

Small A, Hicks C, McGovern T, Scurry T, Whipp M. A balanced scorecard for evaluating the performance of motor dealerships. *In: 23rd International Conference on Production Research*. 2015, Manila, Philippines.

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Date deposited:

22/03/2016



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A balanced scorecard for evaluating the performance of motor dealerships

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Abstract

The focus of Lean Production in the automotive sector has been on upstream manufacturing with limited consideration of downstream service activities. The automotive manufacturers' national sales companies manage the sale of new cars through franchising agreements with automotive distributors. A typical dealership will have multiple value streams besides just the sale of new cars. In order to maintain operational efficiency and effectiveness performance monitoring needs to be routinely undertaken. The traditional balanced scorecard (BSC) is one approach a franchisee could adapt. The BSC incorporates four perspectives, which include: financial, customer, internal processes, and innovation and learning. The approach aims to achieve a balance between short and long-term objectives and between hard objective measures and softer subjective measures. This paper outlines the development of a balanced scorecard for an automotive distributor (dealership) that operates multiple franchises implementing a Lean Transformational change programme that will include Lean evaluation measures.

Keywords: Balanced Scorecard; Franchising; Lean Evaluation; Lean; Motor Dealerships; Performance Evaluation; Value Streams

1. Introduction

The automotive industry comprises: component supply, assembly and distribution. The component supply and assembly processes are manufacturing operations, whereas distribution activity embodies characteristics associated with a service model. The industry makes a major contribution to the UK economy; in 2012, it employed 495,793 people in 1,782 companies. Automotive manufacturing has historically been at the forefront of initiatives that have sought to increase efficiency and reduce costs. Lean production historically arose within automotive manufacturing at companies such as Toyota and Nissan [1].

Lean Production is an evolution of the Toyota Production System (TPS) [2]. It provides an approach to increase the efficiency and effectiveness of operations through balancing production, minimising variation, eliminating waste and minimising inventory through using what is needed only when it is needed (Just-in-Time) [3]. Lean has been widely adapted and disseminated to other manufacturing and service sectors [4, 5]. In the automotive industry, the focus has been on the upstream part of the supply chain (component suppliers and automotive assembly) with relatively little consideration, by academics or practitioners, of the downstream service activities (automotive distribution, sales and servicing) making this area of research very important [6]. The purchasing power of the automotive assemblers, positioned in the middle of the supply chain, enables them to force suppliers to accommodate their idiosyncratic requirements [7]. Likewise, franchise contracts with dealers substantially constrain franchisees' decision-making rights and provide the manufacturers with significant enforcement powers including monitoring, termination and monetary incentives [8]. Franchisees, therefore, need to manage their sales and servicing functions more effectively.

The creation of Lean dealerships is now an important research area [9] as well as evaluating the impact that Lean is having on operations. Their performance may be measured in several ways, for example using financial, customer service and customer retention data. The balanced scorecard developed by Kaplan and Norton [10-15] provides a holistic view by combining the different aspects of performance together. This paper addresses the research question "how can a balanced scorecard be

developed for evaluating the performance of motor dealerships”? There is a plethora of materials relating to performance evaluation and the development of balanced scorecards (BSC). It is important to synthesise this with the literature that investigates the evaluation of Lean. The objective is to develop a BSC tool that can be used to evaluate performance within a large, multi-franchise motor dealership group that is undertaking a transformational change programme based on the application of Lean philosophies and tools. Section 2 investigates automotive franchising and supplier development. Section 3 considers Lean and its application in the service sector. Research relating to the balanced scorecard is then reviewed. Section 5 presents the research strategy and research methods. The development of a balanced scorecard for motor dealerships is then outlined. Finally, the conclusions and suggestions for future research are presented in section 7.

2. Automotive franchising and supplier development

2.1 Automotive franchising

The national sales companies for each automotive manufacturer are responsible for managing the sale of new vehicles through clearly defined franchising agreements with dealerships [16]. This requires dealers to take responsibility for managing the ‘brand’ of the manufacturer. The manufacturer stipulates the contractual terms and procedures for monitoring and evaluating the franchisee [17]. The manufacturers exert considerable power as they specify performance criteria and impose penalties for underperformance [16, 18]. Manufacturers provide support to franchisees through advertising; specialist training in executive, sales and mechanic functions; incentive programs for sales and vehicle repair and maintenance; equipment and specialist tooling; warranty plans and service manuals [19]. Lusch [19] identified that manufacturers tightly controlled franchisees and could apply a range of sanctions including: slowing down the delivery of new vehicles, distributing vehicles unevenly, slowing warranty payments, increasing bureaucracy and threatening contract termination. In comparison, the manufacturers devote considerable time and effort to support up-stream suppliers through supplier development programmes [20].

2.2 Supplier development

Supplier development is a process to disseminate internal capabilities across boundaries [20]. For example, automotive manufacturers may assist suppliers through the provision of training in continuous improvement activities [21]. These activities help develop suppliers’ core competencies, which increases quality and reduces lead times, which is beneficial for the automotive manufacturer. The manufacturers manage distribution through holding companies, which decouples the motor dealerships from expertise that resides in the manufacturing operations. Continuous improvement is a core element of Lean. Hines and Holweg [22] identified that the key objectives of manufacturing improvement activities were to increase quality, reduce cost and reduce lead-times. However, in other sectors, such as motor distribution, improvement activities may address a broader range of tangible and intangible factors. Identifying how ‘best practice’ approaches can lead to improvements in performance is therefore important.

3. Lean

There is a voluminous literature on the Toyota Production System (TPS) and Lean which originated in automotive manufacturing [for example, 1, 2, 23-25]. Due to the limited resources available in Japan and the increasing competition for automobiles, Toyota developed a manufacturing system based upon the principles of Just-in-Time, Kanban and the respect for employees that allowed them to undertake problem solving activities in order to improve the TPS itself [22]. Sohal [26] stated that Lean production requires changes to be implemented throughout an organisation – not just the operational environment. This holistic perspective is sometimes overlooked as the focus is often on ‘quick-wins’ and immediate payback [20, 27]. In the quest for short-term success, less focus is placed on how improvements or ‘quick-wins’ can be measured operationally [28].

The overall objectives of Lean are to maximise value, minimise waste, balance production levels, minimise variation and achieve continuous improvement [22, 28-30]. Other benefits of Lean include

stock reduction, increased quality, greater productivity and shorter lead-times [31]. Lean may be viewed from two perspectives: philosophical, in terms of its goals; or as the application of tools and techniques [28]. The second perspective, in which Lean tools and techniques that have been applied to improve processes, has received the most attention in the literature [28, 32-34]. Western organisations have primarily concentrated on applying such tools through shop floor improvement activities and often neglected the cultural change that Lean requires [22, 26].

The effective implementation of Lean requires a detailed understanding of value streams and sources of variability. There are three types of waste: 'muda' (those things that add cost, but do not add value); 'mura' (variation or irregularity that causes 'muda') and 'muri' (overburden, when employees or resources are pushed beyond their capacity) [35]. Coping with variability is a key part of Lean [22]. For example, identifying one form of variability within the manufacturing system may help eliminate waste - but unless an organisation can identify all sources of variability and eliminate them in tandem, the benefits of Lean will be restricted [28]. Organisations need to manage variability in order to create more capacity through better asset utilisation [22]. Identifying value streams and mapping them is a useful start in understanding value-adding and non-value adding activities within an organisation's operations. Value stream maps also uncover where variability might be impacting upon the manufacturing 'system'. The notion of value, however, can sometimes be mistaken for cost reduction [22].

Research has presented the idea that Lean is the best available operational system and can be implemented in any company [31]. In contrast to this view, service providers have distinctly different characteristics to manufacturers in terms of intangibility of the service provided (often in the presence of the customer), perishability and high labour costs calling into question the applicability of Lean to the service sector [30].

3.1 Lean services

Services are inherently perishable and cannot be held in an inventory, which can make scheduling staff problematical. However, eliminating waste can free up employees' capacity to better meet customer demands [36]. There has been a growing emphasis on the application of Lean in the service sector [37-40], particularly public services. For example, Erridge and Murray [37] reported on the implementation of Lean on a local government's procurement processes at Belfast City Council. The study identified that an internal champion was needed to make the approach a success, as well as transferring the concept of value adding activities from a pure manufacturing perspective [37]. Hines and Martins [41] explored the use of Lean in the Portuguese and Welsh court services and concluded that Lean could be applied to the legal sector. One finding was that the language used was important and that it needed to be tailored to the context [41]. Scorsone [42] conducted research on Lean at the City Government in Grand Rapids, Michigan, USA, which faced reduced budgets and a declining workforce. A key finding was that the value streams that ran through the government office were confused and needed to be addressed [42].

Radnor and Walley [43] investigated eight public sector organisations (as well as three pilot sites) in Scotland that had embarked on a Lean programme. The research identified that Lean had been adapted at a number of different levels from full implementation (where sustainability was more likely), through to a lighter touch (where the focus was primarily on the application of the tools and producing 'quick-wins'). The report concluded that the application of Lean to these particular cases was successful overall. However, the key barriers identified were: the culture of public services; not being customer focused; silo working; a lack of clear strategic direction; and a lack of understanding on the effect of 'variation', 'systems thinking' and 'flow' [43]. A number of these points were emphasised in a special issue of *Public Money & Management* published in February 2008. The papers argued the significance of Lean to the public sector and outlined how Lean thinking could meet the challenge of providing public services in the public sector. These articles demonstrated that aspects of Lean could be transferred to the service sector. However, this transfer required more tailoring to the local context. Radnor and Bucci [44] evaluated a Lean programme undertaken in Her Majesty's Court Services (HMCS). The research focused on the administrative functions of the service and waste elimination throughout the value streams to free up additional capacity. It was concluded that leadership and the

development of an enthusiastic team were critical factors [44]. Despite the application of Lean in many different service contexts, limited attention has been paid to the service element of the automotive sector, which is the customer facing part of the supply chain [45].

Kiff [9] investigated Lean within the automotive supply chain and focused on Lean at the dealership level. He identified that significant stock and waste were caused by the systems and procedures that linked dealerships with the automotive manufacturers' national sales companies. In order to overcome this issue, a better management of the sales and servicing functions was proposed that would ultimately reduce wasteful activities and at the same time increase customer satisfaction [9]. Value stream mapping was proposed as one Lean tool that could help. Mapping processes at the dealership level could allow non-value adding and wasteful activities to be identified [9]. Continuous improvement initiatives such as Lean can be enhanced by effective and meaningful measurement [46].

Bititci et al. [47, p.46] defined the performance management process as "the process by which the company manages its performance in line with its corporate and functional strategies and objectives. The objective of this process is to provide a proactive closed loop control system, where the corporate and functional strategies are deployed to all business processes, activities, tasks and personnel, and feedback is obtained through the performance measurement system to enable appropriate management decisions". The balanced scorecard with appropriate measures and metrics is a tool that can be used for integrated performance management. In 2005, Kaplan [48] argued that manufacturing and service organisations have been successfully using the balanced scorecard to create and execute effective strategies for over a decade.

4. The Balanced Scorecard

The Balanced Scorecard (BSC) is a performance measurement system (PMS) [49] and has been designed to take into account four perspectives: financial, customer, internal business processes, and learning and growth [12, 15, 48]. A balanced scorecard presents decision makers within an organisation a "*balanced picture*" of the current performance along with metrics associated with future performance [12]. To summarise, the BSC joins together an organisation's vision and strategy in order to create achievable objectives and suitable measures that include hard objective measures as well as softer subjective measures [14, 15, 49-51]. The BSC helps tackle operational issues through measuring the current performance, as well as identifying "*how*" that performance was achieved [46]. It is important, therefore, that the most suitable measures can be incorporated into a BSC [50]. The aim of the BSC is to focus on only a limited number of critical measures [12, 15, 52]. Through adopting such a focussed approach, the performance evaluation will allow an organisation to communicate the strategy and direction of the company to employees, customers and other key stakeholders [46].

The BSC requires different perspectives to be included when identifying appropriate measures [52, 53]. This is useful especially when trying to evaluate Lean. Financial measures are a key source of information, but they provide information on past performance and can provide a misrepresentation of future outcomes [12, 15, 48, 52]. One criticism of the BSC is that it requires managers to work with multiple measures at once [12, 51]. Some managers focus on financial measures as they are more readily understood by everyone within the organisation [12, 14]. Kaplan and Norton [12] identified that many organisations use three themes associated with financial measures to achieve their objectives: cost reduction, productivity improvement and asset utilisation. These financial measures worked as part of the industrial mass production era [15], but they may not be sophisticated enough to evaluate the application of Lean in the service sector. For example, financial performance measures may not directly record improvements in customer satisfaction, cycle time, or demonstrate new value creating processes, that could be a direct consequence of applying Lean [15].

One approach would be to rely on other softer measures. These are the customer aspect of the BSC. The problem is that non-financial measures such as customer service, customer satisfaction and employee involvement can be prone to the same problems as financial measures [12]. They provide information on previous performance, which may not be directly linked to strategic objectives. They

may not be useful in determining which strategic direction an organisation should take [15, 49]. Outcome measures alone will not help identify how improvements will be achieved. Conversely, performance drivers (such as defect rates or cycle times) may enable the business unit to achieve short-term operational improvements, but without outcome measures they will fail to reveal whether the operational improvements translate into enhanced financial performance. It is necessary to have an appropriate mix of outcome measures and performance drivers [12]. Kaplan and Norton [12] concluded that value can vary across industries but identified three value attributes relating to: product/service; customer relationships; and image and reputation should be included on a BSC.

If Lean is viewed as a socio-technical system incorporating technical components (for example, the application of 5S, visual management, root cause analysis etc.) as well as supportive practices (for example, an appropriate reward system, employee empowerment, commitment etc.), an appropriate balance between cause and effect and the technical and the supportive elements needs to be managed [30]. Performance measures within a BSC could be created that incorporate the elements reflecting the technical and supportive aspects of Lean, as long as they are objective and reliable [53]. This would allow an organisation to understand the effect that Lean has on its overall performance. Managers could be presented with a BSC that evaluated Lean operational measures (performance drivers) which would be linked with financial performance information (outcome measures) [10, 15].

The fourth BSC perspective focusses upon learning and growth. The learning and growth section helps identify the structure an organisation should adopt to cultivate long-term growth [12]. Internal skills and other capabilities need to be aligned to the strategic direction set out by the senior management team [54]. This can be achieved by focusing on three core elements: people, systems and organisational procedures [12]. This allows gaps to be identified between the existing and required skills, which can be addressed through staff training [54]. However, Albertsen and Lueg [49] argued that performance measurement systems (PMS) such as the BSC can only really have an impact on performance if it is aligned with actors' intrinsic and extrinsic incentives. Kaplan and Norton [14] stated that it can be a risk to link rewards directly to BSC metrics as it assumes that the right measures are initially incorporated into the BSC. In practice, the refinement of a BSC is iterative. It also assumes that the measures are valid and reliable. This issue could be addressed through the learning and growth perspective of the BSC, which aims to promote the development of a shared vision, as well as providing strategic feedback to help achieve organisational learning [14, 51, 55, 56].

A BSC aims to help organisations improve current processes [12, 14]. However, a good BSC will also identify new processes that an organisation needs to be good at in order to meet financial and customer objectives [15]. These measures need to take into account the cause-and-effect relationships in order to determine the lead and lag metrics [15]. The BSC, therefore, is a collection of up to twenty-five measures that incorporate financial and non-financial measures that taken holistically depict an organisational strategy and communicate short and long-term objectives in a balanced way [10, 15, 50]. This is important because Hadid et al. [30] argued that rigorous research needs to be conducted that examines the impact of Lean on service and in particular its impact on performance. Identifying appropriate measures to populate the BSC then becomes important [52].

5. Research strategy

The primary research strategy adopted for this work was action research with a large motor dealership that operates multiple franchises (as the case under investigation) as part of a Knowledge Transfer Partnership (KTP) [57].

5.1 Action Research

Theory development is an important activity in organisational research [58]. A case study can help with theory development as it can address the 'what' and 'how' questions but also ask the 'why' questions that other research strategies cannot [59, 60]. Case studies have been argued to be one of the most useful ways to making valid contributions to the operations management knowledge base [61, 62]. This is because case studies are often deployed for investigating unfamiliar conditions [63].

To get a greater understanding of how a BSC could be developed, applied and used Action Research would be beneficial. Coughlan and Coughlan [64] considered that operations management researchers need a strategy to answer research questions that surveys and case studies could not answer. Action research can be summarised to incorporate “*research in action, rather than research about action; participative; concurrent with action; a sequence of events and an approach to problem solving*” [64 p.222]. It would be impractical to develop and test a BSC unless the research was situated within the context of an organisation. Action Research was deemed the most appropriate research strategy to accomplish this.

5.2 Research Methods

Case studies involving action research are not restricted to adopting one particular research method so can incorporate more qualitative data (for example, interviews, documentary collection), quantitative data (for example, financial records, questionnaires), or a mixture of both [58, 65]. It is important to document in great detail the ‘operations’ of the phenomena under investigation [66]. This could include for example, drawing on archival data [58], and standard operating procedures. Archival data provides a good context and background to an organisation under investigation as the data collected will have been produced for a specific organisational purpose [66]. Participant observation was used in order to examine what participants did, and how they worked. Vinten [67] supported making observations at regular intervals to build up a better picture of the activity being undertaken. To achieve this, observations were recorded in a diary by a member of the research team [68] and were used as part of the analysis. The observations were recorded each day and re-written afterwards as a form of reflection. Along with previous academic literature, archival data, documentary data and observations were collected as the first phase of this research, which allowed the development of a balanced scorecard for evaluating the performance of motor dealerships.

6. The development of a balanced scorecard for motor dealerships

The following sections demonstrate the development of the balanced scorecard. The BSC is one part of a much larger transformational change programme. As part of this programme, four pilot sites (different franchises ran by the motor dealership) were selected. The franchises made up different manufacturer models, markets and characteristics.

The project began with an internal and external review of existing practices. This stage of the project helped the research team and company specify the value of their business operations to their franchisors and customers. The next stage of the project assessed the Company’s readiness for change. At this stage of the project, a review and evaluation of existing processes and structures within the dealership was undertaken. Methods such as process and value stream mapping as well as service blue printing was undertaken. The approach focused on the competitiveness and efficiency of service, repairs and back-office functions. An evaluation of employees’ ‘readiness for change’ was also undertaken.

The remainder of this section displays examples of the types of value stream maps and process models developed. Secondly, an overview of the key performance indicators (KPIs) and Lean evaluation literatures was evaluated to determine the most suitable metrics to be included on the Balanced Scorecard. Finally, through a synthesis of these two approaches, the Balanced Scorecard was developed.

6.1 Process mapping and value streams

Mapping the value streams was a two-stage process. Firstly, the pilot site was observed and primary data were collected by the research team through shadowing and questioning employees, note taking, diary entries, photographs, A3 sheets (a standard report used for plan-do-check-act problem solving) as well as interactive sessions on problems and challenges. Secondary data included job descriptions,

manuals, job cards, manufacture's standards (specifying process steps and benchmark times), facility layout drawings, typical schedules and working patterns. Secondly, the data were analysed to gain an understanding of the operational and cultural context. The research team facilitated the application of Lean tools including 7 wastes, spaghetti diagrams, 5 whys, process mapping (see Fig. 1) and Value Stream Mapping. The company staff and management team then identified priorities for continuous improvement and future actions.

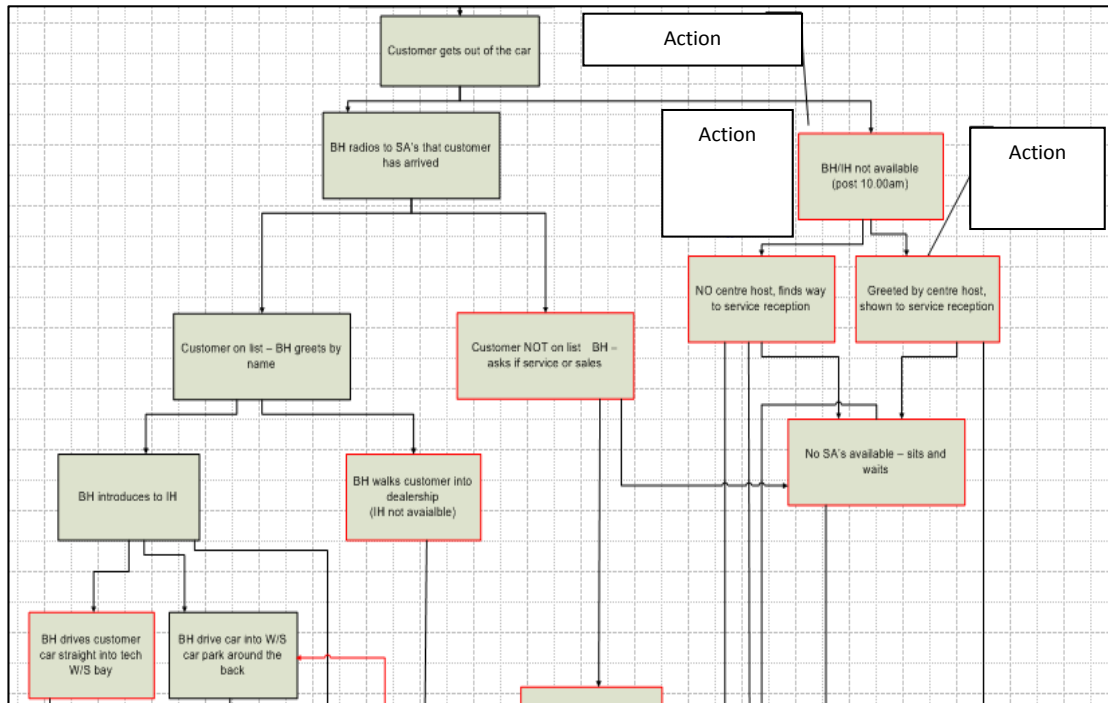


Fig. 1. An example of a process map

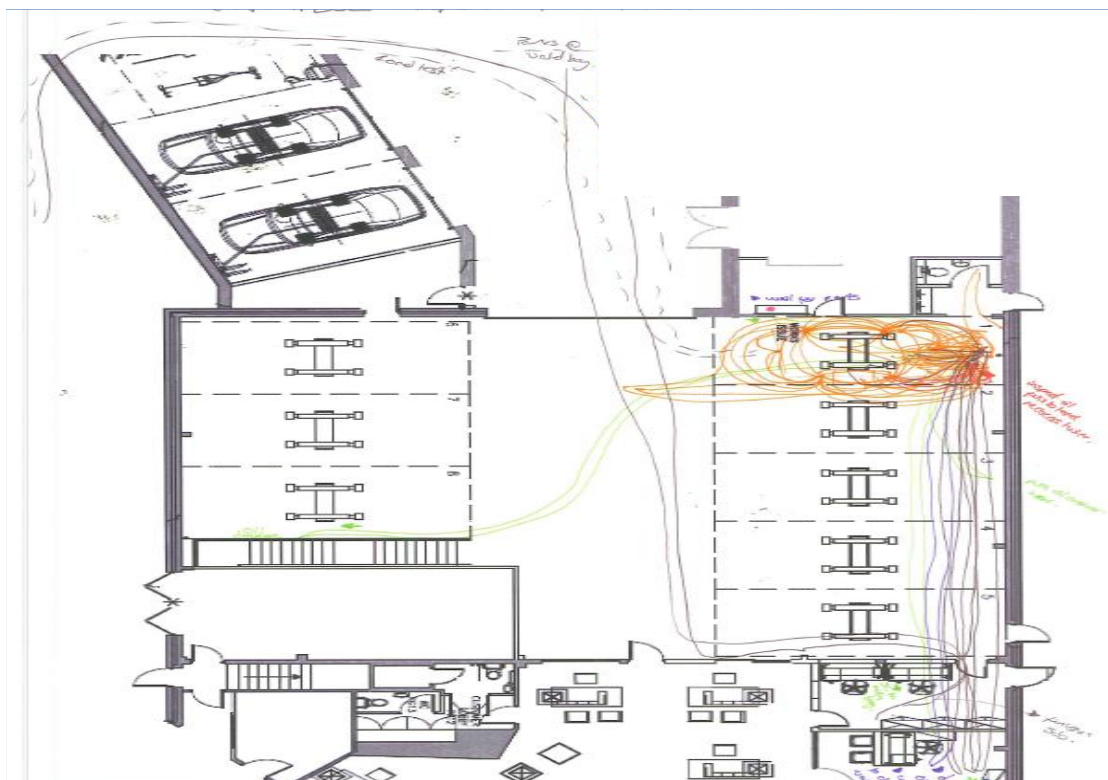


Fig. 2. Technician movements

An analysis of the technicians' processes for the different value streams was also completed. The aim behind this was to identify variation in the services and look at the process flow. An example of the outcomes is shown in Fig. 2.

The outcome of the mapping revealed the issues listed in Table 1.

Table 1. Wasteful activities identified

Issue	Waste Type
Walking to get diagnostic print outs	Motion
Walking to get diagnostic machines	Motion
Walking to parts department	Motion
Walking for oil drainers	Motion
Walking to check authorisation	Motion
	Waiting
Walking to Service advisors to check service due	Motion
	Correction
Duplication of printing as is lost from printer – duplicates walking	Over-production
Tech walking backwards and forwards to check on authorisation	Motion
Oil drainers not emptied – techs waste time locating other drainer	Conveyance
Parts given out incorrect – duplicate runs to parts	Correction
Car parked on the front, should be in the workshop bays – have to walk around and get it	Motion

The example illustrated (Fig. 1, 2 and Table 1) was for a standard annual vehicle service, which was a component of a number of the value streams identified. Continuously improving the standard service could impact on other value streams within the business. Therefore, it is important to measure what impacts any improvement had on operations.

6.2 Key performance indicators and lean evaluation metrics

In order to identify the key performance indicators that could be included in the BSC, a two-stage process was followed. Firstly, appropriate KPIs were identified from within the business. This involved identifying the types of information individuals required to perform their role, and additional data that would be useful. Once this data had been collected, duplicates and overlapping measures were removed. Information collected as part of the Company's annual HR review was identified and included. Secondly, 'best practice' measures were identified from sources external to the business. Other KPIs were identified from the academic and trade literature when deemed appropriate by key stakeholders of the project. The KPIs identified are shown in Table 2 below.

Table 2. Key performance indicators identified

Area Identified	Key Performance Indicator
Head Office	Essential maintenance sales; Average invoice value; Recovery rate; Monthly plan for retail labour sales vs actual; Used stock management; Technician capacity.
Pilot Site	Return to workshop percentage; Customer satisfaction score; Rate of returns;
Dealerships	Parts sales; Profitability of the after sales department; Timely submission of claims (Warranty); Levels of warranty write off; Quality/Accuracy of work (Vehicle Administration).
Human Resource Management	I love working for this organisation; I would leave tomorrow if I had another job; My manager does a lot of telling but not much listening; My manager regularly expresses his/her appreciation when I do a good job; My manager helps me fulfil my potential; My manager cares about how satisfied I am in my job; People in my team go out of their way to help me; People in our team don't

	care much for each other; This job is good for my personal growth; There are limited opportunities for me to learn and grow within this organization; Most days I feel exhausted when I come home from work; I'm spending too much time working; Sometimes I feel that the organisation takes advantage of me; My work deadlines are unrealistic.
Best Practice (External)	Customer fulfilment; Service lead-time; Takt time; Technician efficiency; Service lead times; Workshop capacity; Overtime; Training hours; Number of master classes or intervention; Kaizen ideas generated; Inventory.
Other	Service retention rate; Facility capacity; Overall efficiency; Productive efficiency; Service sales; Parts sales per labour hour sold.

In order to supplement and strengthen the proposed BSC, an evaluation of the Lean literature was undertaken to identify appropriate Lean metrics. A number of keywords relating to Lean evaluations were selected by the research team. These included 'Lean Evaluation', 'Lean Measurement', 'Performance Evaluation', and 'Operations Evaluation'. Three databases were used for searching for literature: EBSCO, Science Direct and Web of Knowledge. The results were scrutinised by two members of the research team. Abstracts were used to determine whether an article was included or rejected. After removing duplicates this left 31 articles. Articles were put into chronological order with author, research strategy, control variables (if present), measures of Lean implantation (if present), measures of profitability (if present), and the findings of the study. It was interesting to note that the primary research strategy for these studies was either a survey or secondary data utilising the COMPUSTAT database. The metrics used in these evaluations were reviewed with duplicates being removed. In total, 189 different metrics were identified. These metrics were discussed amongst the research team in the first instance. The research team then categorised the metrics into four areas including: 'use', 'perhaps use', 'not applicable' and 'cannot measure'. The document was then circulated to the wider project team to be used as a discussion document in order to identify the most appropriate metrics in conjunction with the KPIs identified for the development of the BSC.

6.3 A balanced scorecard for motor dealerships

In the automotive industry the most common methods of performance measurement are the use of KPIs that are cascaded down from the top level business objectives into a series of functional measures. This approach helps to link metrics at different levels, but does not take into account that the sum of the parts is not equal to the whole. Moreover, in this way metrics tend to be coherent with functional targets, overlooking the performance of the supply chain as a whole [69]. The synthesis between the identified KPIs and the Lean evaluation literature has enabled a BSC to be developed. The BSC focus and objectives are set out in Table 3 below.

Table 3. The Balanced Scorecard focus and objectives

Balanced Scorecard Perspective	Focus	Objective
Financial	The capability to drive throughput and Profitability	To satisfy our shareholders we must demonstrate a growth in profitability through improvement of margins. This should be driven through innovations in process removing waste and errors, thus creating the opportunity to process more cars, sell more work per-unit, and increase the margin of each job.
Business Processes	Rigorous processes ensuring quality and improvement	To satisfy our stakeholders and customers we must have customer safety at the heart of rigorous processes, which ensure the highest quality, the identification and removal of errors, and the flexibility to improve quickly.
Customer	A culture focused on delivering value to the customer	To achieve our vision we need to become the provider of choice through a reputation of industry leading quality and delivery on time (100%). We need happy, motivated people to deliver outstanding customer

Learning and Growth

Staff and manager capability to create improvements

service and to deliver the best value for money, while continually innovating to always improve our service. To satisfy our stakeholders and customers our people must be highly skilled, informed about the businesses current affairs and empowered to make the right choice. They must understand why we need continuous improvement, be competent to implement it and have their ideas encouraged. Our managers must have the capability to lead change and inspire improvement through their actions.

Based on Table 3, the metrics were identified to provide a rounded view of the dealerships' performance. An example of the financial objectives of the BSC is shown in Fig. 3.

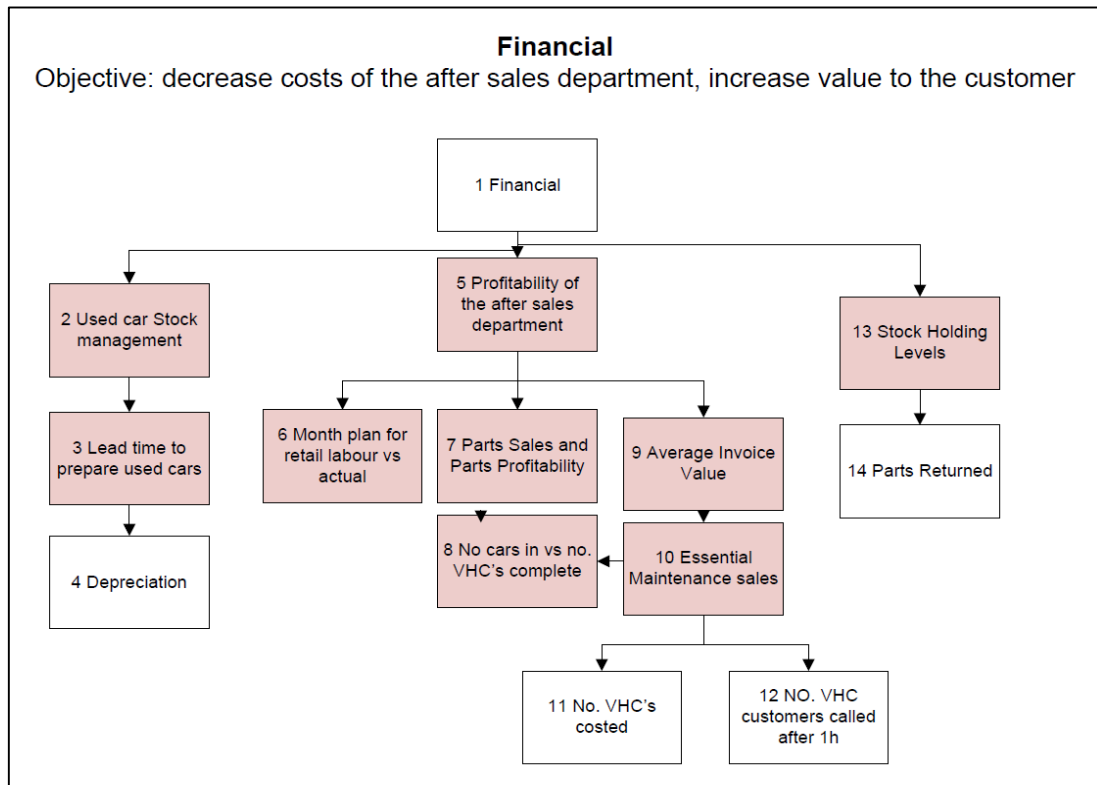


Fig. 3. Financial objectives of the balanced scorecard

The coloured boxes in Fig. 3 identify where continuous improvement events can be applied to in order to improve performance. The financial aspect of the working BSC can be seen in Fig.4 below. The green metrics depicts where data currently exists within the business and can be collected immediately (building on the discussion document created). The orange metrics demonstrate data that will begin to be collected in the immediate future. Finally, the red metrics identifies where new measures will need to be created in order to collect the appropriate data.

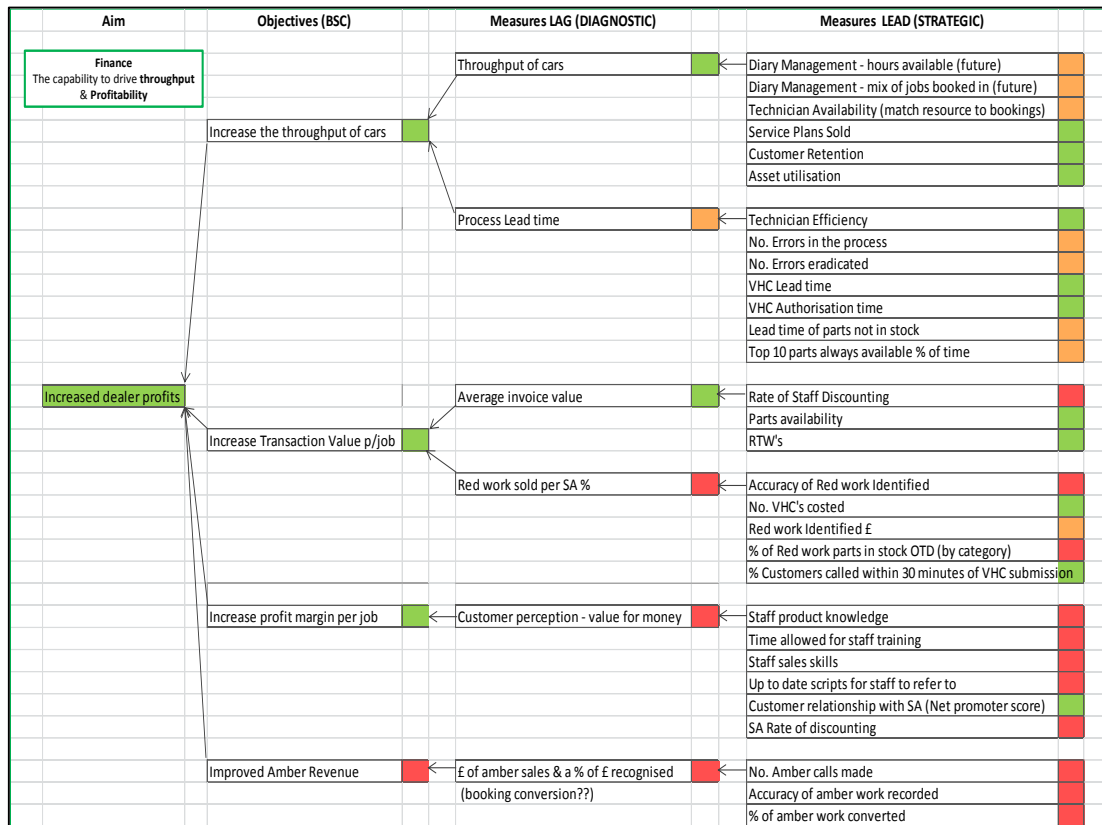


Fig. 4. The development of a balanced scorecard

7. Conclusions

This paper has provided an overview of the development of a balanced scorecard (BSC) for evaluating the performance of motor dealerships. Lean production has been applied to the automotive manufacturing sector and to suppliers' upstream in the supply chain. Downstream automotive franchisees' have been left to manage their own improvement initiatives. Previous research has demonstrated the applicability of Lean to the services sector. However, no research on the adoption of Lean has been conducted at the franchise (dealership) level. Any Lean implementation needs to be evaluated to identify how successful the outcomes have been. No accepted Lean evaluation method currently exists. A review of the Lean literature was undertaken to identify appropriate Lean metrics. This review identified 189 different Lean metrics that could be incorporated into a balanced scorecard (BSC).

The BSC has been identified as a suitable performance measurement tool that can include Lean evaluation metrics. Through an action research strategy, a BSC has been developed building on a motor dealership's internal capabilities, identifying value streams, external best practice, and the academic literature. This BSC can help evaluate continuous improvement initiatives being undertaken as part of a larger transformational change programme at one motor dealer that operates multiple franchises. Future work will evaluate the success of the transformational change programme. The BSC card will form part of that evaluation. The BSC itself will also be evaluated in terms of ease of use and usefulness in identifying the impact of continuous improvement initiatives as well as on outcomes of the programme.

Acknowledgements

The research team wishes to thank the motor dealership (the franchisee), the pilot sites and all of the employees who have provided their time and input into allowing us to conduct this research.

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