# Perceived Communication Channels Based On Employees' Performance Competency among Superiors and Workers In Rwanda

## Maniraho Muhamedi,[1] Mohd Yahya Mohamed Ariffin[2]

**ABSTRACT:** The employee performance in a company depends upon several factors, among which is communication. Due to the fact that modern communication forms are superior to the traditional forms of communication in multiple aspects, it is observed that modern communication tools that support organizational communication have become widely used in the companies. The goal of this study is to observethe mostfrequently used communication channels among seven such channels, namely: face-to-face, addressed document, mobile telephone, fixed line telephone, SMS, E-mail, and Facebook, based on employee performance competency. The results exposed that most frequently used communication channel was e-mail followed by addressed documents. The results also showed that there is negative relationship between the employee performance competency and the level of effectiveness of communication channels.

**KEYWORDS:** employees' performance competency; media richness; communication channels

## INTRODUCTION

Organizational communication is a process that includes the network between directors and workers as well as between the company, the government and the public. In order to accomplish a task, Individuals begin organization from the smallest level. Communication is the elementaryfeatures which plays akey role in

---

[1] PhD Candidate, Faculty of Leadership and Management, Universiti Sains Islam Malaysia, Email: mmedi2002@yahoo.fr
[2] PhD, Associate Professor, Faculty of Leadership and Management, Universiti Sains Islam Malaysia, Email: mohdyma@usim.edu.my

the activities and procedures of each organization. Managers and employees communicate with each other in order to understand the situation, organize accomplishments, resolve problems, establish objectives, make decisions, and broadcast instructions and commands (Daft et al., 1987a). Usually, managers have depended upon face-to-face communication, phone, or written memos and letters in order to communicate with their employees as well as their colleagues. However nowadays with the advance and development of information technology such as computers and smart phones, practical systems of communication are charming more widespread (Zumd et al., 1990). Managers in the public and private companies, industries, institutes and organizations have developed communication significantly to include these modern and advanced communication technologies into the workplace (Harrison, 1997).

In Rwanda, in the past decades the degree of taking on and integration of information technology in socioeconomic life was very low and the shortage of technically qualified professionals was visible at all levels. From 1999 the Rwandan government recognized the important of strategic technology for long term development and incorporated into a plan called "VISION 2020". Like other countries in the region, Rwanda has manufacturing companies which use traditional and new communication technologies in producing products for local and regional consumption.

## LITERARURE REVIEW

### Perceived richness communication channels based on employees' performance competency

Employee performance in organizational communication exposes a fundamental, shared and united importance on the concerns of control and management through correct, accurate and rich communication channels. Organizational communication research has advanced significantly from the early formations and commencements of communication and its role in the organization. Gratitude, appreciation and recognition for the significance of communication to the management procedure and practice can be accredited basically to the work of Barnard (1938). He referred that communication was the exact "heart" of the management practice. In the 1940's, the development in the human and social interactions added and contributed considerably to the concept that communication and organization must be a two-way procedure. It highlighted the concern for employees' attitudes and job

satisfaction and encouraged and motivated study on employees' participation and contribution in decision making. It also highlighted the two-step movement of communication, i.e., upward and downward communication directions. Thus, based on this communication research development, employees' performance can be observed and assessed with regards to the role in the organizational income and development.

Later in the 1950's, communication research focused on the impact and influence of response on employee performance, and an environment study was introduced. The problems with upward communication were the emphasis on attention and research methodologies like Episodic Communication Channels & Organizations, which was developed by Davis (1953). However, Odiorne (1954) established the word or term "communication audit" as an explanation and description of the procedure used to assess the truth and accuracy of an organization's awareness of employee communication. Communication audit methodologies progressed and advanced a common method for the research of organizational communication that rose and improved employee performance in the companies and institutions.

Nowadays, communication can be understood and assumed to be among one of the most principal and significant activities in companies or organizations between managers and employees (Harris & Nelson, 2008). Basically, relationships develop or grow out of communication. The functioning and existence of companies, industries, institutions and organizations is built on effective relationships among managers and groups of staffs which cannot occur without rich and effective communication channels between superiors and subordinates. Moreover, Jones et al., (2004) mentioned that organizational abilities and competences are advanced and performed through "intensely social and communicative processes". Communication supports and assists persons while groups manage events and activities in order to accomplish objectives. Furthermore, it is also important in socialization, decision-making, problem-solving and change-management processes.

Every company has internal communication which also offers employees with essential information regarding their occupations and jobs, company, organization, milieu and also each other. Communication can assist and motivate people to build trust, make shared characteristics and encourage in engagement. Meanwhile, internal communication offers a way for persons to show and express feelings and emotions, share expectations and

desires and celebrate and remember activities or accomplishments. Communication is the foundation for people and groups to create logic for their company, and generate information on the nature of the company and the resources of its income.

The employee performance is encouraged by good communication channels in the company' regardless of whether it is respectable, effective or ineffective. Lukazewski (2006) states "The greatest continuing area of weakness in management practice is the human dimension. In good times or bad, there seems to be little real understanding of the relationships between managers, among employees, and interactions between the two. When there are problems, everyone acknowledges that the cause often is a communication problem; so now what?"

Two different studies, the first one conducted by Roberts & O'Reilly (1974) and the second one directed by Snyder & Morris (1984) show that managers and scientists have long established and agreed that communication procedures are a key element or dynamic in organizational achievement. However, other academics in various research fields argue that employees who have open appearances and positions of communication with superiors and supervisors are more inclined to create effective job associations with those superiors, to raise and enhance their organizational presence and improve their performance, and to add value to organizational output and productivity as found by Muchinsky (1977), Gray & Laidlaw (2004) and Tsai, Chuang, &Hsieh, (2009). On the other hand, Schweiger&DeNisi, (1991) and Gopinath& Becker (2000) demonstrate that employees who have affirmative and open communication channels with supervisors are also better able to manage and deal with major organizational fluctuations, such as dismissals or temporary hold on jobs or merger of two or more companies.

Meanwhile, Smidts, Pruyn, & van Riel, (2001) and Bartels, Pruyn, De Jong, &Joustra, (2007) in their researches displayed that an employee who has a rich and strong communication channel reports higher organizational publicity and identification. Whereas, Stephens & Long, (2000), Tepper, Moss, Lockhart, & Carr, (2007) have added that who have greater communication channelswith their managers are able to cope and deal more successfully with job stress.

As a result, researchers have proposed several ways in order to advance and improve communication tools within organizations. Some of them include Atwater & Waldman (2008)

and Downs & Adrian (2004). Other scholars such as O'Reilly (1977), O'Reilly & Roberts (1977), Roberts & O'Reilly (1979), Snyder & Morris (1984) and Kacmar, Witt, Zivnuska& Gully (2003) they mentioned, based on a series of studies, that there is strong suggestion and evidence that dissimilar characteristics of effective organization and management communication, such as high frequency, openness and accuracy, performance feedback, and adequacy of information about organizational policies and processes, and all those aspects and features are completely linked and connected to employee performance competency.

According to Pandey & Garnett (2006), most organizations place a high value on effectiveness of employee performance in an organization. One of the strategic ways to reach organizational effectiveness is the ability of managers to communicate with purpose and direction to the employees. Communication is defined as the exchange of information between people, by means of speaking, writing, or using a common system of signs or behavior (O'Hair, *et al*, 2005). Pandey and Garnett (2006) suggested that company should view communication as a display of the company's health. Organizational effectiveness is a "key competency of management and the capability to communicate tasks into measurable actions" (O'Hair *et al.*, 2005, p.39). In successful organizations, leaders do not simply communicate but effectively transform communications into actions. Managers in successful companies communicate in various way preferred by the employees. Therefore the employee satisfaction depends upon the effective communication channels maintained by the managers. Managers of successful companies understand the direct relationship between job satisfaction of the employees and their productivity, as it relates to employment of experienced employees, retention of trained employees, and the cultivation of human capital (Lussier & Achua, 2004).

The principal role of communication channels in a situation is to transmit and exchange information to achieve the company's goals and objectives (Lussier & Achua, 2004; O'Hair *et al.*, 2005; Pandey & Garnett, 2006). Companies are often comprised of employees from diverse populations, who bring "different goals, backgrounds, styles, habits, and preferences to the process" (O'Hair *et al.*, 2005,p. 5).

Manager and employee communication requires an understanding of the power structure and power sharing and must incorporate sensitivity to the differentiation of their roles in order to maximize productivity. Power sharing and communication require

positive and constructive relationships between managers and employees, which will enhance productivity, creativity, teamwork, and agreeability. These attributes are facilitated through communication of common interests and needs, and the satisfaction of those needs by the managers.

Pettit, Goris, and Vaught's (1997) study of 302 employees at two manufacturing firms illustrated the direct association between communication and job satisfaction. The study reported a relationship between communication styles of telling, selling, consulting, or joining and work performance and job satisfaction. Furthermore, these researchers demonstrated that predictors of job satisfaction relating to communication were "accuracy of information, desire for interaction, communication load, trust in superior, influence of superior, and satisfaction with communication" (p. 81). Each of the four communication styles described by Pettit, Goris, and Vaught required a style of deliverance. Richmond and McCroskey (2000:359) explain that supervisors use one of the "four communication styles of telling, selling, consulting or joining to produce productive satisfied employees".

Effective communication between management teams and subordinates is essential to the productivity of organizations. However, there exists a noticeable need to examine organizational communication and how communication styles of management teams affect employee job satisfaction (Roberts & O'Reilly, 1979). Job performance and employee job satisfaction are predictors of the profitability and life of an organization (Richmond & McCroskey, 2000).

## HYPOTHESIS

The study tested the relationship between employee performance competency and level of effectiveness of communication channels, namely based on the following variable: Company activities, the researcher tested the following hypothesis:

*H*. There is a significant relationship between company activities and level of effectiveness of communication channels at Sulfo Rwanda Industries.

## METHOD

### Research design

This study used a survey and semi-interviews design to examine the most frequently used communication channels based on employee performance competency between supervisors and subordinates at Sulfo Rwanda Industries in Kigali, Rwanda in January and Febuary 2014. Reinard (2001) described that a survey is an empirical study that uses questionnaires or interviews to discover descriptive characteristics of phenomena. Themixed model design has six different method designs which are: the convergent parallel design, the explanatory sequential design, the exploratory sequential design, the embedded design, the transformative design, and the multiphase design (Creswell & Plano, 2011). For the purpose of this study, the researcher intends to use the convergent parallel design.

Additionally, self-administered questionnaires and interviews were used as an instrument for data collection. Questionnaires were established to test the two parts through which use of the seven types of communication channels might reveal the most frequently used communication channel for carrying out the company activities and the level of effectiveness of communication. All questions used a four-point Likert scale, where 1 represented almost never and 4 always. In total, the questionnaire had over twenty questions, examining the individualities of respondents and the most frequently used communication channels based on employee performance competency.

### Population and sample

The population of this study involvedall managers and employees using those communication means in their workplace at all departments of the company. They were selected because all of them were involved in communication each other during the job period. The sample size of the study was derived using quantitative and qualitative means. The study used 459 executives and workers and the sample of the employees was from a total of 740 of the total workplace population for the purpose of quantitative study. The qualitative study used a purposeful sampling technique which identified eight informers, three managers and five employees.

## Data analysis

All the quantitative data collected were entered into a computer for the purpose of analysis. They were analyzed using the Statistical Package for Social Sciences (SPSS) version 16.0 for Microsoft windows. Descriptive statistics and multiple regressions were used to analyze the data with concern to the aims of the study.

## FINDINGS

## Features of Respondents

The demographic characteristics of respondents involved Gender, Nationality, Marital status, Working Experience, Highest Educational Achievement, Job destination and Departments. Therefore, the researcher described them one by one as well as displayed the data in two separatetables.

The characteristics of the respondents were described as follows. As far as gender is concerned, 275 of the respondents were male and 184 female managers and employees. Thus, more than half managers and employees who participated in the study were males, since 275 (59.9%) were males and 184 (40.1%) were females. Moreover, nationality was considered among the demographic characteristics of respondents. The largest number of participants was local workers with 450 (98.0%) local respondents, whereas international workers were only 9 (2.0%).

Furthermost, the study considered different marital statuses in the Sulfo Rwanda industries as one of the demographic features. The workers who were married were among the majority of the number of participants, i.e, 309 (67.3%), While, those who were unmarried (singles) were 150 (32.7%) in the number.

In addition, working experience was measured as a key factor among respondents in the Sulfo Rwanda Industries: Participants who had worked a period between 1 and 5 years registered in the highest number of 124 (27.0%) respondents. This was followed by those working for a period of 16-20 and 11-15 years, which was 114 (24.8%) and 113 (24.6%) respectively. However, those employed for 6-10 years and 21 years and above recorded the lowest number of respondents which were 82 (17.9%) and 26 (5.7%) respectively.

Moreover, the highest educational qualifications of workers were considered in the study. Participants with secondary school level certificate registered the highest number 231 (50.3%). Those

with bachelor degree were 163 (35.5%) whereas those who held Diploma and primary school certificate registered with 29 (6.3%) and 28 (6.1%) respectively. However, the lowest number of participants come from the educational qualification level of masters level and those with no education as 6 (1.3) and 2 (0.4%) respectively.

The study was also concerned with job destination and departments in the Sulfo Rwanda Industries as parts of demographics characteristics. Based on data, Participants who were office agents registered the highest number of 230 (50.1%). They were followed by accountants who were 68 (14.8%) in number while the post of General Director CEO had the least participants with 1 (0.2%) participant. Additionally, the study considered different departments of Sulfo Rwanda Industries. Ihema Street had biggest number of participants who were 181 (39.4%) in number. They were followed by participants from the Market street who were 147 (32.0%) in number, whereas 131 (28.5%) were participants from Gikondo department.

**The Employees' Performance Competency and Level of Effectiveness of Communication Channel**

Table 1 indicates the most perceived rich communication channel among the seven communication channels including face-to-face, addressed documents, mobile (cellular) telephone calls, land (fixed) lines telephone calls, SMS, e-mails and Facebook and their effect on the Employees' Performance Competency. The responses to all the seven communication channels were examined. The results indicate that managers and employees of the company prefer to use addressed documents the most (Mean = 3.3312) for company activities, followed by e-mails (Mean = 3.1786), it was found that however, Facebook (Mean = 1.7598) is the least channel of communication in terms of company activities. Face to face (Mean = 3.1373), mobile (Mean = 2.7734) and other channels of communication are in between the above channels. However, in term of level of usefulness it was found that the result indicates that executives and employees preferred Facebook as a means of communication (Mean = 2.7734). Table 1 illustrates the above findings as follows.

**HYPOTHESIS TEST**

*H*: To determine the relationship between company activities and level of effectiveness of communication channels, the researcher used simple multiple regression or method in order to test the correlation between two variables ofcompany activities and level of effectiveness of communication channels in the Sulfo Rwanda Industries.

As shown in Table 2, a significant model emerges from the analysis (F 72.469, P=.000.) It means that the level of effectiveness of communication channels was significant impact on the company activities (β= -.370, t= -8.513, p=.000). However, the impact is negative which means that the higher the level ofeffectiveness of communication channels, lesser the level of company activities. The independent variable (level of effectiveness of communication channels) manages to explain about 14% of variance in the criterion variable ($R^2$= .137). Therefore, the hypothesis is supported.

**The Employees' Performance Competency and Level of Effectiveness of Communication Channel**

The first question was "what are the most common communication channels you use to communicate with customers in your company?"
Almost all respondents stated that the most common communication tool used between the company and the customers is the internet, followed by telephone, as Respondent 5 said:

> "First of all we have website customers who look at what they need and what the company offers. However, whenever they have a problem, they use the telephone. For example, when a customer comes and buys goods, then he or she may leave a check which we findlate that there is no money against the account number. But because they leave their telephone number we are able to call them and then solve the problem".

However, there are some cases such as advertisements, where the most frequently used communication channel is the print media like newspaper and magazines. Respondent 2 said:

> "We use printing media as well during advertisements; yes, printing media like newspapers, like magazines".

Also, face-to-face is a preferred communication tool for internal customers to solve some problem. Also, letters are used to give

employees briefs or warnings. The participants expressed more about by stating examples. Respondent 8 said:

> "yeahhh there are two types of customers, there is internal customers and external customers; like you now are external customer because you come from outside and you need service; the internal customer is like my colleague coming from another department such as from accountability to general direction, or from marketing department, or from cosmetic or soft factory needs something here all of them there are my customers I should know how to communicate with them. Uhhh. Again mainly let me start with internal customer as almost we use telephone, and we use E-mails via that outlook we have, and also the book which we register in order to avoid someone who will say that for example write punishment letter miss salary, the letter to someone in the soap department even the letter may have been written but we should have evidence in the department that they have seen it, whether the chief of the department has seen it; he should know that person they have given him punishment that also is a kind of communication, because otherwise he may say that he did not get that letter".

## The Comparison of Employees' Performance Competency

Evaluating the results from observing both quantitative and qualitative aspects based on the Employees' Performance Competency, the findings indicate that managers and employees of the company favor to use addressed documents for company communications followed by e-mails. The lowest means of communication is Facebook in terms of company activities. Face-to-face, mobile and others channel of communication are in between the above.

On the other side, the qualitative results showed that practically all respondents specified the internet as the most frequently used communication tool between the company and the customers, followed by the telephone. Additionally, printing media like newspaper and magazines are used in some cases such as advertisements. Besides the above, face-to-face is a favored communication type in the case of internal customers to solve some problems. Finally, letters are used to give employees briefings or warnings.

## IMPLICATIONS OF THE STUDY

The implications of this study are that a list or rank of media could be used as a communications framework for managers and employees in the Sulfo Rwanda Industries, which can help them to pick or select appropriate communication media in their daily task and assignment in various situations. In this way, managers could communicate with employees and use the appropriate means of communication in order to achieve tasks the most effectively.

The findings indicatethat managers and employee perception regarding addressed documents and telephones (landline and mobile) that they also favor communications based on Employees' Performance Competency. However, other channels are also utilized in the company. Additionally, the study brings to focus the fact that higher management should ensure that modern means of communications in the company should be provided to employees, in order to be well connected with employees through the modern technology devices of communication which are most useful for employees. Thus, those modern technology devices of communication are very important for better organizational outcomes and means of communication.

## CONCLUSION

The study has drawn some conclusions. The first conclusion was that both managers and employees in the company emphasize much more on those media they transfer information through based on the communication channels which are obtainable easily and less on those communication channels which are more effective. Based on the results of this study, communication channels in general have a negative relationship with this competency. There was a significant negative relationship between the communication channels and all variables related to competency regarding the variable which is company activities.

The company's increased usage of modern communication channels has resulted in an increased acceptance of innovation to the communication channels used. Consequently, the management should evaluate the types of communication channels most preferred between superiors and employees in order to plan the increasing of available types of communication.

The most perceived commonly used communication channels should be those channels preferred by managers and employees to send and receive information regarding their daily

assignments, such as e-mail, addressed documents, face-to-face and telephone.  Moreover, the company's management should limit means of communication provision to only the most chosen communication channels to effectively manage investments and information control.

## REFERENCES

Atwater, L. E., & Waldman, D. (2008).*Leadership, feedback, and the open communication gap*. New York: Taylor & Francis.

Bartels, J., Pruyn, A., De Jong, M., &Joustra, I. (2007).Multiple organizational identification levels and the impact of perceived external prestige and communication climate.*Journal of Organizational Behavior*, *28*, 173–190.

Bernard R. H. (1988) Research Methods in Anthropology Qualitative and Quantitative Approaches First Edition

Creswell, J. W., & Plano Clark, V. L. (2011). Designing and conducting mixed methods research (2nd ed.). Thousand Oaks, CA: Sage.

Davis, Keith. (1971) "Success of Chain-of-Command Oral Communication in aManufacturing Management Group."*Academy of Management Journal*.

Downs, C. W., & Adrian, A. D. (2004).*Assessing organizational communication: Strategic communication audits*. London: Guilford.

Gopinath, C., & Becker, T. E. (2000). Communication, procedural justice and employee attitudes: Relationships under conditions of divestiture. *Journal of Management*, *26*, 63–83.

Gray, J., & Laidlaw, H. (2004). Improving the measurement of communication satisfaction.*Management Communication Quarterly*, *17*, 425–448.

Harris, T. E., & Nelson, M.D. (2008). Applied organizational communication: Theory and practice in a global environment. New York: Lawrence Erlbaum.

Jones, A., Watson, B., Garner, J., &Gallois, C. (2004). Organizational communication: challenges for the new century. *Journal of Communication, 19, 722-750.*

Kacmar, K. M., Witt, L. A., Zivnuska, S., & Gully, S. M. (2003). The interactive effect of leader–member exchange and communication frequency on performance ratings. *Journal of Applied Psychology*, *88*, 764–772.

Lukaszewski, J. (2006). *Rethinking employee communication: A strategic analysis*. No. 5. JimLukaszewski Strategy.

Lussier, R., &Achua, C. (2004).  Leadership Theory, Application, Skill Development. Minnesota:  Southwestern.

Muchinsky, P. (1977). Organizational communication: Relationships to organizational climate and job satisfaction. *Academy of Management Journal*, *20*, 592–607.

Odiorne, George. (1954). An application of the communication audit. *Personnel Psychology*, 1:235-243.

O'Hair, D., Fredrick, G. W., & Dixon, L. D. (2005). Communication in business. Boston: Houghton Mifflin.

O'Reilly, C. A. (1977). Superiors and peers as information sources, work group supportiveness, and individual decision making performance *Journal of Applied Psychology*, *62*, 632–635.

O'Reilly, C. A., & Roberts, K. H. (1977). Task group structure, communication, and effectiveness in three organizations *Journal of Applied Psychology*, *62*, 674–681.

Pandey, S. K., & Garnett, J. L. (2006). Exploring public sector communication performance: Testing a model and drawing implications. Public Administration Review, 66(1), 37-51.

Pettit, J. D., Goris, J. R., & Vaught, B. (1997). An examination of organizational communication as a moderator of the relationship between job performance and job satisfaction. *Journal of Business Communication, 34*, 91-98.

Reinard, J. (2001). Introduction to communication research (3$^{rd}$ ed.). New York: McGraw-Hill.

Richmond, V. P., & McCroskey, J. C. (2000). The impact of supervisor and subordinates immediacy on relational and organizational outcomes. Communication monographs

Roberts, K. H., & O'Reilly, C. A. (1974). Measuring organizational communication. *Journal of Applied Psychology*, *59*, 321–326.

Roberts, K. H., & O'Reilly III, C. A. (1979). Some correlates of communication roles in organizations. *Academy of Management Journal, 22 (1): 42-57.*

Schweiger, D. M., & DeNisi, A. S. (1991). Communication with employees following a merger: A longitudinal field experiment. *Academy of Management Journal*, *34*, 110–135.

Smidts, A., Pruyn, A. T. H., & van Riel, C. B. M. (2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of Management Journal*, *49*, 1051–1062.

Snyder, R. A., & Morris, J. H. (1984). Organizational communication and performance. *Journal of Applied Psychology*, *69*, 461–465.

Stephens, C., & Long, N. (2000). Communication with police supervisors and peers as a buffer of work-related traumatic stress. *Journal of Organizational Behavior*, *21*, 407–424.

Tepper, B. J., Moss, S. E., Lockhart, D. E., &Carr, J. C. (2007). Abusive supervision, upward maintenance communication, and subordinates' psychological distress. *Academy of Management Journal*, *50*, 1169–1180

Tsai, M., Chuang, S., & Hsieh, W. (2009). An integrated process model of communication satisfaction and organizational outcomes. *Social Behavior and Personality*, *37*, 825–834.

Table 1: The Employees' Performance Competency and Level of Effectiveness of Communication Channel

| The Employees' Competency | Performance | Level of effectiveness of communication channel | |
|---|---|---|---|
| Communication channels | Company activities (mean) | Communication channels | Levels (mean) |
| Face-to-face | 3.1373 | Face-to-face | 1.7081 |
| Addressed documents | 3.3312 | Addressed documents | 1.4183 |
| Mobile (cellular) telephone | 2.7734 | Mobile (cellular) telephone | 1.7277 |
| Fixed line telephone | 2.9346 | Fixed line telephone | 1.3377 |
| SMS | 2.0633 | SMS | 2.6166 |
| E-mails | 3.1786 | E-mails | 1.3007 |
| Facebook | 1.7598 | Facebook | 2.7734 |

Table 2: Simple multiple regression between company activities and Level of effectiveness of communication channels

| Model variable (N=459) | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | T | Sig. |
| 1  (Constant) | 4.056 | .157 | | 25.826 | .000 |
| Level of effectiveness of communication channel | -.715 | .084 | -.370 | -8.513 | .000 |
| F=72.469 | P=.000 | R=.370 | R²=.137 | $R^2$ Adj=.135 | |