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# The Influence of Organizational Factors on Individual Productivity of Agricultural Extension Experts

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**Abstract:** The main purpose of this study was to investigate the organizational factors that affecting agricultural extension expert' individual productivity. A survey of 88 extension experts was conducted in Hamadan Province of Iran. Individual productivity was measured with a self-evaluation questionnaire. The study found that the majority of the extension experts (65.9%) belonged to high level of individual productivity, followed by 28.4 and 5.7% belonging to intermediate and low level of individual productivity, respectively. Regression results also indicated that the full model was moderately successful, explaining 38.4% of the variances in the individual productivity. Two independent variables that accounted for the explained variances were organizational support and participation in management. Administration should conduct a periodic needs assessment to determine the level of individual productivity of Extension experts' and identify methods for increasing individual productivity based on these findings.

**Key words:** Agricultural extension, agricultural extension experts, job performance, organizational factors, productivity

## INTRODUCTION

Organizational Development (OD) is a distinct area within the field of organizational science that focuses on the planned and controlled change of organizations in desired directions. In general, outside consultants rather than organizational members are usually responsible for managing the development process. In essence, OD attempts to change an organization as a totality by changing the organization's structure, technology, people, and/or tasks. In reality, any facet of an organization is a legitimate target of OD. In this article, the focus will be primarily on change efforts that are directed at people rather than at tasks, structure, or technology. A popular definition of OD, which can be used for discussing the people side of planned change, has been offered by French and Bell (Vecchio and Appelbaum, 1995).

In Iran, 23 million people are earning directly from agriculture and nearly 3.5 million of active population is working in this sector (Asadi and Shams, 2003). Role of extension and education of agriculture is vital in the agricultural development and can't be gainsaid (Tatum, 1995). Despite the efforts with regards to agricultural development and supporting farmers to improve their competencies in different aspects of their jobs by Iran Agricultural Extension Organization (AES), there are indications that the efficiency and the quality of the support provided by AES have not been enough to serve the farmers' needs (Karbasioun *et al*., 2007). Also AES in Iran is suffering from malfunctions in the area of human resource management and development (Karbasioun *et al*., 2005). Moreover, the challenge of working for extension is included job positions are multidimensional, often including new projects before the old are completed. Productivity is a performance measure encompassing both efficiency and effectiveness. It is important, therefore, to know who the productive employees are.

Productivity, as a concept, has a renaissance of late. For a time, it was relegated well behind quality as exhorting force for organization and individual (McKee, 2003).

High performing, effective organizations have a culture that encourages employee involvement. Therefore, employees are more willing to get involved in decision-making, goal setting or problem solving activities, which subsequently result in higher employee performance (Hellriegel *et al*., 1998).

Productivity is traditionally defined as the ratio of outputs to inputs, in line with its original definition by labor economists. More specifically, productivity refers to the relationship between what comes out of a system and what is consumed to create those outputs (Sink and Smith, 1994). At the individual level, productivity refers

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to the effectiveness with which a worker applies his or her talents and skills to perform their work, using available materials, within a specific period of time (Ruch, 1994), and such individual productivity has been associated with group and organizational level productivity (Andersen, 1997; Campbell, 1988; Harris, 1994).

Individual productivity has been identified as an important individual outcome (Belanger *et al*., 2001; Cascio, 2000; Hartman *et al*., 1992), Derrick and Fang (2004) found that productivity was positively associated with beliefs and attitudes, and individual factors Predicting Productivity.

Many factors of associated concepts with individual productivity of an organization are organizational factors.

Commitment is a construct that seeks to explain consistencies involving attitudes, beliefs and behavior and "involves behavioral choices and implies a rejection of feasible alternative courses of action" (Hulin, 1991). Thus, these consistencies are usually seen as behavioral choices devoted to the pursuit of a common goal or goals (Hulin, 1991). In review of organizational commitment literature, Meyer and Allen (1991) identified three distinct themes in defining commitment as "affective", "continuance" and "normative" commitment. According to Meyer and Allen's (1991) three-component model of commitment, employees can adopt to varying degrees these three forms of commitment. Mowday *et al.* (1982) argue that an understanding of the processes related to organizational commitment has implications for both the employees and organizations. From an individual's viewpoint, his or her commitment to an organization may make the individual more eligible to receive both extrinsic rewards such as bonuses and awards, and intrinsic rewards such as job satisfaction and better relationships with colleagues. From an organization's perspective, employees' commitment is important since it is seen to be negatively associated with their lateness to work, absenteeism and turnover, which, in turn, have implications for overall organizational performance.

Organizational Support (OS) may be used by employees as an indicator of the organization's benevolent or malevolent intent in the expression of exchange of employee effort for reward and recognition (Lynch *et al*., 1999). Research has discussed organizational support as a resource capable of influencing performance by neutralizing stressors (Rhoades and Eisenberger, 2002) and increasing affective commitment to the organization (Meyer *et al*., 2002). Lynch *et al.* (1999) posited that when employees perceive high levels of OS, they are more compelled to contribute to the objectives of the organization.

Employees work in different levels, frequencies, and durations of the physical effort during performing the tasks of their jobs. An increase in the level of physical effort was accompanied by an increase in energy expenditure. The majority of the energy consumption generally is converted to the waste activities such as static effort (e.g., lifting, pulling/pushing objects), to other awkward postures, or to inefficient equipment or method. These waste activities cause decreasing productivity unpleasant environmental conditions have both direct and indirect effects on employee productivity. The concentration to tasks of an employee who exposes to these impacts decreases, which leads to low employee performance including productivity, quality, emotional stress, and in turn this causes high cost.

Several studies have proposed that budgetary participation is positively linked to employee's productivity (Argyis, 1952; Hofstede, 1968; Merchant, 1981; Brownell, 1982; Nouri and Parker, 1998). In contrast, other studies have reported a negative association (Bryan and Locke, 1967) or no association (Brownell and McInnes, 1986). There is, thus, no simple relationship between budgetary participation and employee's productivity.

Communication is vital to all functions of organizations. Organizations, however, are different. As social systems, they are activated and coordinated through communication. Nevertheless, to be operationally meaningful, specific perspectives of the organizational importance of communication are necessary. Particular facets of communication and their associations to other organizational constructs need to be investigated and understood (Piccolo and Colquitt, 2006; Chien, 2004; Requena, 2003; Goris *et al*., 2002; Roberts and O'Reilly, 1979). Accordingly, this study has one basic thrust: To explore the impact of satisfaction with communication on the individual productivity.

There is an inherent conflict between the interests of management and employees. Both have rights, which are enshrined in the Constitution. Employees have the right to self organization, collective bargaining and negotiations, and peaceful concerted activities, including the right to strike in accordance with law, to security of tenure, humane conditions of work, and a living wage, and to participate in policy and decision-making processes affecting their rights and benefits, as may be provided by law. There is also a need to explore ways of achieving employee's empowerment to promote their dignity and, likewise, spur their productivity with participating in management (Tomboc and Bernadette, 2004).

**Purpose and objectives:** The main purpose of this research was to investigate the organizational factors that affecting on individual productivity.

Of particular interests were to:

- Study the personal traits of extension experts in context of individual productivity
- Measure the level of organizational factors of extension experts

- Measure the level of individual productivity of extension experts
- Explore the extent to which certain organizational factors predict extension experts ' productivity

## METRIALS AND METHODS

The study's population and sample consisted of 88 experts was selected by using of "proportional random sampling" method from Hamadan Province, Iran in 2008-09.

A variety of scales and self-developed questionnaires have been employed to measure extension experts ' productivity. This scale is a self-report instrument that measures individual productivity across 10 different items. Respondents were instructed to indicate the extent of their ability or productivity in each item on 0 - 10 point that they gave to themselves.

We used self-report instrument that measures job satisfaction, job attitude, job motivation and need for achievement across 8 different items and personality across 15 different items. Respondents were instructed to indicate the extent of their agreement with each item on a five point scale ranging ''strongly disagree, disagree, neither disagree nor agree, agree, strongly agree.

Following the distributing of the questionnaire, 88 out of 100 questionnaires were returned; representing a response rate of 0.88 Reliability of the questionnaire was measured by computing of Cronbach's Alpha coefficient, the measure of internal consistency, this coefficient for individual productivity was 0.93 which indicates the acceptable level of reliability (Nunnally, 1978). To evaluate validity of this instrument, questionnaire was assessed by some Tehran university agricultural extension and education department scientific board members.

In this research, descriptive and inferential statistics were used to analyze collected data. Descriptive statistics were included frequency values (mean, standard deviation and so forth) and inferential statistics were included regression procedures, correlation coefficients calculations. In preparation for the stepwise regression analysis, variables at the nominal level were coded into a set of dummy variables (Norusis, 1990). All data were analyzed using the SPSS for Windows, version 11.5.0.

## RESULTS AND DISCUSSION

**Personal traits of agricultural extension experts:** As shown in Table 1 the sample used in the present study were 76 men and 12 women. The vast majority of respondent were married (87.5%), 12.5% were single.

Extension experts' service year distributed almost evenly among the four categories ranging from "Lower than 7 years" to "22 and over". The majority of the extension experts (45.5%) belonged to intermediate level of participation in budgetary, followed by 29.5 and 25% belonging to low and high level of participation in budgetary. The majority of the extension experts (63.6%) belonged to intermediate level of participation in management, followed by 34.1 and 2.3% belonging to low and high level of participation in management. The majority of the extension experts (66%) belonged to comparatively suitable level of work condition, followed by 27.2 and 6.8% belonging to suitable and unsuitable level of work condition.

The majority of the extension experts (64.8%) belonged to high level of organizational commitment, followed by 29.5 and 5.7% belonging to intermediate and low level of organizational commitment. The majority of the extension experts (60.2%) belonged to intermediate level of organizational support, followed by 20.5 and 19.3% belonging to high and low level of organizational support. The majority of the extension experts (59.1%) belonged to intermediate level of Satisfaction of organizational communication, followed by 39.8 and 1.1% belonging to high and low level of Satisfaction of organizational communication.

**Individual productivity:** Table 2 shows the overall index of individual productivity, which is identified as the mean

Table 1: Personal traits of agricultural extension experts

| Variable name | | Frequency | Percentage | SD/Mean |
|---|---|---|---|---|
| Sex | Male | 76 | 86.4 | |
| | Female | 12 | 13.6 | |
| Marital status | Single | 11 | 12.5 | |
| | Married | 77 | 87.5 | |
| Service years | <7 | 30 | 34.1 | 7.57/11.98 |
| | 8-14 | 19 | 21.6 | |
| | 15-21 | 25 | 28.4 | |
| | >22 | 14 | 15.9 | |
| Participation in budgetary | Low | 26 | 29.5 | |
| | Intermediate | 40 | 45.5 | |
| | High | 22 | 25.0 | |
| Participation in management | Low | 30 | 34.1 | |
| | Intermediate | 50 | 63.6 | |
| | High | 2 | 2.3 | |
| Work condition | Un suitable | 6 | 6.8 | |
| | Comparatively suitable | 58 | 66.0 | |
| | Suitable | 24 | 27.2 | |
| Organizational commitment | Low | 5 | 5.7 | |
| | Intermediate | 26 | 29.5 | |
| | High | 57 | 64.8 | |
| Organizational support | Low | 17 | 19.3 | |
| | Intermediate | 53 | 60.2 | |
| | High | 18 | 20.5 | |
| Satisfaction of organizational communication | Low | 1 | 1.1 | |
| | Intermediate | 52 | 59.1 | |
| | High | 35 | 39.8 | |

Table 2: Respondents derived scores from individual productivity items (N = 88)

| Individual productivity | Mean | SD |
|---|---|---|
| Paying attention to managers order | 8.85 | 1.482 |
| Ability to Meet Deadlines | 8.35 | 1.702 |
| Responsibility | 8.45 | 1.976 |
| Time management | 8.06 | 2.031 |
| Monitoring | 8.07 | 2.211 |
| Attempt to take management skills | 8.08 | 2.219 |
| Success in produce services to farmers | 7.80 | 2.208 |
| Participation to management | 7.98 | 2.279 |
| Give information on time to farmers | 8.34 | 2.359 |
| Skills to make and use instrument relevant to job | 7.22 | 2.680 |

score obtained from a 10-item questionnaire. A total score of 29-52 is interpreted as low job satisfaction, while 77 and over is considered to represent individual productivity.

**Extension experts' level of individual productivity:** In Table 3 the majority of the extension experts (65.9%) belonged to high level of individual productivity, followed by 28.4 and 5.7% belonging to intermediate and low level of individual productivity, respectively (Table 3).

**Correlation analysis:** In Table 4, there was a non-significant relationship between service years and individual productivity (r = 0.108), work condition and individual productivity (r = 0.148). On the other hands, there was a significant relationship between participation in budgetary, participation in management, Work condition, Organizational commitment, Organizational support, Satisfaction of organizational communication and individual productivity.

Comparison of Extension experts by some personal traits indicated that there were no significant differences between different categories of marital status, and sex (indicated in the Table 5) on the level of individual productivity.

**Regression analysis:** In this research for identification of organizational factors associated with individual productivity, a regression procedure was used (Table 6). For extension experts' regression procedures indicated that the full model was moderately successful, explaining 38.4% (Adjusted $R^2 = 0.369$) of the variance, in individual productivity. Two independent variables that accounted for the explained variance were organizational support and participation in management.

In other words, extension experts with more organizational support and higher participation in management, there was more likely to have higher level of individual productivity. However there was a relationship between dependent variable (Y) and independent variables (following equation):

$$Y = 46.542+0.446X_1(\text{organizational support}) +0.284X_2 \text{ (participation in management)}$$

## CONCLUSION

In this study individual productivity refers to the effectiveness with which an extension expert applies his or her talents and skills to perform his/her work. This study aimed at investigating the relationship between individual productivity and some of organizational factors among extension experts, which have necessary roles in Iran with important contribution of agriculture and rural population. The study confirmed organizational factors especially organizational support and level of participation in management have considerable impacts on extension experts' level of individual productivity. In other words, contribution of organizational factors was 38.4% in the explaining of variances in the individual productivity indicating remaining variances in the individual productivity was explained by other factors such as psychological, professional, environmental variables. Contribution of organizational support and participation in management was important in the explaining level of extension experts' individual productivity. Therefore, administration should conduct a periodic needs assessment to determine the level of individual productivity of personnel and identify methods for increasing individual productivity (Mallio, 1990) based on these findings.

Table 3: Extension experts' level of individual productivity

| Level of Personal productivity | Frequency | Percentage |
|---|---|---|
| Low (29-52 points) | 5 | 5.7 |
| Intermediate (53- 76 points) | 25 | 28.4 |
| High (77-100points) | 58 | 65.9 |
| Total | 88 | 100 |

Table 4: Correlation analysis between individual productivity and some independent variables

| Independent variable | Correlation Coefficient (Pearson correlation) | |
|---|---|---|
| Service years | 0.108 | ns |
| Participation in budgetary | 0.289 | ** |
| Participation in management | 0.467 | ** |
| Work condition | 0.148 | ns |
| Organizational commitment | 0.347 | ** |
| Organizational support | 0.563 | ** |
| Satisfaction of organizational communication | 0.259 | ** |

*: Significant at p<0.05, **: Significant at p<0.01

Table 5: Comparison of Extension workers' level of job satisfaction by some variables

| Variable | | Name mean rank | Mann whitney | |
|---|---|---|---|---|
| Sex | Male | 43.45 | 376.5 | ns |
| | Female | 51.13 | | |
| Marital status | Single | 36.86 | 339.5 | ns |
| | Married | 45.59 | | |

*: Significant at p<0.05, **: Significant at p<0.01

Table 6: Regression analysis independent variables associated with extension experts' productivity

| Step | Variable | B | β | Significant level | Adjusted $R^2$ | $R^2$ |
|---|---|---|---|---|---|---|
| 1 | Constant | 51.139 | | | | |
| | Organizational support | 2.684 | 0.563 | 0 | 0.317 | 0.309 |
| 2 | (Constant) | 46.542 | | | | |
| | Organizational support | 2.128 | 0.446 | 0 | | |
| | Participation in management | 0.731 | 0.284 | 0.003 | 0.384 | 0.369 |

$Y = 46.542+0.446X_1+0.284X_2$

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