



## An Analysis of Lean Management Procedures within Irish Motor Dealerships

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### Abstract

There is a large volume of extant literature relating to lean management within the automobile *manufacturing* industry, but, there is very limited research on lean management within *dealerships*. Furthermore, the relevance of lean management within the *Irish* motor industry is a relatively unexplored area. Due to a lack of information, many misconceptions and misunderstandings exist regarding lean management and its relevance to motor dealerships.

This paper explores the impact of lean management on Irish motor dealerships which have implemented lean procedures and explores the perceptions of dealerships which have not embarked on a lean management programme. The paper provides an analysis of lean management procedures from the perspective of senior managers working in franchised Audi and Volkswagen dealerships in Ireland. Overall, the results of the study indicate that lean management procedures have a positive influence on dealerships, but, the importance of training and commitment for lean procedures to be successful should be emphasised.

**Keywords:** Lean management, Irish motor dealerships

### 1. Introduction

#### 1.1 Background to Lean Management

Lean management evolved from philosophies such as Just-In-Time (JIT), Total Quality Management (TQM) and World Class Manufacturing. From a business perspective the term 'lean' is used to describe a philosophy of management which involves a set of tools and techniques used to optimise time, assets, and productivity, while continually improving the quality of products and services for customers. Todd (1995) suggests that the term 'lean production' was coined to clarify what the concepts of JIT and TQM did and did not stand for, along with highlighting that lean uses less of everything in comparison to mass production.

Lean production is derived from the Toyota production system devised in the 1950s to eliminate waste within the organisation. Lean production developed over the years to provide a competitive advantage for Toyota having an ability to provide higher quality cars, in less worker hours and with fewer defects than competing car manufacturers. Jones and Mitchell (2006) suggest that the lean management provides four significant benefits for an organisation. First, increased productivity results within the organisation because the same workers can achieve more output from existing resource levels. Second, the delivery of work is improved through increased standards of work completed in less time. Third, quality increases due to a reduction in the number of mistakes. Finally, increased satisfaction levels ensure better staff morale and a stable workforce.

#### 1.2 Relevance of Lean Management within Irish Motor Dealerships

O'Brien (2006), speaking at a Society of Irish Motor Industry (SIMI) annual dealer conference, outlined findings of a survey of more than 70 Irish motor dealerships, carried out by consultants Grant Thornton which indicates that the average return on investment in Irish motor dealerships was just four percent while dealer profit before tax comprised 0.8 percent of sales. Furthermore, O'Brien contends that the 'shrewd' investor seeks a return on investment in excess of eight percent per annum, thereby currently making motor dealerships unattractive for investment.

Some of the pressures which franchised motor dealerships in Ireland are subjected to include:

Lower profits despite increased new car sales

Tougher sales targets in order to obtain rebates from manufacturers  
Higher levels of used car stocks, exerting pressure on prices and margins  
Lower margins on overall car sales leading to increased dependency on after-sales activities  
Tighter manufacturers' standards for facilities within the dealership  
Increased staff-training, administration and operating costs  
Tighter cash flows

Competition Commissioner Kroes (2006), in a speech to the European Council for Motor Trades and Repairs (CECRA), suggests that since the introduction of the new Block Exemption rules in October 2002 dealer margins have fallen to such an extent that many franchised car dealerships within Ireland and throughout Europe are fortunate if they maintain margins of one percent on new car sales.

As a consequence of the pressures on the car sales business, future profitability within motor dealerships will rely heavily on after-sales activities. The level of after-sales activity within dealerships has declined due to increased reliability of motor vehicles along with significant extension in recommended service intervals. These factors are increasing the level of competition between motor dealerships for the declining quantity of work available. Furthermore, as the quality of all cars has improved, after-sales service is a less significant differentiator, thereby making customer service *the* most important differentiator between dealerships. A more proactive approach, therefore, is required by Irish motor dealerships to increase profitability. Advocates of lean management contend the implementation of lean techniques can provide opportunities for dealerships to address the outlined difficulties, to increase return on investment, and create a sustainable competitive advantage (Womack and Jones, 2005; Hines *et al.*, 2002).

## 2. Research Methodology

Eleven in-depth face-to-face interviews were conducted for this research. Ten Audi and Volkswagen Irish motor dealerships within the group were selected for inclusion in this study. A further interview was held with the Irish Audi and Volkswagen distributor in order to get an overall view of the implementation of lean management within the dealerships. It was decided to concentrate on the Audi and Volkswagen group as there has been a coordinated effort by their distributor to encourage dealers to participate in a lean management programme. The dealers were located in the Leinster province, and primarily within Dublin. A further consideration was to select dealers representing a variety of organisation sizes.

A criterion of qualifying as a research interviewee was that the participant had to be a senior manager within the dealership and directly involved in implementation of lean management within the organisation. The reason for such criteria was to evaluate why the dealership had become involved with lean processes, and the effects of lean within the organisation from a managerial point of view. The belief that junior staff may not have been in a position to answer these questions influenced these criteria. The interviewees comprised eight dealer principals, two after-sales managers, and one representative for the Audi and Volkswagen distributor in Ireland. All the dealer principals and after-sales managers had direct responsibility for the implementation of lean management within their organisation, while the distributor representative had monitored the implementation of lean procedures within the dealers concerned.

After interviewing three dealers who had not implemented lean management, common findings were emerging so a decision was taken not to continue with further interviewing of dealers who had not implemented lean. This concurs with Seidman (1998) who suggests that saturation of information occurs where the interviewer begins to hear the same information and is no longer learning anything new. All interviews were recorded on tape and transcribed verbatim shortly after each interview. Analysis of data was based on the *grounded theory* approach.

## 3. Research Findings

### 3.1 Reasons for Implementing Lean management procedures in Irish Audi and Volkswagen Dealerships

The research findings indicated that there is no *one* reason why dealers became involved in implementing lean management techniques. The reasons for dealers becoming involved with the introduction of lean management depend on the individual circumstances of each dealer. The findings suggest, however, that some reasons are common to most of the dealers involved. For dealers with physical space constraints, one of the primary reasons for implementing lean was to improve the utilisation of limited resources. Other dealers embarked on lean management in an attempt to overcome problems with the running of certain departments within the organisation, most commonly the service and parts departments. The problems varied in nature from operational to personnel issues. While increasing performance levels and workshop utilisation were important considerations, the improvement of quality standards and customer satisfaction levels were outlined as the primary objectives for some dealers becoming involved in the introduction of lean management. An excerpt from the interview with one of the dealers reflects the concern of many of the interviewees:

*We have a problem with repeat repairs and customer satisfaction levels and I reckoned that better analysis and procedures would mean fewer repeat repairs which in turn would lead to increased satisfaction levels (Dealer 7).*

### 3.2 Attitudes Towards Lean Management Within Dealerships

The findings highlight the importance of having staff and management who have a positive and committed attitude towards lean. In addition to showing a high level of commitment to implementing lean, a further advantage of having management involved as trainers is that they should gain a thorough understanding of how the concepts work. For the successful implementation of lean management within an organisation it is essential that a strong and dedicated leader is involved. One of the conditions under which the consultants undertook to work with each dealer was that the dealer principal had to be directly involved and participate in all the training courses. This was seen as essential so that the introduction of lean would not be delegated to someone else within the organisation having less authority than the dealer principal.

The research findings indicate that dealerships which have achieved most from the implementation of lean are those where senior management has remained closely involved in the process. On the other hand, those who found that they were too busy to remain directly involved have allowed the system to 'slip', as indicated by two excerpts from the interviews:

*The reality of what happened here, and it shouldn't be an excuse, but we probably just got too busy and things were let slip (Dealer 4).*

*At different stages we have lost momentum and then you can get into a rut and it is hard to pick it up again (Dealer 2).*

The culture within an organisation has a major influence on the success or otherwise of lean management. While advocates of lean insist that it is the processes rather than people that make the system work, the current study suggests having the right people for the job is essential for successful implementation of lean principles. Furthermore, where there is a less positive attitude towards lean, its implementation is more difficult:

*The biggest problem to implementing lean management is what we call inertia or resistance to change (Dealer 1).*

*Most of the personnel have been doing things their own way for so long that it is very hard to change them (Dealer 5).*

The majority of the dealers interviewed believed that when the objectives of lean were fully explained resistance was generally overcome. Once staff saw there was a benefit for themselves, as workers, in addition to the benefit for the company they cooperated:

*A lot is to do with the way you sell it to staff. Many people, when they hear the term 'lean' think it is to do with layoffs and so on. It is very important that one communicates to them that this is not what lean is about (Dealer 1).*

In some dealerships most resistance to the implementation of lean was from middle management whereas the workers on the floor were quite willing to become involved in improving their work practices but were almost discouraged by their managers. Dealers found that once staff embraced the true concept of lean management its effect increased feedback and contributions, from staff at all levels, for logical improvements to the workplace and work practices:

*Mechanics would be forthcoming with ideas on how the tool room should be laid out, where tools should be located according to use, etc. (Dealer 1).*

It is clear that many factors influence the culture change necessary for adopting lean processes. There is no 'one size fits all' solution due to the different backgrounds of all the dealers involved. The importance of having committed and skilled management in place to develop a culture where all staff willingly become involved and actively work to make improvements within the organisation is emphasised by the findings.

### 3.3 Methodologies and Tools Used in the Implementation of Lean

Many different tools are used for the implementation of lean. Some of the most relevant tools used for the motor retailer are briefly described in this section.

#### 3.3.1 Pre-diagnosis

Pre-diagnosis involves the physical checking of each vehicle when left to the workshop, by the customer, to have service and repair work carried out to identify what exactly is required prior to the mechanic actually beginning work on the car. This, however, is really only the second stage in the pre-diagnosis process. The first stage involves having the ability to correctly ascertain from the customer at the time of booking, all relevant details in order to be able to make an informed estimate of the extent of work required. This means that the relevant parts required can be ordered and readily available when the car actually arrives for the service. It is acknowledged that the unavailability of parts at the required time is a major contributor to delays in completion of service and repair work within motor dealerships. Furthermore, adequate workshop time can be allocated at the booking-in stage to ensure each job can be completed with a single workshop visit.

As part of this process 'green stream' work was identified. 'Green stream' is the term used for standard type operations which have the ability to flow smoothly. Due to the wide variety of work carried out in the after-sales department, from standard pre-delivery inspections, servicing and repairs to the unpredictable repair of sporadic faults and breakdowns, it makes the implementation of a green stream vital for the smooth operation of pre-diagnosis:

*We took the jobs with the most straightforward work content and they were the ones that we 'green streamed' and we got them through the system as quickly as possible (Dealer 7).*

This means that every job is initially examined to ascertain whether it is suited for the green stream or not and this will affect the planning involved prior to the car arriving at the workshop. In the case of green stream work the parts can be ordered in advance and relatively accurate labour time allocation is possible in most cases. On the other hand, with non-green stream jobs, the amount of preparatory work that can be done before the car actually arrives might be quite limited. Preparatory work for non-green stream jobs can involve researching manufacturers' technical data for any records of similar known problems and solutions. The overriding goal of the pre-diagnosis, either at the time of booking or when the car actually arrives, is to quantify the job:

*The only real way to quantify a job is to carry out pre-diagnosis which means physically checking the car over. You can do so much on the telephone but you are still only seeing part of the picture and it is not until the car arrives that you can see that the drive boots are damaged or something else (Dealer 1).*

The dealers involved have undertaken the physical element of pre-diagnosis to varying degrees. Some dealers physically pre-diagnose all jobs while others pre-diagnose only the 'green stream' type jobs as identified at the time of booking. One possible difficulty identified by some dealers in relation to pre-diagnosis is the effect of long lead times for workshops. It is essential to shorten lead times in order to improve flexibility and to allow prompt adapting to specific demands which arise. Furthermore, short lead times reduce the risk of obsolete stock becoming an issue. This is particularly relevant to the motor dealer where specific parts are required for specific vehicles and cannot be re-sold if the customer does not return to have the part fitted. Effective pre-diagnosis in tandem with short lead times helps reduce the risk of obsolete stock:

*Pre-diagnosis has helped reduce the level of stock due to parts being ordered and the customer not returning (Dealer 1).*

Another important consideration is the need for adequately trained and experienced staff working at service reception with good technical knowledge for the successful implementation of pre-diagnosis. The current research findings illustrate that when the dealer has pre-diagnosis working effectively the benefits are significant, as it reduces the number of cars having to return for completion of repairs which in turn reduces the administration and paperwork. Pre-diagnosis provides opportunities for up-selling, it increases workshop throughputs by making the service process more efficient, and it helps to reduce the stress levels for both staff and customers when repairs can be completed on time, first time.

### 3.3.2 Spaghetti Maps

Many of the dealers interviewed mentioned the use of spaghetti maps as one of the tools used which had a big influence on refining how certain jobs were being done. Spaghetti mapping involves tracing the movements of a worker while he or she is carrying out a particular task. This highlights the waste involved in each process and provides a focus whereby people begin to think more about what they are doing and ways of simplifying procedures. Most dealers viewed this as being a very simple and logical tool and yet very effective for highlighting waste within work practices. Spaghetti diagrams were viewed by many interviewees as a key 'selling point' of lean procedures to workers who can see a tangible benefit for them:

*Through the use of a spaghetti map it was observed that one guy who was valeting a car actually walked 1.8 km while cleaning the car. Through analysis we were able to modify the way he did the job in a logical way so that he could clean the car while having to walk only 0.25 km (Dealer 1).*

*The spaghetti chart was probably the most effective tool to get everyone thinking about reducing waste. The idea of reducing waste by eliminating unnecessary journeys and doing a job in the least possible manoeuvres really brought the idea home (Dealer 7).*

*The use of spaghetti maps provided amazing findings which was very beneficial to the dealers. We mapped one particular service job and observed the mechanic from when he actually got the jobcard to when he began working on the car. Between walking around looking for keys, seat covers, floor mats and so on and then having to move other cars to get the one he was to work on into the workshop it took twenty-five minutes from receiving the job card to when he began working on the car (Distributor Representative).*

The findings confirm that spaghetti mapping is one of the key lean tools that all dealers obtained significant benefits from. First, in terms of identifying wasteful elements of existing practices and second, through highlighting to all staff members how worthwhile and realistic lean management techniques can be.

### 3.3.3 Job Card Data Analysis

The workshop job card is an invaluable source of information for analysing after-sales activities. In addition to providing a description of the work requested by the customer for the technician prior to commencement of work, the job card provides a record of feedback from the technician on exactly what work has been carried out during the service, along with any outstanding repairs which need further attention. Data analysis of workshop job cards was carried out by the lean management consultants and highlighted many inefficiencies within the after-sales department at all levels along with highlighting the potential for increased sales. This detailed procedure involved analysing up to three hundred job cards within the dealership and identifying where repairs were not completed fully or on time. The numbers of cars which required more than one visit to the dealership to have work completed were tracked and the reason why the revisit was necessary was identified in each case. Additionally, the loss of potential workshop sales identified during the service of a car was highlighted. The analysis highlighted the reasons why this work was not completed in the workshop and the value of the potential lost sales to the dealership:

*We decided that instead of booking for fifty hours work a day in the workshop, we would pear it back and only book for twenty five hours, however we find now that we are up-selling to such an extent that we are actually selling fifty three labour hours a day (Dealer 6).*

The analysis of job cards proved that, contrary to what dealers had believed, it was actually the lack of adequate preparation that was the weakest part of the service process. It also highlighted that some dealers were experiencing comebacks in the region of fifty to sixty percent, many of which were caused by straightforward procedures not being carried out in an efficient manner, such as specific parts not being ordered for cars before the car arrived for servicing:

*I think that if the dealers did nothing else in relation to lean but carry out data analysis and then use the findings to make improvements it would be very worthwhile (Distributor Representative).*

The current research indicates that jobcard data analysis has highlighted significant shortfalls when dealing with customers and difficulties with existing processes within the dealership. In most cases, the information forthcoming through data analysis had been overlooked by dealers before embarking on lean principles. Furthermore, data analysis highlights increased opportunities for 'up-selling' within the after sales department. The benefits obtained from up-selling are twofold. First, with increased parts and labour hours sold, and second, through reduced administration work per day which is viewed as non-value adding work.

### 3.3.4 Pre-picking of Parts

Many dealers had already embarked on the pre-picking of parts prior to implementing lean management procedures. It was, however, in a quite haphazard fashion as they did not fully analyse the requirements before the cars arrived for servicing. Pre-picking is based on the concept of JIT whereby the parts for a particular job are gathered together and available for the technician when he/she requires them. This eliminates waiting times and helps to evenly spread the workload of the parts personnel throughout the day.

Some of the dealers have gone so far as to close off the counter between the parts department and the workshop and employ a dedicated 'parts-to-workshop' person. This means that the mechanics do not have to come looking for parts. Instead, the parts are already picked and waiting for them. Some dealers provide mechanics with a 'pool stock' of common items used in servicing, such as light bulbs, fuses and other consumables which are replenished regularly by the parts-to-service person and this eliminates the need for mechanics to waste time looking for these consumables during the course of servicing a car:

*We did something quite radical. We closed the parts counter to the workshop completely and employed a person specifically to become a parts-to-service person (Dealer 3).*

The findings indicate that while some dealers had previously introduced some pre-picking of parts, the introduction of lean thinking made the system more effective due to more efficient booking-in processes and pre-diagnosis. This suggests that efficient pre-picking of parts can happen only in tandem with adequate pre-diagnosis.

### 3.3.5 Location of Special Tools

Prior to the introduction of lean management the general attitude was to keep special tools locked in a secure location, perhaps even in the parts department where a system of 'signing out' a tool was adopted to monitor the location of the tool. While this approach was good from a security perspective, it was not conducive to the lean philosophy because it caused delays while mechanics were searching for tools or waiting at the parts counter for a tool.

*From an importers point of view we were advising that, because there are so many special tools, they should be locked away in the parts department. From a lean thinking view, ideally every mechanic should have their own set of special tools, but at the very least special tools should be located on a visible shadow board and no more than a twenty metre walk from all the mechanics (Distributor Representative).*

The findings suggest that the location of special tools which are purchased by the dealership and commonly available to all mechanics can relatively easily be adapted to lean processes. Where the tools belonging to individual mechanics are concerned however, there may be a certain resistance to being told how to organise their personal tool box unless mechanics can see the benefit for themselves.

### 3.3.6 Customer Fulfilment Reporting

Customer fulfilment reporting involves monitoring the progress of each job as it progresses through the workshop from start to finish. It requires detailed analysis of the different stages and examines if the time allocated for each job was adequate; what extra work was found during the service; and if the work could be finished in the time allocated or, if not, why not. Through this monitoring, trends arise which indicate where problems and 'bottlenecks' are occurring and, therefore, it highlights where changes need to be made to improve the process. Due to the significant time required for conducting the customer fulfilment report, the study indicates that only one dealership has fully adopted this aspect of lean management. Other dealers contend that it is not practical as it almost requires a dedicated person to carry out the reporting.

*If you were to clock the time spent filling out the customer fulfilment report each day it would be about two hours. It can cause a degree of analysis paralysis at times, but it is a very effective tool (Dealer 1).*

The research findings indicate that some dealerships have adopted a broader range of methodologies than others for implementing lean. This is primarily influenced by the duration which the dealership has been involved with the lean programme, but not definitively. In many cases the commitment of management proved a more influential factor. In the majority of cases, however, pre-diagnosis, spaghetti mapping, and job-card analysis were the basic methodologies applied.

### 3.4 Analysing the Influence of Lean Management within Motor Dealerships

Assessing the effectiveness of lean management takes on different forms depending on what a dealer expects from lean. Regardless of individual dealership needs, the overriding objective of all dealers was to make significant improvements to the running of their businesses. The findings suggest that every dealer has obtained at least some benefit from implementing lean management, including those who commenced implementing it relatively recently. Furthermore, the findings indicate that the degree to which all dealers achieve their expectations depends on the commitment to the programme. Some of the benefits the dealers experienced are summarised below.

#### 3.4.1 Lean Management and Performance Levels

Performance levels, namely workshop throughputs, which include the sale of labour hours and vehicle parts, have generally improved in all dealers who have implemented lean management techniques within their after-sales departments. Performance, however, has been influenced to varying degrees and generally those who have put more time and effort into lean have seen greater returns. The interviewees who have been using lean practices for a considerable time estimate that turnover through the service and parts department has increased in the region of eighteen to twenty percent as a consequence of implementing lean management:

*Our workshop efficiency soared and our profitability soared and the mechanics bonuses also went up, and from that moment everybody was convinced that lean was worthwhile. It was a win-win situation (Dealer 3).*

Other dealers have observed that standard service times have been reduced significantly, which leads to increased throughput and with lower stress levels for all concerned:

*We have always run at above ninety-five percent productivity but the stress levels in order to keep it at that level are quite high. So what I see from lean is a reduction in stress levels, and if you reduce the stress levels people stay with you longer. People are happier, people earn more money, and if they are well paid yet not so stressed they look after customers better which is beneficial for the long-term future of the company (Dealer 6).*

A difficulty highlighted in the current research is that the dealers involved appear to have no definite method of determining the effectiveness of lean management with regard to increasing performance levels. This results in quite subjective views regarding the effectiveness or otherwise of lean management pertaining to performance levels.

#### 3.4.2 Lean Management and Quality Standards

It is difficult for many of the dealers to accurately estimate the effect that lean management has had on the improvement or otherwise of quality standards within their businesses. Various factors affect the perceived quality levels and many of these factors are outside the direct control of the motor retailer. Some dealers commented that the product quality of the cars they are selling and servicing has improved greatly in recent years and that contributes to the overall perception of improved quality, even if this is not directly attributable to the implementation of lean in the motor dealership:

*Quality has definitely improved, however, in reality I believe it is a combination of improved product quality as highlighted by a reduction in warranty problems in 2006 when compared to 2005, which we can't really take credit for. We haven't been able to strip out and identify exactly how much of the improved customer satisfaction figures is attributable to lean (Dealer 2).*

The research findings highlight a contradiction in relation to quality and lean management whereby the manufacturer stipulates that a definite number of quality checks must be carried out and recorded as part of the dealer monthly quality standards checklist. This is contrary to the widely held views of lean advocates that quality checks are a form of waste. An important finding from the current research is that there is no one technique used to monitor quality standards within the dealership and consequently how quality is affected by lean management.

#### 3.4.3 Customer Satisfaction and Lean Management

The most common tool used to monitor quality is the customer-satisfaction survey, which involves an analysis by a marketing company on behalf of the distributor to record customer satisfaction levels and to rank each dealer accordingly. A difficulty arises, however, as there is a considerable time delay before the data is made available, so it limits the opportunity a dealer has to resolve a difficulty for the customer and to retrieve the situation.

While some dealers are attributing improved customer satisfaction directly to the implementation of lean, the distributor who monitors customer satisfaction on an ongoing basis, contradicts this:

*Our own research into customer satisfaction has showed that it has not got any better. From our research there appears to be no direct link to show that customer satisfaction improved with lean thinking (Distributor Representative).*

The current findings indicate that while customer satisfaction surveys are applicable to all dealers, there is no one effective method of assessing customer satisfaction being used by all dealers involved in lean management. This suggests that assessing customer satisfaction and the significance of lean to customer satisfaction is quite subjective. While dealers express their own views on what is important, more research into customer satisfaction levels is required to accurately determine and compare the levels of improvement involved.

#### 3.5 Difficulties in Implementing Lean Management

From the research conducted, it is apparent that certain difficulties have hindered the development of lean management among the dealers interviewed. These problems can be attributed in some cases to the attitudes and activities of personnel within the dealership. Some of the difficulties, however, are outside the control of the individual dealers and result from limitations of distributors and suppliers.

##### 3.5.1 Cherry-Picking Elements of Lean Management

Most of the dealers interviewed have to some extent cherry-picked elements of lean management which either appealed most to them or suited their individual circumstance. Cave (2003) contends that cherry-picking the more attractive elements while leaving out the more difficult elements ultimately results in failure of lean management within the organisation. This is due to processes not working effectively in isolation and therefore maximum benefit cannot be obtained.

##### 3.5.2 Need for a Dedicated Lean Manager within the Dealership

The current research findings suggest that if a dedicated lean manager was appointed with the sole responsibility of implementing lean techniques, then it would have been possible to maintain momentum to a greater degree. It is clear that there are significant benefits from implementing lean management, both financial and otherwise, so a cost-benefit analysis should indicate that the cost of having a dedicated lean manager could pay many times over through increased productivity and stable workforce.

##### 3.5.3 Personnel Difficulties

The attitudes and ability of personnel within the dealership has a significant impact on the success of lean management within the dealership. The ability to maintain staff levels and minimise staff turnover are essential if the organisation is to be successful with implementing lean management procedures. The need for effective management to create stability within the dealership with regard to staffing is also important.

##### 3.5.4 Time Span for Implementation of Lean Management

The current research findings highlight the importance of adapting the timeframe for the implementation of lean management according to the requirements of individual dealerships. The nature of the business dictates that each dealer must be analysed individually and targets set accordingly. The approach of forming groups of dealers and allocating a common timeframe for the group to implement specific lean procedures appears to have had only limited success.

### 3.5.5 Suppliers

To some extent, dealerships are constrained with implementing lean procedures due to external influences, which are outside of their control. The most significant theme that emerged from dealers in this regard was in relation to the supply of parts. The interviewees highlighted that the current system, whereby parts are delivered from the manufacturer to the dealer via the importer, was not in line with the concept of lean management and JIT.

## 4. Conclusions

Previous literature relating to lean management within the motor industry focused primarily on manufacturing processes and in particular the Toyota Production System. The relevance of this to Ireland is limited as there have been no automobile manufacturing plants operational in Ireland for some years.

Despite the improved variety and quality of products, Womack and Jones (2005) contend that customer satisfaction appears to be deteriorating. Furthermore, they suggest that 'lean consumption' should be more satisfying due to the availability of cheaper and more reliable products, however, this is not the reality. Instead, the consumption process very often involves significant effort for the consumer for which there is no remuneration or satisfaction. The essence of lean management in the motor retail trade is to improve the consumption process for the customer through increasing the efficiency of processes within the dealership.

The primary conclusions from the current study confirm that senior managers consider lean management to be a worthwhile project for motor dealerships. Within those dealerships which have not implemented lean, all interviewees commented that it was something that they would possibly undertake in the future:

*We would not have the time available to dedicate to implementing lean management up until now but perhaps in the future we will consider it (Dealer 9).*

The findings from the current study suggest that there is a generally positive attitude towards lean management; however, there is also some misunderstanding on what is actually involved. A factor that all interviewees agree on is that lean management requires much time and effort. The rate at which lean techniques are implemented varies, depending on the circumstance of individual dealerships. This suggests that the practice adopted by the consultants of grouping dealerships and attempting to coordinate the implementation of lean practices, whilst appearing more cost effective, may not be the most successful approach for individual dealerships. In all cases, for lean management to be successful, it is essential that senior management is committed to the lean programme and encourage all staff to be directly involved with the training and implementation of lean. In dealerships where lean management is embraced, significant improvements accrue, which makes the programme worthwhile both in financial terms and in developing a positive working environment. Finally, in agreement with many advocates of lean management the findings suggest that lean is a long-term process which involves many difficulties and requires commitment and resilience.

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