

Vehicle Design and Launch under Dynamic Balance

Run Xu

Yantai Institute of Technology, Eletricity Mechanical Department, Shandong, Yantai 264005

Abstract: The life span of automobile can be improved under moderate dynamic balance condition. It's the number of vehicles sold versus time. They are dynamic rather than immutable. When the quantity is high, the cost decreases and should increase time, and when it is low, the cost increases should decrease time. This is dynamic balance. Furthermore large dynamic without controllability, not as a cost analysis. The right balance may be controlled is the purpose of our study. So the study of dynamic balance system is the main problem to predict the quantity and time of future market demand. Here the conversion coefficient is the first problem we need to solve. This paper describes the automobile innovation and mass production.

Keywords: vehicle; design; launch; design; dynamic; balance

Date of Submission: 22-01-2023

Date of acceptance: 06-02-2023

I. Introduction

The vehicle as a transporting tool has been dominated year by year. It not only conveys heavy goods but also convey passengers so it plays the most important role in world more and more. On the other side due to its high price it dominates to play the same role in industrial country. As we know the vehicle quantity will stand for one country's industrial developed index. So we must meet the face of vehicle situation to consider its design and launch in factory with dynamic balance. As we know the vehicle will be produced by manufacturing factory after the specified design and development by research and development(R&D) department after purchasing order. However the trial and launch have different conception, only flow line assembled by regulative process is to start manufacture launch after trialing sample being produced to experimental process and submitted to customer to obtain their agreement. ^[1-8]

The dynamic balance is formed which means a certain prediction will be produced before its launch with a non balance market demand quantity. The non balance condition may present unstable situation which is a certain flexibility in different period. For example the demand has been changed in terms of the uncertain factor. Therefore the market research with conversion coefficient can be made as soon as possible(ASAP) for later continuous launch. According to the research data the conversion coefficient has been substituted into a series of formulae to gain the scientific result for determining of considering the cost and price of vehicle. In this paper the total narrative on the conversion coefficient role has been written for vehicle launch problem. ^[9-12]

The new vehicle must be developed through design and innovative department so that the strict technological administration will be proceeded from R&D ensures that the launch is done smoothly according to the specified project on demand of customer. Thereby the technology will be needed to promote to specified project sufficiently day by day for us to accumulate plenty experience to short the design cycle when we have new plan to launch to market.

II. Discussions

The vehicle design and innovation are our main topics at the moment. How to create a new function of the vehicle is a matter of national economy. This is particularly important because of its high price.

Different functions require different designs and innovations. Nowadays, people's requirements for new functions are becoming more and more obvious. How to buy high value-added vehicles at lower prices is an increasing requirement. So the current requirements for its performance are increasing day by day. These requirements can be met through the research and development department. Excellent design comes into being to meet people's higher requirements for vehicle performance. It's going to require that we, the business community, build better vehicles through research and development.

2.1 New function of vehicle

The appointment of engineers enables the creation of products in enterprises to be implemented. Focus on the primary purpose of product function update can be achieved, and launch new products to meet the needs of consumers at major sales levels of the society. Reduce the time to propose new products, reduce the design cycle. At some point in the first design, the second design was introduced. The third and fourth products are also launched seasonally to maintain the continuity of product design and increase the life of series products.

How to predict the accurate demanding quantity has been judged which is important factor. That will influence the whole product flow line assembled for new vehicle so the method is adopted to calculate will be dominated in advance. Such as conversion coefficient into formula to obtain the most accurate value has been required by our specialists or engineers. This may be big project even establishing a new scientific induction to approach the virtual calculation on the views of current urgent one, For example writing a speciality book to observe the conversion the coefficient which is key.

With the addition of new features, the overall life of the product has increased and the profit is greater. Customers can improve the scope of replacement of new products on a regular basis, can enjoy a higher level of product performance brought by life. For example, on the basis of washing and dehydration of the washing machine, the drying function can make dirty clothes in the washing machine to complete the washing and drying one-stop service. Customers no longer have to spend time alone drying their clothes in the washing machine. This greatly increases the convenience, allowing clothes to be dried earlier even in winter and humid conditions that are not conducive to drying, and the difference is only 500 yuan. So in the future, washing machines integrated with elution and drying will become the main products of customers. Higher demand drives better products. Customers put forward to increase a certain aspect of performance requirements, the company's research and development department can develop the corresponding products. This makes the product performance more and more, the degree of automation more and more, rich people's diversified requirements.

2. 2 Focus on main property

Write articles in the main performance areas, follow up the areas that can be improved, and make articles. This can improve performance, stand out from the crowd and increase sales. Other aspects need to reduce the design time, so as to do well in the primary aspect, secondary speed through, to ensure that the primary purpose smoothly. In the aspect of personality to improve the main function of the product. But research and development requires a certain amount of time to prepare and meet the material requirements to produce new products at a lower cost. Some products are not immediately available or cost prohibitive for mass production. This allows you to consider a compromise function. Properly designed, it can stand out, For example a hybrid vehicle. On the one hand, it can use electricity For example pure electric, and on the other side, it has the mechanical power of an internal combustion engine fueled by gas and diesel. Half is electric and half is kinetic energy, and can eventually transition to a pure electric vehicle without vehiclebonization. The switch to pure electric vehicles, or vehicles that run on other fuels such as hydrogen, could be completed after decades of saving oil reserves. In order to achieve the ultimate power conversion without relying on vehiclebon and oil, hydrogen fuel has become the preferred fuel vehicle, and its market is gradually forming.

2.3 Aspect of project

If the acceleration of the vehicle is included in the primary position, the design needs to increase the engine load power. If stability is taken as the first column, the bottom bridge spring should be redesigned and the weight adjusted. If space and comfort are a priority, wheelbase and interior should be improved.

As mentioned above, for the specific automotive design and innovation topics, we should find out the key links of specific analysis, focus on innovation to do it well, is what the research and development department of the enterprise should do. In order to improve its design ability for different topics to make different judgments, and ultimately to build a first-class vehicle and struggle.As for other demand the function defined by definite knowledge to grasp its certain depth identification through regulating its parameters is to complete for adapting to new function in R&D dept.. Utilizing similiar method realizes the new vehicle upgrade into new level for demand of customer and new market.

2.4 New hybrid electric vehicle

In current world it exists in change time of century. The requirement of vehicle energy problem has been emphasized on, so new hybrid electric vehicle is produced correspondingly. Because it has green and non contamination this type vehicle has an immenseness prospect. Many corporations propose their new energy vehicle for us in advance which dominates over the domestic and oversea market of vehicle. Furthermore due to its low noise of motor and rapidly rechargeable battery the vehicle has occupied main sale quantity by customer requirement. Non brush permanent magnet is the motor assembled in vehicle, the material and experimental data has been made continuous task to ensure that the performance stability is improved and error doesn't happen more.

In short for the maximum benefit we shall enhance our capacity to design any new types of vehicle in terms of the unstable market demand and our plan within shorter time in R&D even manufacturing department. We shall prepare our dedication to more development in searching for broader field of new vehicle in advance so that the first design level and capability will occupy in manufacturing factory. This is the destination for us to comply with vigour activity of innovation and good payment. In this paper we briefly state the path to meet in

our design for finding that the matter happens in advance and suggested solution mind. This is the soul of this paper.

III. Conclusions

As finance and econometrics among economics there are many types. So in Japanese Hitotsubashi University they exist in the world priority occupation at No. 4. They specialize to show their theses of MBA&DBA both from narrative DBA to computing one. Certainly there is some professors from America to write some papers currently, meantime there are several research professors come from China. They have occupied experience after working several years there to come here for continuing to do their research. The most famous place belongs to IMD(International institute of management development) in Lausanne, Switzerland at No.1.

Acknowledgements

This work was supported by the Korea of Science and Engineering Fund, under the Specified Base program granted as No. 96-0300-11-01-3.

References

- [1]. Yang rui. Cost Management[M]. East China Normal University Press, 2017:73~76
- [2]. Compilation group of economics text series. Microeconomics[M], Economic Science Press, 2013:106
- [3]. Frank J. Fabozzi. Financial economics[M], China machine press,2015:51
- [4]. Sui l et al. Error theory and basis of measurement adjustment[M], Surveying and Mapping Press,2010: 3-4
- [5]. Run Xu , Boyong Hur. Modeling of Economic Cost Distribution in Screw Thread[J] , Journal of Economic Science Research, 2020, July 03 (03) :21~24
- [6]. Run Xu, The cost control of motor housing process[J]. International Journal of Plant Engineering and Management[J], 2019;24: 187~192
- [7]. JunPing Jia, Xiaoqun He etc., Statistics[M], Chinese Renmin University Press, 2015, 182
- [8]. Baishan Xie, Financial market[M], Peking University Press, 2015,18
- [9]. Jinkun Liu, Control of Intelligence[M], Electronics Industry Publisher, 2012,127
- [10]. Bruno Siciliano, Lorenzo Sciavicco etc., Robotics[M], Xi'an Jiaotong University Press, 2018, 4
- [11]. Chunlin Zhang, Mechanics Innovation Design[M], China Machine Press, 2015,7
- [12]. Chen Te etc., Estimation of driving states based on pseudo-measurements of longitudinal force for distributed drive electric vehicle[J], Journal of Mechanical Engineering, Sep. 2019, 55(18); 87