

Quality-Based Compensation Schemes for Modular Homebuilding

Ahmad K. Elshennawy, Ph.D.
Michael A. Mullens, Ph.D., PE
Isabelina Nahmens

Housing Constructability Lab
University of Central Florida
Orlando, Florida 32816-2993

Abstract

Results from a benchmarking study of modular home manufacturers have indicated that two-thirds of those companies studied have active employee incentive schemes. The study also pointed out that although management likes the concept of rewarding performance, companies are not satisfied with current incentive programs. This paper summarizes the results of this study and presents an overview of an innovative employee reward model for modular home manufacturers. Based on the concept of gainsharing, the model seeks to share company profits with employees based on a portfolio of operational performance measures. Suggested measures address key objectives relating to safety, quality, productivity and work force stability.

Keywords: employee incentive, modular home manufacturers, employee reward, gainsharing.

1. Introduction

During 2000, 1.24 million single-family homes were completed, excluding HUD code or mobile homes. According to Census, 1.16 million (94%) were site-built, 40,000 (3.2%) were modular and 39,000 (3.1%) were panelized [1]. Historically, modular housing sales have lagged site-built housing. Contributing factors include consumer perception of factory-built homes, pricing relative to site-built, and lack of customization. Given these constraining factors, the modular housing industry represents an ideal candidate to explore innovative quality theories such as quality-based compensation schemes that will improve levels of customer and employee satisfaction.

Quality leaders recognize the contributions of all employees in meeting organizational goals and share the resulting tangible benefits [2]. There are two diametrically opposing philosophies for recognizing and rewarding employees. The first assumes that a well-designed incentive program will lead to higher productivity for the employer and therefore pays employees for their incremental efforts [13]. Incentive-based compensation schemes link rewards to the performance records of teams and employees. The best incentive plans are simple, easily articulated, and readily understood by employees. They need to be directly related to job functions which the employee can control and which the employee can calculate the payoff. They have to be able to answer the question, "What's in it for me?"[5].

The other general philosophy is summarized by Kohn: Pay well, fairly and take their minds from money [9]. Kohn states that incentives work as punishments, that employees focus on rewards and not on their jobs, that intrinsic motivation is better than extrinsic motivation, and that financial incentives are effective only when tasks are mindlessly simple. Non-monetary recognition programs emphasize the organization's commitment to their employees by providing very competitive base salaries and substantial benefits including health insurance, retirement plans, vacations, home purchase assistance and family tuition programs. They also emphasize promotion from within the company. Other best practices for employee recognition include Quality Person of the Month, Team Leader of the Quarter, and Perfect Attendance Recognition. Teams may be recognized as High Performance Team of the Month when realizing higher than normal performance, or may be recognized for successful project completion when meeting its zero defects goal for consecutive weeks.

The Housing Constructability Lab (HCL) at University of Central Florida is a university-based research organization dedicated to creating production innovations for the U.S. homebuilding industry, helping homebuilders improve their ability to build high quality, affordable, energy efficient homes. HCL research efforts in modular homebuilding are guided by the Quality Modular Building Task Force, consisting of ten of the nations largest modular manufacturers and their key suppliers. In 2001 the Task Force directed HCL researchers to identify practical and usable quality control practices that can be used in modular manufacturing including quality-based compensation systems. To respond to this request, the HCL research team embarked on a research effort to:

- Benchmark incentive and recognition systems used by modular manufacturers, other homebuilders and companies in parallel industries.
- Identify current best practices.
- Develop recommendations for a quality-based compensation system for a typical modular manufacturer.

This paper describes the results of this research effort, which includes a quality-based compensation system model that promotes an understanding of quality principles and that, if implemented, could enhance quality and provide a higher level of business performance in the modular homebuilding industry.

2. Current Approaches

Regarding employee compensation systems, Frederick Herzberg stated that the only way to motivate employees is to give them challenging work where they can assume responsibility [6]. A fundamental question is whether a person will be more motivated and produce up to their potential if there is a cash incentive to do so[5]. Herzberg's research showed that there are two distinct groups of factors that affect job attitudes. The first are called dissatisfiers or hygiene factors and the second are termed satisfiers or motivators. Subjects of Herzberg's research ranked dissatisfiers as follows: company policy and administration (35%), supervision (19%), relationship with supervisor (10%), work conditions (10%), salary (8%), and relationship with peers (5%). Motivators included achievement (42%), recognition (31%), work itself (22%), responsibility (21%), advancement (12%), and growth (7%). Monetary reward, a dissatisfier, ranked fifth in importance. The paper states that pay is necessary and people need it, but it is not what motivates them. Herzberg's research shows that the top motivators are achievement, recognition, work itself, and responsibility. However, the same study showed that the best-performing workers are rewarded through merit pay or individual incentives that recognize individual achievement. [5]. Thus, an ideal quality-based system should combine both monetary reward and recognition.

Many companies award bonuses as they see fit. Employees do not know why they received a bonus and have little idea of how to receive it again. In this environment, incentives can result in employees questioning why another employee received more than they did. If employees have no idea why they received the bonus, it ceases to be motivational. Incentive plans should be structured appropriately or they will work against the organization [2]. A sound quality-based compensation system must be consciously designed to achieve the organization's goals. Key features include the type of incentive (monetary or recognition), the organizational level incentivized (e.g., individual, team, department), the timing of incentives (weekly, quarterly, annually), key performance measures, and incentive functions that map performance into incentive.

When determining the type of incentive, it is important to recognize that rewards can be broader than traditional definitions of compensation and benefits [3]. Unless teamwork is recognized with rewards, team members may not perceive their work within teams to be valued [7]. In general, productivity is higher in firms that pay above normal wage rates to workers with similar job characteristics. However, higher bonuses do not necessarily guarantee higher profits [5]. Although findings suggest that incentives can result in strong productivity-enhancing behavior, differences in skill employee skill levels, type of ownership, and geographic region may affect the impact of incentives on profit. Incentive wages may not realize their full profit-maximizing potential because they are not set at their optimum rate [4]. It may prove useful to involve employees in the design of the incentive system.

In developing a quality-based compensation system, three aspects should be considered: process, communication and administration [12]. From a process standpoint, top management must be directly involved, but input must also be provided by employees who are to be motivated by the plan. The plan must be communicated fully, clearly, and

repeatedly. Everyone needs to understand. The incentive plan should be administered to maximize total impact on motivation. For example, bonus checks might be delivered separately from regular paychecks.

Incentive compensation is defined as a “proactive, defined program” in which employees know the objectives and what rewards meeting those objectives will generate. Bonus programs are defined as “discretionary” programs that do not have clearly defined objectives [5]. An effective quality-based compensation system should motivate people to be more productive and achieve high performance [5]. For a company to realize a return on investment from their compensation program, they need to follow three fundamental principles:

1. Incentives must be linked to company objectives
2. Employees must understand those objectives and how the incentives compensation is linked to achieving them.
3. Employees must help to realize those objectives through their job performance.

A systems approach helps companies to establish an effective incentive scheme in a systematic way: first defining the goals of the company through the company mission statement, second identifying the key drivers defining the company’s success to achieve their goals and objectives, and third defining measurable goals for each key driver.

3. Study Approach and Findings

In today’s highly competitive business environment, there is not always time for gradual improvement. Benchmarking is a tool that allows the rapid identification and adaptation of best practices for significant process improvement [14]. In order to assess current practices in the modular housing industry, HCL researchers first benchmarked incentive systems used by modular manufacturers, other homebuilders and companies in parallel industries. Five modular manufacturers were benchmarked, including one National Housing Quality Award winner. Benchmarking was done via telephone interviews with senior management, including the president/general manager, production manager, and quality manager. Results from the benchmarking reveals that 70% of the modular manufacturers interviewed had an active incentive program. Productivity is the primary criterion used to determine incentives in the modular industry, followed by safety, quality, attendance and turnover (Figure 1).

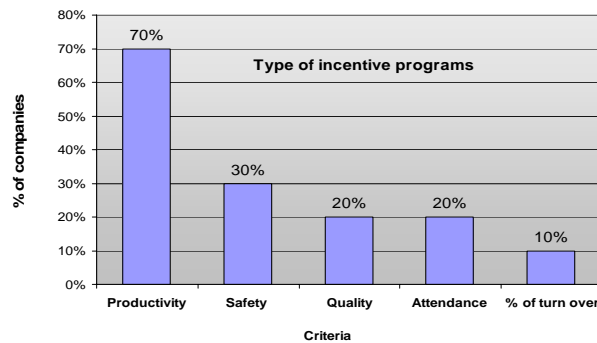


Figure 1. Benchmarking Results: Type of incentive programs

The remainder of this section describes a quality-based compensation system model for modular manufacturers. The model is structured around findings from the benchmarking study. The overriding goal of the quality-based compensation system is to improve operating performance, while exceeding customer satisfaction. More specific objectives include enhancing safety, improving quality, increasing productivity and achieving a stable work force. An overall structure for the model is shown in Figure 2. Potential approaches for accomplishing each of the specific objectives are discussed below.

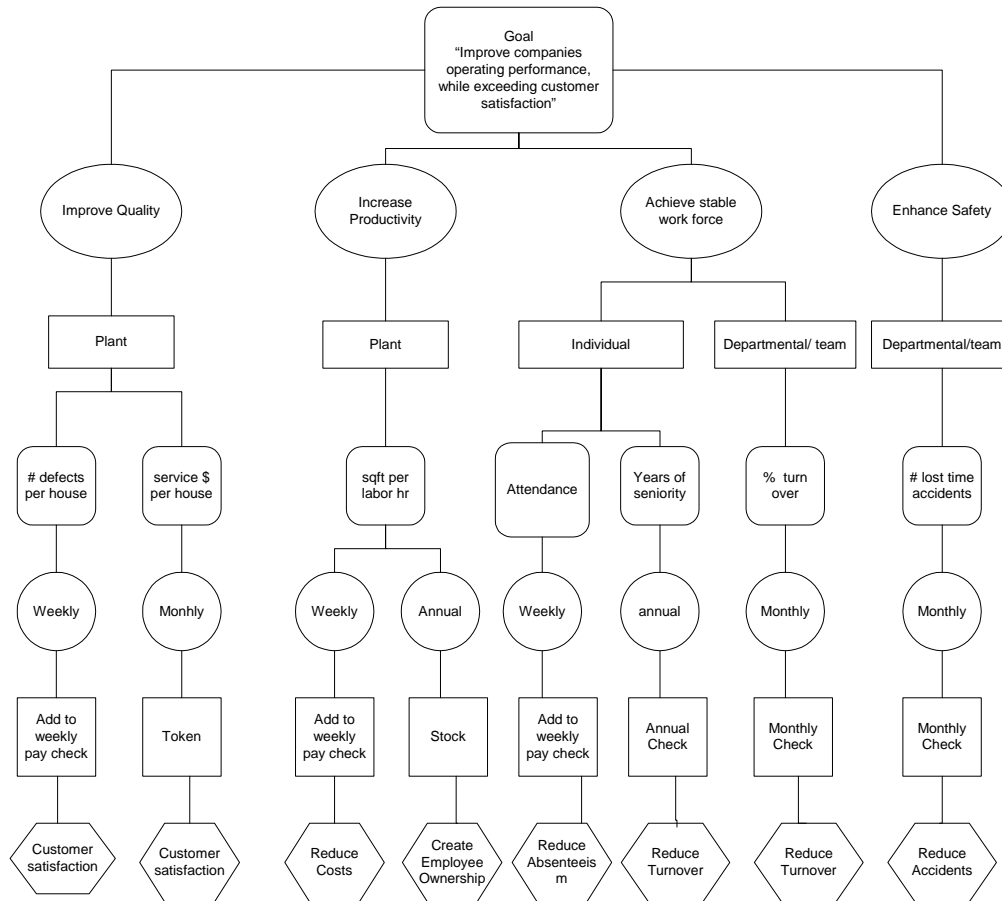


Figure 2. Quality-based Compensation Schemes for Modular Homebuilding

Improving Quality

Quality-based incentives recognize performance directly related to customer satisfaction. Key performance factors should include fundamental measures such as defects per house and service costs per house. Other likely measures include the number of quality improvement suggestions implemented, ratings from the set crew's quality checklist, ratings from customer surveys, % of service claims completed in a timely manner, and % on-time delivery. Based on actual performance on selected measures, a percentage of company profits would be set aside in a quality incentive pool. Each employee would then receive a predetermined percentage of pooled funds, based on his/her base salary. It is critical that all rules be explicitly defined. Tangible measures and visible objectives should be used. Assigning points or using a weighting system can ensure objectivity. It is also important to provide continuous feedback, displaying progress toward the goal.

This overall plant level incentive could be paid out weekly, monthly, quarterly and/or annually. More frequent payouts mean smaller checks which can become routine and contribute little to motivation. Less frequent payouts translate to larger checks, which would increase value, but might be forgotten over an extended interim period. End-

of-year payouts can also be used to reduce employee turnover. Tokens such as caps, t-shirts, and gift certificates could also be awarded for exemplary performance.

Increasing Productivity

Productivity-based incentives seek to increase productivity and reduce operating costs. Key performance factors should include fundamental measures such as square feet of production per labor hour and/or sales \$ per labor hour. Other likely measures might include rework per house, scrapped materials per house, sales \$ per module, gross sales/cost of goods sold. Administrative details would be similar to those described previously. Productivity-based incentives must be carefully balanced with quality-based incentives; otherwise, high productivity may be attained at the expense of quality.

Stable Work Force and Enhancing Safety

Decreasing absenteeism is a critical issue for modular manufacturers. Undermanned crews can disrupt line flow, causing bottlenecks. Reducing turnover is just as important, given the cost of hiring and training skilled workers and the disruption caused when a highly skilled employee leaves. Key performance factors should include fundamental measures such as attendance, years of seniority and turnover. Note that the former two incentives might best be measured and rewarded at the individual level, while turnover could be paid at the team or departmental level. Other likely measures could include growth in the employees' skill level and employee satisfaction survey rating.

Safety-based incentives seek to maximize worker safety by keeping employees actively engaged in workplace safety. A commonly used measure is the number of lost time accidents. Note that it may be appropriate to measure and pay this incentive at the team or departmental level to maintain vigilance of fellow employees..

Conclusions

Most modular home manufacturers have active employee incentive schemes. However, companies are not satisfied with current incentive programs. This paper has presented an overview of an innovative employee reward model that seeks to address many of the issues with current incentive systems. Based on the concept of gainsharing, the model seeks to share company profits with employees based on a portfolio of operational performance measures. Suggested measures address key objectives relating to safety, quality, productivity and work force stability.

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