Roger, Silva and de Paula (2008) sought to determine the effect of diversification strategies in traded Brazilian industries, but in this case, the data collected showed no adherence to a chance of increase in profitability.

No relevant study was found regarding the packaging industry addressing diversification as a strategic choice and evaluate their results, which justifies the research conducted by this study.

METHODOLOGY

To achieve the goal proposed in this study, we've opted for the method of case study, with evidence gathered from research and records of the company examined. The methodology developed for the analysis of this case study consists of an empirical approach of checking the performance of the company studied as a result of its diversification process, from the concepts extracted from the theoretical basis, as described below.

The confirmation of a successful diversification should find results that prove its effectiveness in all aspects raised by the theoretical basis, i.e.:

1st aspect: Typology and strategic diversification positioning adopted must be clearly identified from the information obtained in the literature consulted. The effectiveness of the company positioning, according to Porter's strategic typology of "positioning based on needs" must be tested by checking the penetration of this positioning with customers, i.e.: customers, facing a diverse supplier must get him to stock up on more than one of its product alternatives, also buying new products that are added to the portfolio. Furthermore, they should identify the company as the best alternative of supply for these new products added to the portfolio.

2nd aspect: The financial results derived from the new business that the company chose to implement diversification should produce improvements in business performance and a substantial part of the expansion of gains should result from the new products, according to Marreiros and Gomes (2008) approach, which shows the superior financial performance as one of the basic reasons for diversification. To do so, the company's financial reports must be raised

after deployment of the strategy, verifying the effects of diversification on the results, gross profit and gross cash contribution at each year for each product.

3rd aspect: The company should be able to achieve a solid and sustainable market share in the new diversified businesses, as well as maintain or improve its “market share” in existing businesses within the concept that the greatest strength is with the market leader company. The verification of this dimension of diversification should be done by comparing the evolution of the sales volume of each product from the company with the market size, based on data obtained from research sources that indicate how much is consumed annually for each product that the company produces and markets.

4th aspect: As confirmation that the company, “won the battle in the customers’ minds,” information showing that the company was able to impose its position with the clientele must be sought, getting a clear recognition of the position adopted from its customers.

5th aspect: Verify if the company, after full development of the diversification deployed, is able to present superior economic performance to that of the competition, fulfilling the condition of business “oriented to the competitor”.

Concepts that support the 3rd, 4th, and 5th points are extracted from the theoretical framework of Ries and Trout (1989) already mentioned.

The case chosen for this study is the diversification work by Impacta S/A Indústria e Comércio, hereinafter “Impacta” or “company researched”. Impacta is a traditional producer and supplier of collapsible tubes for the pharmaceutical and cosmetics segment for over 60 years. This product is a primary package for semi-solids (ointments, creams and similar) that shows signs of maturity by presenting only vegetative growth.

The company researched accumulated skills and assets that make it a world-class producer, because the product is a package that must combine excellent internal lining with perfect decoration work and offset printing, as well as the dominium in the field of extrusion by impact technology from aluminum slugs, being the dominant player in Brazil and Latin America. Its skills, considering the concepts of the Resource Based View (Barney, 1991) current, assets, skills and attributes that qualifies it to produce and market other products that use these technologies and are on the rise, in an effort to diversify.

Impacta also reveals vertical integration, since it has its own production of aluminum slugs, making them from primary aluminum and adding titanium, boron and developing a sophisticated treatment process and quality control of this alloy, which is then laminated, stamped, annealed and undergoes a finishing process. Since 1999 the company started to export these slugs until it fully occupied its excess capacity, and decided in 2010 to double that capacity in the face of strong international demand for that product.

Simultaneously with the start of the aluminum slugs export, the board of directors and shareholders began to discuss the future of the business of collapsible tubes, a mature product that already showed signs of reduction in its growth potential and suffered the threat of a substitute, in this case the laminated multilayer tube, a packaging which the toothpastes segment had joined in the 1990s. The administration and the board saw with concern the company’s total dependence on revenues from the production and sale of collapsible tubes. The company then decided to pursue diversification opportunities that showed synergy with their skills, experience and clientele.

At the occasion, two targets were identified: the extruded plastic tubes and rigid tubes in monoblock, which are mostly used as aerosol cans. Plastic tubes were manufactured by a single company, with low quality standards and reduced production capacity. Other option, the rigid tubes for aerosol cans was a market also served by only one competitor in a similar situation. However, growth in demand for rigid tubes was still unable to occur, since the Brazilian market was lacking in filling services. The choice then fell on the plastic tubes.

In 2001 the company began the construction of a factory for offset printed plastic tubes for semi-solids, which started its production and sales in 2003. In 2006, with the entry of two aerosol filler companies in the market, the restriction to the market growth of aerosol cans was eliminated, and Impacta diversified further, starting to produce and market aluminum impact extruded monoblock rigid tubes, with internal coating in epoxy phenol lacquer and also offset printed, in a production process similar to that of collapsible tubes.

The investigated company, by diversifying, has positioned itself as a Total Packaging Solution, or a company able to offer complete solutions for primary packaging in relation to collapsible flexible packaging for semisolids (the plastic and collapsible tubes) decorated in offset and monoblock packaging in aluminum produced from impact extrusion and endowed with inner lining and decorative high quality offset (included here are the rigid tubes and collapsible tubes), focusing on sales growth in the pharmaceutical and cosmetic sectors.

Thus, this study seeks to obtain and analyze data needed to verify whether this diversification process is producing the results mentioned in the theoretical basis, through the examination of profitability, growth in market share, effectiveness of the company's positioning and comparison with the competition.

DATA COLLECTION

To check whether the results achieved by Impacta satisfy the placements of the theoretical basis, data collection began by surveying the historical series of gross profit and gross cash contribution by product from the beginning of the diversification process, i.e., from the year 2003. In that year the company began the production of plastic tubes. Aluminum slugs sale was already happening then, focused only on exports, based on surplus of the production capacity.

Therefore, the first investment made towards diversification was the one for plastic tubes, followed in 2006, by an investment in rigid tube business. In addition, as of December 2003, the financial reports began to have a format that allows the evolution of results view by business unit in terms of Gross Profit ("gross profit" before administrative expenses and financial expenses) and Gross Cash Contribution, which is the Gross profit plus depreciation, which would be a "proxy" of EBITDA (earnings before taxes, interest, depreciation and amortization).

Data available from 2003 are shown in table 2 for the originally existing business, i.e. collapsible tubes, in tables 3, 4 and 5 for the new businesses introduced with the diversification process - the plastic tubes, the aluminum slugs and rigid tubes, respectively, and in table 6 shows the evolution of the company's consolidated result. These products were considered within the strategy of diversification related to commercial and technological synergies as shown in figure 1.

Table 2
Financial Results – Collapsible Tubes

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Units (millions)	316.6	329.8	334.1	352.3	346.3	322.1	282.8	360.5	343.1	370.0
Gross Profit R\$,000.00	11,882	16,090	15,204	16,686	20,402	17,621	11,908	23,160	20,675	18,409
Gross Cash Contribution (GCC) R\$,000.00	14,480	17,897	17,924	20,403	23,856	21,660	18,680	29,027	25,536	24,830
% Total of the company's GCC	74.2%	70.5%	77.0%	74.7%	72.3%	59.4%	51.5%	58.3%	49.3%	48.6%
% GCC/Net Sales	25.2%	27.9%	27.4%	28.5%	34.4%	32.1%	31.1%	36.1%	32.9%	30.8%
% Product sales/Company's total net sales	73.2%	69.9%	65.5%	63.7%	56.5%	54.9%	50.2%	52.1%	55.4%	46.4%

The results in table 2 show that the original business of the company (collapsible tube) has volume in units and gross profit with a stagnant profile over time, which is typical of mature business and led the company's management to seek diversification, because if the company proceeded with this product only, the profits would tend to stop growing. To Ansoff (1977) companies diversify when their goals can no longer be achieved within the set of products defined by the expansion, which is clear in the case of Impacta, according to table 2.

Table 3
Financial Results – Plastic Tubes

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Units (millions)	9.6	16.8	23.4	25.8	37.4	41.3	51.5	69.5	72.5	83.2
Gross Profit R\$,000.00	658	566	1,289	1,351	2,652	2,512	3,285	5,377	4,562	5,690
Gross Cash Contribution (GCC) R\$,000.00	1,382	2,216	3,162	3,620	6,508	6,387	7,079	9,944	8,914	9,693
% Company's total GCC	7.1%	8.7%	13.6%	13.35	19.7%	17.5%	19.5%	20.0%	19.3%	19.0%
% GCC/Net Sales	39.9%	36.7%	34.0%	32.0%	38.9%	35.2%	33.5%	36.3%	32.8%	34.5%
% Product Sales/Company's total net sales	4.4%	6.5%	9.3%	10.1%	13.6%	14.3%	17.7%	17.7%	17.3%	16.2%

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Table 4
Financial Results – Aluminum Slugs

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Tons	2,744	3,188	4,084	4,250	4,030	4,139	4,583	4,496	4,210	4,963
Gross Profit R\$,000.00	1,500	2,230	934	1,668	1,519	3,385	4,302	3,166	1,912	4,122
Gross Cash Contribution (GCC) R\$,000.00	1,927	2,629	1,263	1,880	1,770	3,659	4,597	3,457	2,187	4,385
% Company's total GCC	18.7%	10.3%	9.4%	12.0%	6.3%	14.1%	12.6%	9.2%	12.4%	13.9%
% GCC/Net Sales	10.9%	12.1%	5.0%	6.6%	6.4%	13.6%	19.1%	11.8%	8.4%	14.6%
% Product Sales/company's total net sales	22.4%	23.6%	25.2%	26.2%	22.1%	19.6%	19.8%	17.1%	9.9%	17.6%

Table 4 shows an increase in aluminum slugs sales in 10 years from 80.9 % in tones and gross profit growth of 174.8 % in this business also seen as an alternative to diversify, thus testifying their contribution to the increase of the company total profit.

It turns out, however, that the business of aluminum slugs is a particular case: there is almost no domestic market and sales are mostly made for export. Sales are a result of surplus production, since the product is also used to supply the company itself. However, the company is the only producer able to meet the needs of the segment in South America, and thus the entire available surplus finds a buyer and this item ends up becoming a diversification alternative for the company.

Therefore, after 2010, the company started construction and equipment purchases to double the capacity, which will lead to an increase in this business share in total sales, with significant economies of scale. No data were found on the market size of aluminum slugs that could be used in the present study.

Table 5
Financial Results – Rigid Tubes

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Units (millions)	-	-	-	-	15.5	22.4	26.2	35.2	47.0	58.0
Gross Profit R\$,000.00	-	-	-	-	336	1,841	615	3,416	4,127	5,255
Gross Cash Contribution (GCC) R\$,000.00	-	-	-	-	554	3,279	3,219	6,231	8,739	9,452
% Company's total GCC	-	-	-	-	1.7%	9.0%	8.9%	12.5%	19.0%	18.5%
% GCC/Net Sales	-	-	-	-	5.8%	23.2%	21.8%	30.7%	31.9%	27.5%

% Product Sales/Company's total net sales	-	-	-	-	7.8%	11.2%	12.3%	13.1%	17.4%	19.8%
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Source: Las Casas, 2011

Table 5 shows that the three products for which the company has diversified, the rigid tubes exhibit the fastest growth, with gross profit growth of 1606% in five years and the number of units of sales growth of 292% in the same period, already representing in the last year analyzed 19.8% of net sales of the company, surpassing the share achieved by plastic tubes and the aluminum slugs.

Table 6
Financial Results – Totals of the Company (RS ,000.00)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total profit before tax	7,259	13,910	10,508	13,753	17,945	15,618	16,074	27,645	15,901	19,371
Deflated profit										
EBITDA	12,732	19,101	16,851	20,709	26,201	29,586	28,139	40,788	35,759	39,059
Deflated EBITDA	12,732	17,570	13,790	16,745	20,399	21,377	18,512	24,438	19,246	20,009

Table 6 consolidates the effect of all diversifications on the total EBITDA of the company that grows 206.8% in ten years on non deflated basis against a growth of only 71.5% of gross cash contribution (a “proxy” EBITDA) in the collapsible tube. Therefore the company’s rising profitability of 206.8 % would not have happened if the new products were not attached to its portfolio.

Regarding the evolution of the market share, in response to one of the situations mentioned in the methodology of this work, Impacta annually purchases the search “Brazil Pack” of Datamark, a company specialized in data collection in the packaging sector. The result of the material analysis, confronted with the actual volumes sold by the company for each product is presented in table 7. The above-mentioned table shows the positioning of the product originally existing, the collapsible tube, in relation to the market over time. This market has a growth rate of only 15.7 % in 10 years, but the company’s participation, fluctuating between 40 % and 48 %, is robust and the business is profitable, which gives it a characteristic of cash generator with high market participation and low growth in the BCG matrix, as demonstrated by Las Casas (2011), or as that product is popularly referred to under the optic of the BCG matrix, a cash cow, while the rigid tubes and the plastic tubes appear as “opportunities” initially, with low market share and high growth. Just below the results of volume and market share of the collapsible tubes, are the same data for rigid and plastic tubes.

Table 7
Sales (millions of units) and Participation

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Collapsible Tubes										
*Domestic Market	609.3	673.3	648.1	719.8	740.0	722.4	664.3	716.7	730.2	705.1
Domestic Sales	255.9	282.8	278.7	309.5	318.2	303.4	265.7	348.8	314.0	317.3
% Market Share	42%	42%	43%	43%	43%	42%	40%	48%	43%	45%
Exports	60.7	47.0	55.4	42.8	28.1	18.7	17.1	11.7	29.1	52.7
Total	316.6	329.8	334.1	352.3	346.3	322.1	282.8	360.5	343.1	370.0
Rigid tubes										
*Domestic Market	42.7	51.9	55.5	69.2	75.9	92.2	104.6	129.3	128.9	142.1
Domestic Sales					12.9	16.6	25.1	34.9	46.4	55.4
% Market Share					17%	18%	24%	27%	36%	43%
Exports					2.6	5.7	1.1	0.3	0.6	2.6
Total					15.5	22.4	26.2	35.2	47.0	58.0
Plastic tubes										
*Domestic Market	143.3	167.8	196.0	224.0	250.0	250.7	273.5	295.5	328.1	351.7
Domestic Sales	8.6	15.1	19.6	22.4	32.5	35.1	46.5	65.0	68.9	80.9
% Market Share	6%	9%	10%	10%	13%	14%	17%	22%	21%	23%
Exports	1.0	1.7	3.8	3.4	4.9	6.2	5.0	4.5	3.6	2.3
Total	9.6	16.8	23.4	25.8	37.4	41.3	51.5	69.5	72.5	83.2

Note that in the case of plastic tubes, the market share is already growing more slowly in recent years, in contrast to the rapid growth of the market share for rigid tubes.

The database also allows the verification of the efficacy of positioning according to the perception of the customers. The ability to become a Total Packaging Solution was found in customer satisfaction surveys that the company has done since 2002, whose results are presented in tables 8, 9 and 10. The survey is conducted annually by the “Pró Pesquisa” company, hired by Impacta to get to know customers’ opinion about their products and services, and involves all customers in each business unit, only the very small ones being dropped from the survey. This is a survey that enables the capture of customers’ perceptions about several aspects connected to the diversification of the products portfolio.

The first data concerns the expansion of the customer base who buys each product the company produces and sells. On table 8, it is found that the diversification has evolved into a larger customer base, and 90 clients were screened customers in 2011, declaring to consume 161 items, i.e., the average of items consumed by customer is 1.79, ranging between collapsible tube, rigid tube and/or plastic tube, which attests that several customers of collapsible tubes are also buying rigid tubes and/or plastic tubes, validating the strength of Total Packaging Solution

concept. Aluminum slugs, for not being part of the domestic market, are excluded from the research.

Table 8
Products consumed by researched clients

Year	Collapsible tubes	Rigid tubes	Plastic tubes	Total clients researched
2002	41	-	-	41
2011	58	46	57	90

The aforementioned survey also collected customers opinions about the products, according to table 9, putting Impacta in comparison with the competition for each product. The table shows that with new products, plastic tubes and rigid tubes, the company is building a reputation equal to that achieved by their collapsible tube with the clientele, with reviews of “Good” and “Excellent” surpassing the 85% mark in all cases, which attests its acceptance by the customer as a producer and supplier of quality products.

Table 9
Clients’ evaluation on the quality and reliability of the products provided by Impacta

	Good	Excellent	Bad	TOTAL
Collapsible tubes	69%	26%	5%	100%
Rigid tubes	50%	37%	13%	100%
Plastic tubes	69%	31%	-	100%

In the comparison with the competition, table 10 shows that the image Impacta has related to new products launched, plastic tubes and rigid tubes, is higher to that of the competition, positioning the company well “inside the customer’s mind”, according to Ries and Trout (1989).

Table 10
Impacta evaluation when compared with the competition

	Collapsible tubes			Rigid tubes			Plastic tubes		
	Excellent	Good	Bad	Excellent	Good	Bad	Excellent	Good	Bad
Impacta	33%	62%	5%	57%	40%	3%	48%	52%	-
Tubocap	10%	80%	10%	25%	62%	13%	-	80%	7%
Bispharma	60%	40%	-	-	-	-	-	-	-
CBE	28%	58%	14%	-	-	-	-	-	-
Globalpack	-	-	-	-	-	-	13%	80%	7%
C-Pack	-	-	-	-	-	-	42%	58%	-

To evaluate Impacta’s financial performance compared with the competition, we used a survey by SERASA, a Brazilian Credit Rating service company; since all Impacta competitors provide information for that company. Table 11 presents the latest results of Impacta competitors made available by SERASA. CBE and Bispharma are competing in collapsible tubes; Tubocap in

collapsible tubes and rigid tubes; C-Pack and Globalpack are competitors in plastic tubes.

Table 11
Last results of the competition according to SERASA (R\$,000.00)

	CBE 2011	Bispharma 2011	Globalpack 2011	C-Pack 2011	Tubocap 2008(2)
Operational profit	677	5,960	5,334	2,640	3,783
Profit before tax	-60	6,134	-7,832	-9,009	1,450
Net profit	-60	-1,854(1)	-1,162	-11,421	1,465

(1) The balance of the Bispharma Company present a withdrawal of dividends exceeding the profit in 2011 and SERASA considers its accounts to be "inconsistent".

(2) Tubocap after several liquidity crises ended its activities in January 2012. The year 2008 was the last in which the company presented the numbers to SERASA.

For the same indicators listed in table 11, Impacta had the following results:

R\$,000.00

- Operational profit 23,560
- Profit before tax 19,371
- Net profit 14,700

The economic results place Impacta in the lead over all competitors in all products, with positive gross profit and gross cash contribution, as evidenced by tables 2-5.

RESULTS ANALYSIS

The analysis of data collected and presented in item 6 above, enables obtaining answers to each of the six items in accordance with the proposed method; one must check the data collected in the same sequence presented here.

1st Verification – Typology and strategic positioning of the diversification implemented within the case study

The strategy by Impacta S/A was to seek a positioning based on needs, according to Porter (2004), by presenting itself as a company that offers Total Packaging Solution, i.e., solutions of various types of packaging for the same customers. Such strategy was implemented through a related diversification, with commercial and technological synergies, according to the concept by Marreiros and Gomes (2008). Such type of diversification satisfies the condition of use of valuable and difficult to imitate resources, based on the concept of Resource Based View indicated by Carneiro, Cavalcante and Silva (1997) in the discussion of the theoretical basis of this work.

As for the effectiveness of the new positioning - being able to attract customers to purchase multiple products within the company - table 8 shows the distribution of products purchases produced by Impacta before and after diversification. Based on this distribution, the positioning of Total Packaging Solution was confirmed as effective by being able not only to capture a larger base of important customers, expanding it to 120%, as well as to attract customers of that base to the new products, since the average of items (products) bought by customer went from 1 in 2003 to 1.79 in 2011.

Therefore, the company, through this strategy, succeeded in getting customers to buy

multiple items (products) from Impacta instead of only one (collapsible tubes), as it used to happen in 2003. These results were drawn from the customer satisfaction survey commissioned by Impacta from the specialized company Pró Pesquisa, which heard 90 clients in 2011. This is a typical diversification “based on needs”, according to which Porter (2004) states within the theoretical basis of this study.

2nd verification – Improving the company’s financial performance and increased profits from new products

Data presented in tables 2-6 indicate that company’s total EBITDA deflated by the IGP-M increased by an average of R\$ 14.7 million in 2003, 2004 and 2005 to an average of R\$ 21.2 million in the years of 2010, 2011 and 2012. This trend is confirmed in the company’s projections in its 2013 budget, which is R\$ 45.5 million, i.e., R\$ 21.6 million in deflated values back to 2003 by the IGP-M.

Regarding the source of the results, 74.2% of the gross cash contribution came out of the business of collapsible tubes in 2003, while in 2013 this figure dropped to 48.6%. The new business of plastic tubes and rigid tubes, used to represent only 7.1% of this contribution in 2003, accounted for 37.5% in 2013.

There is, therefore, a clear symmetry between financial results of diversification implemented and what the concepts set out in the theoretical basis point as a success case.

3rd verification – Solid market share of the products the company sells

Table 7 lists the results of the company in the domestic market. Impacta had in 2003 a “market share” of 42% in collapsible tubes, reaching 45% in 2012, year in which a local competitor, Tubocap, ended its activities. Sales of collapsible tubes in the domestic market grew 24% in units from 2003 to 2012, exports fell 13.1%, and the total volume of sales increased 16.9% in ten years, typical evolution of a mature product with vegetative growth. Therefore, the aluminum tube is the so called “cash cow” in the BCG matrix concept, i.e., the company’s money maker. Impacta had total market leadership with this product.

The two new businesses reached a substantial market share.

- Plastic tubes – 25% in 2012
- Rigid tubes– 43% in 2012

From this point of view, it appears that the company was able to become an important “player” (actor) in these markets, having led their diversification projects effectively regarding market penetration. The rigid tubes, reaching a “market share” of 43% in six years, present a star product behavior in the BCG matrix: rapid sales and gross cash contribution growth - 1606 % since 2006. This Impacta product is currently the Brazilian market leader. The company’s plastic tubes on the other hand are in second place in sales in the country.

In the case of the theoretical basis, we find references to the importance of market leadership in the work of Ries and Trout (1989), which can be observed in the case of collapsible tubes, and the rigid tubes; this position is also strongly pursued in the case of plastic tubes, taking as a basis the chronological evolution observed in table 7.

4th verification – Favorable perception of the customers about the company’s position

The satisfaction survey mentioned in the database indicated, as shown in tables 9 and

10, that the customers' perception of the new products quality and the overall service provided to them by Impacta resembles the one that had the company as a supplier of collapsible tubes. I.e., the new products are not perceived as inferior to the ones the customers can get from other vendors, enabling the qualification of Impacta as a Total Packaging Solution supplier.

These results fit with the idea of Ries and Trout (1989) regarding the achievement of "the customer's mind", also mentioned in the theoretical basis of this work. Thus, both for the ability to attract customers to their unique new products as well as the ability to provide them with a positive perception of their new strategic positioning, it can be stated that Impacta was successful in these important indicators of its diversification success.

5th verification – Performance against the competition

According to the statements of Ries and Trout (1989) about the competition, it is observed from the numbers in table 11, compared to the results reported by the company in question, that Impacta got financial results substantially better than the competition's in all products it manufactures. Therefore, the diversification strategy adopted has led the company to a unique position of competitive advantage by executing in a unique and superior way a set of activities, according to the typology of Porter (2004).

To further verify the prospect of future economic sustainability of the company, this study had access to the "Five-Year Plan" presented by the company's Management to the Administrative Council of the company, according to table 12 below. The document provides a higher growth in the business of rigid tubes and aluminum slugs, and a total growth of net sales by Impacta of 85 %, based on 2012 prices, confirming its potential for sustainable growth.

Table 12
Revenue's future growth positioning – 2012 prices base

	Annual net revenue (millions of dollars)	
	Current	Prediction in 5 years
Collapsible tubes	41.3	44.1
Rigid tubes	19.8	71.5
Plastic tubes	15.8	25.7
Aluminum slugs	19.9 (6.300 t)	37.8* (12.000 t)
Total millions of US\$	96,8	179,1

Projections will always be debatable and do not have the strength of concrete data based on past results, but they nevertheless constitute an indication of how the company may have its sales distributed by product on a longer term, which is important for the consolidation of the strategy adopted.

CONCLUSIONS

This study examined a case of diversification with commercial and technological synergies, in the packaging industry. The packaging segment operates in a business-to-business mode and, from that perspective, such diversification strategy provide customers of the company that diversifies its production with a purchase alternative concentrated on one single supplier, in a system that the company called the Total Packaging Solution. This strategy approximates the supplier and the customer by expanding the business base and facilitating the customers' purchases process, which are, in the case study examined, companies mainly from the cosmetic and pharmaceutical industry, manufacturers of products that require high quality primary packaging, since such packages should add a considerable value to the final product.

As for the results achieved by the company studied, the data collected have, as a consequence of the diversification model chosen, a better economic performance, a successful evolution of the company's market share in all the products it markets, a positioning indication that confirms the effectiveness of the Total Packaging Solution concept and an economic performance far superior to all competitors in each of the products in its portfolio.

Regarding the future prospects of the company investigated, they point to an expansion of the diversification process, removing the risk of dependency on a mature product, the collapsible tube, identified as the company's current cash cow. The diversification strategy implemented with entrance of new products with rising sales and profit margins appropriate to supplement the profits from the current "flagship" of the business, reduces the risk of the company and helps to ensure economic sustainability.

Considering all of the above findings, it can be inferred that the case is about a successfully deployed diversification, confirming the viability of this alternative as a strategic solution for companies in the packaging industry within the assumption that it is related with business and technological synergies.

It must also be highlighted that the present study has limitations with respect to its use as a tool for assessing the possibility of diversifications being successful strategies on the focused segment (packaging), as it examines results of a single company for the study of the diversification strategy; beyond this, only the diversification itself was examined, without taking into consideration other factors that may affect the business such as the country's economy, markets and products themselves.

As a suggestion, other studies focusing the analysis of diversification cases from other companies of the packaging segment could be performed, verifying the evolution of its profitability and capacity of growing market share with new products to which they have diversified. It is also suggested an inference on these companies' results compared to those coming from competition and the confirmation of recognition of its positioning in the market by customers or consumers. This confirmation can be made through opinion's research that target to determine customer's level of knowledge related to this positioning and how they see it under their own perspective as a signal of their inclination to acquire the new products that the company has started to sell.

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