

DEVELOPING A BALANCED SCORECARD FOR AUTOMOBILE AND MOTORCYCLE MANUFACTURERS: A CASE STUDY AT HONDA VIETNAM COMPANY

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ARTICLE INFO	ABSTRACT
Received: 04/9/2023 Revised: 24/10/2023 Published: 24/10/2023	<p>The Balanced Scorecard (BSC) is seen as an effective administrative tool for enterprises to achieve their strategic objectives. Thanks to the streamlined design of the four main perspectives including Finance, Customer, Internal process, Learning and Growth, enterprises can successfully realize strategic expectations. This paper aims to propose a strategic map and key performance indicators (KPIs) in a balanced scorecard that are consistent with the characteristics of Vietnam's automobile and motorcycle manufacturers, with an empirical study at a typical enterprise, Honda Vietnam Company. The study was conducted through surveys as well as in-depth interviews of 75 specialists, representing the Sales, Planning, Manufacturing, Accounting, Customer Care and Human Resources departments. Research results show that all strategy targets receive high consensus from experts at a level above "agree" (mean from 3.04 to 4.92). All 39/39 indicators to measure 21 strategy targets of Honda Vietnam Company were evaluated by experts with an average value ≥ 3.5. Based on survey results, a balanced scorecard was proposed with detailed steps, from designing the strategic map and KPIs to integrating them into the management system in line with Honda Vietnam Company's strategic objectives.</p>
KEYWORDS	
Balanced Scorecard	
Honda Vietnam Company	
Strategy target	
Key performance indicators	
Management system	

XÂY DỰNG THẺ ĐIỂM CÂN BẰNG CHO DOANH NGHIỆP SẢN XUẤT Ô TÔ, XE MÁY: NGHIÊN CỨU ĐIỂN HÌNH TẠI CÔNG TY HONDA VIỆT NAM

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Ngày nhận bài: 04/9/2023 Ngày hoàn thiện: 24/10/2023 Ngày đăng: 24/10/2023	<p>Thẻ điểm cân bằng (BSC) được xem là một công cụ quản trị hữu hiệu giúp cho doanh nghiệp đạt được mục tiêu chiến lược. Bằng sự thiết kế hợp lý của bốn viễn cảnh chính là tài chính, khách hàng, quy trình nội bộ, học hỏi và phát triển, các doanh nghiệp có thể thu được thành công, đáp ứng kỳ vọng chiến lược. Mục đích của nghiên cứu này là đề xuất một bản đồ chiến lược và các chỉ tiêu đánh giá hiệu quả (KPIs) theo thẻ điểm cân bằng phù hợp với đặc thù của các doanh nghiệp sản xuất ô tô, xe máy tại Việt Nam, với nghiên cứu thực nghiệm tại doanh nghiệp điển hình là Công ty Honda Việt Nam. Nghiên cứu được thực hiện thông qua khảo sát kết hợp với phỏng vấn sâu của 75 chuyên gia, đại diện cho các bộ phận Bán hàng, Lập kế hoạch, Sản xuất, Kế toán, Chăm sóc khách hàng và Nhân sự. Kết quả nghiên cứu cho thấy tất cả các mục tiêu đều nhận được sự đồng thuận cao của các chuyên gia ở mức trên “đồng ý” (giá trị trung bình từ 3,04 đến 4,92). Tất cả 39/39 chỉ số để đo lường 21 mục tiêu chiến lược của Công ty Honda Việt Nam đều được các chuyên gia đánh giá với giá trị trung bình $\geq 3,5$. Dựa trên kết quả khảo sát, một thẻ điểm cân bằng đã được đề xuất với các bước chi tiết, từ thiết kế bản đồ chiến lược, các thước đo và tích hợp vào hệ thống quản lý cho phù hợp với mục tiêu chiến lược của Công ty Honda Việt Nam.</p>
TỪ KHÓA	
Thẻ điểm cân bằng	
Công ty Honda Việt Nam	
Mục tiêu chiến lược	
Chỉ tiêu đánh giá hiệu quả	
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1. Introduction

Balanced scorecard (BSC) was first known in 1992 as introduced by Kaplan and Norton. Accordingly, a balanced scorecard is a planning and performance measurement tool, aiming to transform the overall vision and strategy of the organization or enterprise into specific objectives, clear indicators and targets [1]. A balanced scorecard provides a system of key performance indicators that complement traditional financial financial measures of customer satisfaction, internal processes, learning and growth activities.

A balanced scorecard is an administrative tool that has been widely applied around the world in many fields. According to a survey by Bain & Company, 62% of 708 participating companies used the balanced scorecard in administration, much higher than other management accounting tools such as the value chain and activity-based costing [2]. The BSC model can be applied in an enterprise from four perspectives: Finance, Customer, Learning and Growth, and Internal process to accomplish the enterprise's objectives [3].

A large number of scholars were attracted to both theoretical and empirical BSC studies. The focus of most studies was evaluating factors affecting the application of BSC in an enterprise or the relationship between BSC and business performance. One of the most recent studies on Vietnamese enterprises is by Thuong and Singh with surveys of 265 Vietnamese enterprises, all of which apply BSC in business administration [4]. The results showed a meaningful relationship between the application of BSC and business performance. Accordingly, as key elements in BSC were changed, the overall performance level of the enterprise also varied in correspondence. Loan et al. [5] examined the relationship between directors' management competence and the performance of small and medium enterprises (SMEs) from a BSC perspective in 419 enterprises. The study had shown the impact of management competence on specific business operational results from each BSC perspective. Ha et al. [6] conducted research on factors affecting the adoption of BSC in Vietnam's SMEs such as top leadership participation, innovation culture, product innovation strategies, organizational resources, competitive environment, business operations, business network support, etc. Tuan [7] conducted research with 109 questionnaires for managers and department heads of Vietnamese commercial banks. The research has shown that BSC from 4 perspectives positively impacts the performance of Vietnamese commercial banks. According to the results, support from the business network was another important determinant of BSC adoption level, along with the position and experience of the business owner. Several similar studies were conducted by Duc Huu et al. [8], Ta et al. [9], etc. Therefore, BSC development for peculiar enterprises, such as automobile and motorcycle manufacturers, remains an open topic for empirical studies.

Honda Vietnam Company (HVN) is a joint venture between Honda Motor Company (Japan), Asian Honda Motor Company (Thailand) and Vietnam Engine and Agricultural Machinery Corporation, established in 1996, with 2 major product lines: motorcycles and automobiles [10]. During nearly 30 years in Vietnam, Honda Vietnam Company has seen constant development and become one of the leading companies among prestigious motorcycle and automobile manufacturers in the Vietnamese market. Although affected by the Covid-19 epidemic, HVN Company's performance in the recent 3 years (2020-2022) still achieved growth in revenue, and profit and obtained the targets [11] - [13].

The goal of HVN is to maintain the leading position in Vietnam's automobile and motorcycle market, even after the society's transition to the "automobile" period [10]. However, most automobile and motorcycle manufacturing enterprises in Vietnam (including HVN) need to import components from abroad, hence becoming dependent on raw material sources, while facing a shortage of skilled assembly labor. Enterprises need to plan clear strategies, outline action plans to take advantage of opportunities and overcome challenges, turn strategies into actions, and evaluate them against their own standards, which should be based on values from not only financial but also customer, internal process, learning and growth perspectives that provide competitive advantages for enterprises.

This study aims to examine the demand and required conditions to build BSC for HVN, based on its mission, vision, and strategic objectives, thereby suggesting BSC conformed to HVN. In addition to the introduction, the remaining part of this paper is arranged as follows: Section 2 will relate to methodology. Section 3 will present results and discussion. Section 4 will give a conclusion of the study.

2. Research methods

2.1. Data collection methods

The research data were collected using survey forms sent to Honda Vietnam Company's directors and managers. The surveyed team included representatives of the department heads, heads or deputy heads of divisions.

The questionnaire was divided into 3 main sections: (i) a general judgment of strategic objectives and strategic map of HVN; (ii) a detailed evaluation of KPIs under 04 BSC perspectives; (iii) respondent information. For questions in sections 1 and 2, a Likert scale of 5 degrees which ranges from "strongly disagree" to "strongly agree" was applied. The questionnaire content was inherited from previous BSC studies by Kaplan and Norton [14], Mai Xuan Thuy [15] with additional department-specific details. In section 3, questions were related to general information of the respondent, including department, position, gender, age, and year of employment. The scale in use was the nominal scale.

The Strategic Mapping Survey was conducted from 12/03/2023 to 14/03/2023 at the Vietnam Honda Factory (Address: Phuc Thang ward, Phuc Yen city, Vinh Phuc province) and Honda Vietnam representative office (Address: 7th Floor, VietTower Building).

The 75 surveyed specialists were department managers in HVN. Seventy-five survey questions were sent to specialists to determine the consensus on the objective system by email and Zalo. The valid forms collected for analysis counted to 75.

In addition, the authors conducted in-depth interviews through Google Meet with 03 HVN leaders including the Chief Executive Officer, the First Motorcycle Plant Director and the Gear Workshop Head, representing 3 levels of HVN management and 01 Chief Accountant, 01 Accountant to better clarify objectives, KPIs, metrics, and their integration into management systems. The interviews were conducted with pre-designed survey forms which included closed and open questions directly related to the criteria for a balanced scorecard. The information is recorded for analysis in research results.

2.2. Data analysis methods

The survey results were processed through the SPSS 20 software analysis tool that combines analysis and comparison to the collected secondary data set to achieve research goals.

A balanced scorecard needs to be applied throughout from top to bottom levels, from setting objective to developing strategies and implementing strategies. This process should be initiated by the HVN leadership and communicated to subordinates. These are specific steps to build a balanced scorecard for HVN:

Step 1: Determine mission, vision and strategies

Step 2: Develop a strategic map

Step 3: Develop Key Performance Indicators

Step 4: Integrate the balanced scorecard into the management systems

3. Research results and discussion

3.1. Mission, Vision, and Strategic objectives of Honda Vietnam Company

Aiming to lead a healthy traffic society in Vietnam, Honda Vietnam has always strived to pioneer and navigate the traffic society by providing quality products and services beyond

customer expectations. At the same time, it also desires to lead in efforts to reduce emissions and realize a safe traffic society.

By promoting the spirit “The Power of Dreams” – believing in dreams, it wishes to bring joy and smiles to people. It is always ready to embrace challenges and create new values with the passion and courage to make dreams come true.

According to in-depth interview results, HVN’s mission, vision, and strategic objectives were communicated to each employee, on the company’s website and during celebrations as well as annual summaries.

3.2. Strategic map for Honda Vietnam Company

Based on R. S. Kaplan and D. P. Norton’s strategic map model, we outlined the HVN Company’s strategic map from 4 perspectives: Finance, Customer, Internal process and Learning and growth [14].

Survey results of participating specialists on the company’s objectives from 4 perspectives are shown in Table 1. All objectives received high consensus with a mean value from 3.04 to 4.92, above the “agree” level.

Table 1. The objective evaluation survey at Honda Vietnam Company

No.	Perspective	Objective	Mean	Note
1	Financial perspective	Increased sales	4.64	Accepted
2		Increased profit/sales	4.72	Accepted
3		Effective cost management	4.48	Accepted
4		Resource utilization efficiency	4.36	Accepted
5	Customer perspective	Honda Exclusive Authorized Dealer (HEAD)/Dealer (DLR) network expansion	4.12	Accepted
6		New customer engagement	3.92	Accepted
7		Product diversification	4.60	Accepted
8		Product quality assurance	4.80	Accepted
9		Brand and product identification	3.04	Removed
10		Market share of motorcycles and automobiles	4.64	Accepted
11		Customer satisfaction	4.72	Accepted
12		Time to resolve a customer complaint	4.52	Accepted
13	Internal process perspective	Internal process finalization	3.88	Accepted
14		Increased production	4.36	Accepted
15		Safe production, explosion prevention	4.24	Accepted
16		Waste treatment upgrade	4.16	Accepted
17	Learning and growth perspective	Upgrade task management systems	4.88	Accepted
18		Periodic HR training	4.28	Accepted
19		HR coordination to appropriate positions	4.08	Accepted
20		Increased employee satisfaction	4.12	Accepted
21		Professional working culture promotion	4.00	Accepted
22		KPI application to each employee	4.20	Accepted

(Source: Prepared by the authors, 2023)

After the specialists reached a consensus on the objective system (Table 1), we outlined the strategic map of the HVN Company (Figure 1).

3.3. Develop Key Performance Indicators

The objectives on the HVN Company Strategic Map were detailed into KPIs to help evaluate how the company’s objectives were executed. The indicators were developed on the basis of criteria used by the board of directors to evaluate performance. In addition, the authors proposed some additional indicators based on 2 criteria: The indicator must be associated with the company’s strategic objectives to evaluate the performance of these objectives, and also be understandable and measurable.

Thereby, the authors developed a total of 39 KPIs to measure 21 strategic objectives of the HVN Company. All 39/39 indicators received specialists' consensus with an average value of ≥ 3.5 , and no new indicator was added by specialists.

The KPI system achieved specialists' consensus with a total of 39 indicators. These indicators were detailed into specific criteria and formulas. The criterion for each KPI was based on the strategic objectives of the HVN Company. A number of criteria were also proposed by the authors (based on the direction of development, business history, and potential of the company), following the SMART principle:

S - Specific: particular, understandable; M - Measurable: quantitative; A - Achievable: challenging; R - Realistic: practical; T - Time-bound: within a deadline.

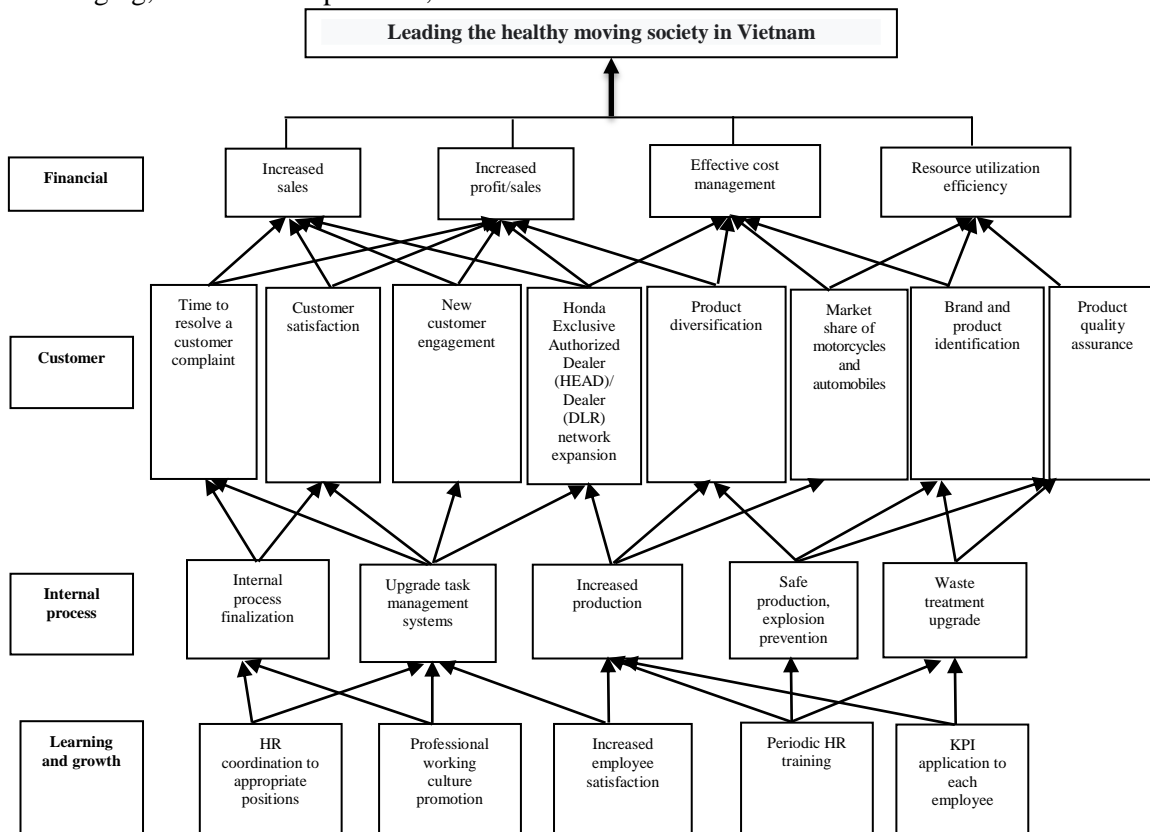


Figure 1. Strategic map of the HVN Company
(Source: Prepared by the authors, 2023)

The formulas of the indicators are illustrated in Table 2.

Table 2. KPI weight on the Balanced Scorecard

Objective	KPI	Unit	Formula
Financial perspective			
Increased sales	Sales increase	VND	(Current year sales - Last year sales)
	Sales growth rate (GRW)	%	(Current year sales - Last year sales)/Last year sales
Increased profit/sales	Return on equity (ROE)	%	(Current year ROE - Last year ROE)
	Return on assets (ROA)	%	(Current year ROA - Last year ROA)
	Profit growth rate (GRW)	%	(Current year profit - Last year profit)/Last year profit
	Percentage of unreasonable costs out of total costs	%	Unreasonable costs/total costs
Effective cost management	Percentage of costs of sales and business management out of total costs	%	Costs of sales and business management/total costs

Objective	KPI	Unit	Formula
Increased resource utilization efficiency	Return on investment (ROI)	%	(Current year ROI - Last year ROI)
	Return on debt	%	(Current year return on debt - Last year return on debt)
Customer perspective			
HEAD/DLR network expansion	Number of additional HEADs	HEAD	Number of additional HEADs in the year
	Number of additional DLRs	DLR	Number of additional DLRs in the year
New customer acquisition	Number of new customers	People	Number of new customers in the year
	Percentage of sales from new customers	%	Sales from new customers/total sales in the year
Product diversification	Number of new products launched	Products	Number of new products launched in the year
	Percentage of sales from new products	%	Sales from new products/total sales in the year
Product quality assurance	Number of customer complaints about product quality	Times	Number of customer complaints about product quality in the year
Market share of motorcycles and automobiles	Maintain motorcycle market share	%	Total motorcycle sales of the company/ Total sales of the motorcycle market
	Increase automobile market share	%	(Current year automobile market share - Last year automobile market share)
Customer satisfaction	Increase customer satisfaction with the products	%	(Customer satisfaction with current year's products - Customer satisfaction with last year's products)
Time to resolution	First contact resolution rate	Times	First contact resolution times in the year
Internal process perspective			
Internal process finalization	Finalize administrative processes	Number of processes	Number of finalized administrative processes in the year
	Finalize HR policies	Number of policies	The number of HR policies completed during the year
	Finalize working processes	Number of working processes	Number of finalized working processes in the year
Increased production	Ratio of actual production output to planned production output	%	Actual production output in the year/ Planned production output for the year
Safe production, explosion prevention	The number of work accidents in the year	Times	The number of work accidents in the year
	Number of explosion cases	Times	Number of explosion cases in the year
Waste treatment upgrade	Minimize the amount of direct waste discharge	Kg or m ³	(Amount of waste discharged to the environment in the current year - Amount of waste discharged to the environment in the last year)
Upgrade task management systems	Finalize task management systems	System	Number of finalized task management systems in the year
Learning and growth perspective			
Periodic HR training	The number of training courses organized	Course	The number of training courses organized in the year
	Training participation rate	%	Number of employees attending the course/ Number of training courses organized in the year
HR coordination to appropriate positions	Time for job rotation	Year	Time for job rotation
	Job rotation acceptance rate	%	Number of employees accepting job rotation/ Number of employees rotating jobs

Objective	KPI	Unit	Formula
Increased employee satisfaction	Average salary raise rate	%	(Current year total average salary - Last year total average salary)/ Last year total average salary
	Percentage of employees satisfied with compensation and benefits	%	Number of employees satisfied with compensation and benefits/ Total number of employees
	Turnover rate	%	Number of turnovers/ Total number of employees
	Percentage of employees satisfied with the work environment	%	Number of employees satisfied with the work environment/ Total number of employees
Professional working culture promotion	Percentage of professional culture ratings from customers	%	Number of customers rating the company's culture as professional/ Total number of participating customers
	Percentage of professional culture ratings from employees	%	Number of customers rating the company's culture as professional/ Total number of participating customers
KPI application to each employee	Percentage of employees evaluated using personal KPI systems	%	Number of employees evaluated using personal KPI systems/ Total number of employees

(Source: Prepared by the authors, 2023)

Based on calculation results, the authors assumed that the KPI weights were fairly balanced across the perspectives. However, the mostly concerned perspectives at HVN include the Customer perspective, the Learning and growth perspective. This was consistent with its strategies.

3.4. Integrate the balanced scorecard into the management systems

On the basis of survey evaluation, the authors propose a BSC as in Table 3.

Table 3. The Balanced Scorecard of Honda Vietnam

Perspective	Objective	KPI
Financial perspective	Increased sales	Sales Sales growth rate (GRW) Return on equity (ROE)
	Increased profit/sales	Return on assets (ROA) Profit growth rate (GRW)
	Effective cost management	Percentage of unreasonable costs out of total costs Percentage of costs of sales and business management out of total costs
	Increased resource utilization efficiency	Return on investment (ROI) Return on debt
	HEAD/DLR network expansion	Number of additional HEADs Number of additional DLRs
	New customer acquisition	New customer acquisition rate Percentage of sales from new customers
Customer perspective	Product diversification	Number of new products launched Percentage of sales from new products
	Product quality assurance	Number of customer complaints about product quality
	Market share of motorcycles and automobiles	Maintain motorcycle market share Increased automobile market share
	Customer satisfaction	Customer satisfaction with the product
	Time to resolve a customer complaint	First contact resolution rate
Internal process perspective	Internal process finalization	Finalize administrative processes Finalize HR policies Finalize working processes

Perspective	Objective	KPI
	Increased production	Ratio of actual production output to planned production output
	Safe production,	The number of work accidents in the year
	explosion prevention	Number of explosion cases
	Waste treatment upgrade	Minimize the amount of direct waste discharge
	Upgrade task management systems	Finalize task management systems
Learning and growth perspective	Periodic HR training	Number of training courses organized Training participation rate
	HR coordination to appropriate positions	Time for job rotation Job rotation acceptance rate
	Increased employee satisfaction	Average salary raise rate
		Percentage of employees satisfied with compensation and benefits
		Turnover rate
	Professional working culture promotion	Percentage of employees satisfied with the work environment
		Percentage of professional culture ratings from customers
		Percentage of professional culture ratings from employees
	KPI application to each employee	Percentage of employees evaluated using personal KPI systems

(Source: Prepared by the authors, 2023)

4. Conclusion

Nowadays, as the world becomes increasingly developed with modern technology, many advanced management methods have been created. In addition, BSC is an effective tool for managers who used to focus on the financial perspective while neglecting other measurable ones. In a company, BSC acts as a measurement system, a strategic management system as well as an information exchange tool. BSC stands out thanks to the balance between financial and non-financial indicators, between indicators measuring results and those guiding activities and causal relationships of objectives and indicators from all 4 aforementioned perspectives.

In this, a BSC has been developed for Honda Company, which is a typical automobile and motorcycle manufacturer in Vietnam. Stemming from strategic objectives, KPIs are also appropriately developed to achieve objectives, and integrated into management systems for periodic monitoring and review. From each perspective, strategies are interpreted into objectives by BSC, thereby the path for each stage can be outlined. This tool also provides up-to-date and relatively accurate information about the current and future operational situation. Based on the achievement of the set KPIs, appropriate rewards and punishments can be given to each employee and each position. The results of this paper provide not only a useful resource for HVN in setting indicators to achieve strategic objectives, but also an effective example for Vietnamese automobile and motorcycle manufacturers in general. In addition, academically, this paper contributes to the literature of BSC applications for reference purposes of future related studies.

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