Analysis and Suggestions on Innovative Activities by Staffs at the Production Line in Large-scaled Companies

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ABSTRACT

Other than solely drawing on professionals, innovation should also mobilize extensive staffs at the production line to launch pragmatic and wide-based innovation by centering upon work. With SGCC as the research target, the article carries out research analysis on innovative activities and incentive measures by staffs from teams at the production line. The research has discovered that factors constraining participation in innovative activities by staffs at the production line cover: (1) limited opportunities of staffs to participate in innovative activities and low level of activities available to them that lead to low enthusiasm among staffs; and (2) incentive measures for innovation fail to embody variations that lead to low acceptance among staffs. On this basis, the article puts forward the proposal on completion of team innovation mechanism from three aspects namely innovative personnel system, innovative management system and innovative operation system.

INTRODUCTION

As industrial revolution goes deeper, intelligence, automation, integration and ecologicalization will become the inexorable trend in the future. A new technology would comprehensively affect products, technologies and flow, but the impact is revolving and continuously completed in the long haul. Other than banking on professionals, innovation should also mobilize extensive staffs at the production line to launch pragmatic and wide-based innovation by centering upon work [1-3].

Corporate development can’t do without innovation. Staffs constitute the main body of innovation and teams form the battlefields of innovation. Many overseas famous companies such as the likes of American 3M company, Google, Toyota in Japan and Samsung in South Korea are attaching high importance to technological innovation among staffs at the production line and have been motivating staffs’ innovative awareness and fostering staffs’ innovative competence via various institutional measures in an effort to ensure perennial vitality of companies [4]. In the
late years, our country is paying increased attention on innovation from independent innovative strategies and development strategies driven by innovation to proposal of ‘Mass Entrepreneurship and Innovation’. Many companies including Huawei, Xiaomi, Haier and so forth are abruptly uprising with virtue of innovation [5-6].

Since team is the most fundamental unit for production in a company, how to mobilize enthusiasm and initiatives of team staffs, consummate relevant systems related with technological innovation among staffs at the production line, and attain teams’ conversion from excellent bodies for execution to innovative organs replete with vibrancy in order to provide guarantee to put into force ‘Double Creation’ Strategy in companies merit deep rumination.

On this basis, this article takes SGCC as the example, conduct research analysis on innovation activities and incentive methods for staffs at the production line, and puts forward corresponding proposals.

RESEARCH ANALYSIS ON INNOVATIVE ACTIVITIES BY STAFF AT THE PRODUCTION LINE

As a cross-boundary large-scaled company ranking the 2nd place among Global Fortune 500 companies, SGCC covers 86% of land territory and a population of 1.1 billion. It covers more than 80,000 teams of varying types on transmission, power transformation, power distribution, overhaul, power utilization, marketing and so forth that are distributed in over 2000 counties of 26 provinces countrywide and cover over 1.5 million team staffs. Research analysis on innovative activities of staffs from teams at the production line in SGCC facilitates all-out understanding of issues existing in technological innovation activities.

In order to roundly learn status quo of technological innovation among staffs from teams at the production line, the research team adopts such means as seminar, one-to-one interview, questionnaire survey and data collection to conduct field research on Hunan Province and its surrounding provinces and cities. It also organizes seminars and gleans second-handed data via network. During the research process, 300 questionnaires are delivered to staffs in 30 teams randomly extracted from SGCC, 274 of which are recovered including 261 valid questionnaires. The effective rate reaches 95%.

It can be learned from the questionnaire survey that teams’ means for joining innovation mainly cover assistance of solving on-the-spot issues, helping technological staffs for research and joining on-spot test. Ratio of each category is seen in Figure 1. The majority of teams would join solving of on-the-spot issues as the ratio reaches 34.9%. Those who join research of technicians account for 12.6%, those who join on-spot tests seize 18.8% and the rest 33.7% do not participate in innovation of any kind.
Analysis on questionnaire research results are seen in Figure 2. Results indicate that teams where a paltry of 9.2% of staffs work for would have at least two topics for technological innovation, teams where 38.3% of staffs work for have at least one topic for technological innovation and teams where 25.3% of staffs do not have any topics for technological innovation.

As is shown in figure 3, teams with all members showing high enthusiasm only account for 19.5%, 52.1% of staffs hold that a handful of members in their teams show high enthusiasm for technological innovation, 17% of staffs hold that technological innovation carried out in their teams are nothing but assignments of tasks and teams devoid of enthusiasm for innovation seize 11.5%.
Whether team staffs carry innovation ability or not would directly determine implementation of innovative activities in teams. Research results on probability of innovation by team staffs are seen in Figure 4. The results indicate that 47.1% of staffs hold that technological innovation in teams are feasible, 34% of them hold that implementation of technological innovation in teams needs sound environmental conditions, 11.9% of them hold that implementation of technological innovation is challenging as their workload in teams is arduous and the rest 6.9% hold that teams are incompetent to conduct technological innovation and hence probability remains meager.

In actuality, only 6.9% of staffs reckon that they are short of capacity for innovative activities, so the bulk of them are competent to participate in innovative activities.

**RESEARCH ANALYSIS ON INCENTIVE MEASURES ON TEAM STAFF’S PARTICIPATION IN INNOVATION**

Research has discovered that ratios of various incentive measures for innovation in different teams are seen in figure 5: material award accounts for a highest ratio at 62.1% followed by open praise standing at 56.3%; innovation training, rationalized appraisal on innovation behaviors, results promotion and professional title appraisal trail it in succession that respectively take 44.4%, 41.8%, 40.6% and 39.8%; post promotion takes the minimum ratio at a paltry 18.4%. It fully demonstrates that various teams are inconsistent and varied in terms of incentive measures for innovation.
Incentive measures for technological innovation in teams vary, and the company is yet to form a completed and unified mechanism on incentive system for innovation, which leads to low acceptance of incentive measures by staffs.

Moreover, research questionnaire results also indicate that 37.5% of grassroots leaders hold that incentive policies and conditions for team innovation are still going through the exploration phase, 16.7% of leaders hold that innovation in their teams are yet to have systematic policy support and 45.8% of leaders reckon that relevant systems, mechanisms and platforms are yet to be established though some policies are launched at present.

PROPOSALS ON COMPLETION OF TEAM INNOVATION MECHANISM

Following the aforementioned analysis research, the research discovers that only a handful of staffs are short of competence of innovative abilities while most staffs at the production line carry innovation competence. Factors constraining participation in innovative activities by staffs from teams at the production line cover: (1) Most team staffs have limited opportunities to take part in innovative activities who can only get involved in redressing of on-spot issues instead of substantially participating in innovative abilities. Level of innovative abilities they participate in is low. All those lead to low enthusiasm towards innovative activities among staffs from teams at the production line; (2) Performance of technological innovation is not ostensibly embodied in performance management so that individuals and teams engaged in innovation are not in variation with those that are not engaged in innovation in terms of payment, so the incentive function is difficult to be displayed; moreover, incentive measures on innovation does not reflect differentiation and awards can’t be correspondingly given following staffs’ actual demands, so staffs do not have high acceptance on incentive measures, which goes against improvement of staffs’ enthusiasm on technological innovation.

Psychological study on innovation indicates that psychological contract is positively correlated with organizational commitment while organizational commitment is positively correlated with staffs’ innovation performance [7]. Therefore, craving nurtured by staffs needs to be maintained and consolidated via organizational commitment such as payment distributed to corresponding behaviors and performance. Therefore, stimulation of staffs’ innovation behaviors requires that an iron triangle
covering ‘psychological contract-organizational commitment-innovation behaviors’ take form before a benign recycle is begot and sound innovation performance shows up.

Organizational commitment needs to be shored up and guaranteed by a set of mechanism. It can be put into effect by abiding by mechanisms. The set of mechanisms mainly covers innovative personnel system, innovative management system and innovative operation system. In terms of innovative personnel system, trailblaze the mindset, work on talent management mechanism and optimize team-building of innovative talents by clutching the concept that ‘talents are the prime resources’. Innovative management system is to carry out management and constraint on staffs’ daily innovative activities, for innovation is, after all, carried out by teams and innovation of activity time, use of utilities and work space all require completed mechanism. The innovative operation system is to carry out management on the final products or achievements. Appraisal, incubation and promotion of results, final industrialization, benefit distribution and so on are carried out with completed mechanisms as backup.

CONCLUSIONS

In order to roundly learn status quo of technological innovation among staffs from teams at the production line, the research team adopts such means as seminar, one-to-one interview, questionnaire survey and data collection to conduct field research on Hunan Province and its surrounding provinces and cities. It also organizes seminars and gleans second-handed data via network. The research has discovered that factors constraining participation in innovative activities by staffs at the production line cover: (1) limited opportunities of staffs to participate in innovative activities and low level of activities available to them that lead to low enthusiasm among staffs; and (2) incentive measures for innovation fail to embody variation that lead to low acceptance among staffs.

Therefore, the author puts forward three aspects, namely innovative personnel system, innovative management system and innovative operation system to work on innovation mechanism in teams at the production line before realizing vigorously launching of innovative activities by team staffs.

REFERENCES