A Survey of Productivity Barriers in Islamic Azad University Branches in Ardebil Province

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ABSTRACT

The main purpose of this research is to recognize organizational productivity barriers in Islamic Azad University Branches in Ardebil Province. Statistical population consists of all the faculty members as well as employees of Islamic Azad University Branches in Ardebil, Meshkin, Parsabad, Germi, Bilasavar, and Kalkhal. The sample includes 246 participants which were chosen from a total of 1067 people based on Cochran's Sampling Formula. For obtaining data, a 16-item questionnaire was prepared and distributed among the sample members. Eventually, 215 filled-out questionnaires were collected. In order to enhance the questionnaire validity researchers consulted with professional faculty members and its reliability 0.85 was obtained based on Cronbach's alpha coefficient. An independent T-test was used so as to analyze the hypothesis and the Friedman Test was used to prioritize productivity barriers indexes. Data analysis reveals that organizational barriers are regarded as productivity barriers in the above-mentioned statistical population. Lack of analytical skills is the main barrier in achieving productivity considering productivity barriers indexes.

Key words: Ammons Model; Islamic Azad University; organizational barriers; productivity; productivity barriers

Introduction

The term "Productivity" is commonly used in executive administrations and organizations. Traditionally, productivity means the ratio of output over input. In this research, we intend to see if there are any organizational barriers in terms of theoretical framework in Islamic Azad University Branches in Ardebil Province. If so, which one of the organizational factors plays the major role as a barrier? Research purposes are as the following:

a. Reviewing productivity definitions
b. Recognizing organizational productivity barriers in Islamic Azad University Branches in Ardebil Province.
c. Prioritizing organizational productivity barriers in Islamic Azad University Branches in Ardebil Province.
d. Offering ways of improving productivity in Islamic Azad University Branches in Ardebil Province.

"Productivity" a multidimensional term:

The term "productivity" was first invented and applied by [1] in an agricultural magazine about two centuries ago. [2] stated that despite long-term use of the term "productivity", we are still unable to know exactly what productivity is. Productivity has been considered as one of the major variables of productive activities [3]. This term has also been used in economic systems [4]. stated that productivity improvement is one of the competitive advantages in organizations[5]. categorized definitions of productivity into three independent sections [6]:

1. Technological concept: The output to input ratio relationship which is used in production.
2. Engineering concept: The relationship between real and potential output of production process.

European Productivity Agency defines productivity as following:

1. Productivity is the degree of efficient application as for factors of production.
2. In the first place, productivity is an intellectual viewpoint which tries to improve the current situation [7].

A simple investigation on the term "productivity" reveals that: First, those who apply this term rarely state an accurate definition of productivity. Second, considering the interpretation of this term, there is little knowledge and information. Also, there are so many disagreements on definitions. Finally, there is a kind of mathematical approach in its definition. Mathematical approach and definition can be used as the basis of performance measurement. In fact, mathematical definition intends to reflect the entire parameters and features of productivity concept.

Table 1: Examples of definitions of productivity

<table>
<thead>
<tr>
<th>Definition</th>
<th>Reference</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity = faculty to produce</td>
<td>[9]</td>
<td>1883</td>
</tr>
<tr>
<td>Productivity = units of output/units of input</td>
<td>[2]</td>
<td>1988</td>
</tr>
<tr>
<td>Productivity = actual output/expected resource used</td>
<td>[10]</td>
<td>1990</td>
</tr>
<tr>
<td>Productivity is defined as the ratio of what is produced to what is required to produce it.</td>
<td>[12]</td>
<td>1993</td>
</tr>
<tr>
<td>Productivity(output per hour of work) is the central long-run factor determining any population's average of living</td>
<td>[13]</td>
<td>1993</td>
</tr>
<tr>
<td>Productivity = the quality or state of bringing forth, of generating, of causing to exist, of yielding abundantly</td>
<td>[14]</td>
<td>1993</td>
</tr>
<tr>
<td>Productivity means how much we produce from the resource used. If we produce more or better goods from the same resource, we increased productivity. Or if we produce the same goods from lesser resources, we also increase productivity.</td>
<td>[15]</td>
<td>1997</td>
</tr>
<tr>
<td>Productivity is a comparison of the physical inputs to a factory with the physical outputs from the factory</td>
<td>[16]</td>
<td>1998</td>
</tr>
<tr>
<td>Productivity = efficiency * effectiveness = value adding time/total time</td>
<td>[17]</td>
<td>1999</td>
</tr>
<tr>
<td>Productivity = (output/input)* quality = efficiency * utilisation * quality</td>
<td>[18]</td>
<td>2000</td>
</tr>
<tr>
<td>Productivity is the ability to satisfy the market’s need for goods and services with minimum of total resource consumption</td>
<td>[19]</td>
<td>2001</td>
</tr>
</tbody>
</table>

According to [8] most of those who debate over productivity are in fact looking for performance. Performance is a quantitative subject which contains operational and economic dimensions. Performance is in relation to concepts such as expense, reflectibility, speed, trust, and quality. Slack and his co-workers stated that the concept and meaning of performance includes: having high quality, providing rapid services, gaining trust in performing plans, having reflectibility in performing activities, and reducing expenses in providing services. Performance purposes are in a close relationship with productivity improvement [20].

Productivity Barriers:

Every manager confronts with productivity barriers. These barriers appear in different forms and their intensity and nature might be changeable as well. They even may appear abruptly. Also, it is possible that a couple of minor barriers be changed to a major barrier by synergy. Not all the productivity barriers are the same. Some of them occur accidentally. Some people might be under an unfair pressure in spite of their serious efforts in confronting with difficult situations while others might be more skillful in recognizing barriers and taking advantage of useful strategies in avoiding and overcoming barriers.

There are different kind of productivity barriers and these barriers result in such consequences over which an unexpected amount of time and effort should be spent. Despite some productivity barriers are clearly apparent; some others are not so obvious. Five major classes which contain majority of barriers are the following:

- Often people don't know what they are expected to do
- People have not often been trained for performing their jobs.
- People can not easily do their occupation duties as expected.
- They confront with organizational barriers while achieving productivity.
- People don’t have enough motivation to carry out their duties [21].

In improving any process you will undoubtedly face with barriers and obstacles and those who are responsible ought to take measures to remove them. Otherwise, in spite of an early possible success, the improvement would not be well-established and after a while there would be no signs of improvement in organization. There are some other barriers in productivity improvement:

- Public unawareness as for position and concepts of productivity, its importance and people's roles and duties in this regard.
- Neglecting ingenious and creative individuals.
- Individual's resistance to changes and their unwillingness to quit some habits.
- Inconsistency, lack of proper guidance and surveillance in productivity improvement.
- Fear of external appearance of productivity such as fear of unemployment.
- Lack of specialists or their motivation to assess, analyze, and measure productivity [22].
[23] in his article "Searching for ways" states the following barriers and problems in achieving productivity especially in administrative and service organizations:
- The vague concept of the term "Productivity" and its various definitions.
- Little useful work in organizations
- Being political and more emphasis on effectiveness compared to efficiency.
- Supportive laws with regard to social justice.
- Non-existence of indexes for non-quantitative administrative and service performances.

Managers of public and private sectors confront with similar barriers in organizational changes. Some barriers might exist in just one sector. A list of various kinds of productivity barriers are presented which despite its expansion, it can not be claimed that the list is comprehensive.

According to David N Ammons, common barriers for improving productivity are divided into three classes:
- Environmental barriers: Those factors which separate private sector from public sector and influence ingenuity related to productivity.
- Personal barriers: They include personal characteristics, behavior, and viewpoints which might be useful in managers' capability to confront with opportunities of productivity improvement.
- Organizational barriers: They include all those common features which exist in all organizations with different degrees [24]. Organizational barriers of this categorization are the basis of the present research.

Organizational productivity barriers include factors which exist in different organizations with various degrees. Some of these barriers might be tangible and special in an organization while intangible in other organizations. Now, we will analyze different dimensions of this barrier.

**Bureaucratic Socialization Process:**

Socialization is a process which workers learn social knowledge so that they would be able to easily understand organizational culture and act in conformity with it. Socialization commences before social workers begin their performance and goes on until they leave organization [25]. It is an informal process during which the old employees socialize the new ones, present what would be expected, help them adapt themselves to the organizational culture, and show them maximum degree of freedom of action. This kind of socialization decreases the employees' willingness to change and is considered as an obstacle to innovation.

**Lack of Accountability:**

It is claimed that employees are practically less accountable for their actions or failures and their operations are deprived of a fundamental mechanism of managerial control and direction. It is impossible that an organization's culture which avoids taking responsibility lead to self-sacrifice and accountability.

**Perverse Reward System:**

In most organizations, sufficient appreciation and reward is not expressed for superior performance at all levels but those who expand their budget as well as personnel are rewarded. Non-existence of fundamental incentives as for managers' innovation and productivity improvement is a major barrier.

**Inadequate Management commitment to productivity:**

Most managers have recognized productivity as a significant goal. This is while real commitment to productivity and mere speech on productivity are two separate issues.

**Barriers to Monetary Incentive plans:**

In addition to restrictive power of the law on state services and other legal barriers, monetary incentive plans end in stalemate in an inappropriate system of human resources management. Without an appropriate classification of occupations and performance evaluation systems, monetary incentive plans would be baseless and this will certainly lead to dissatisfaction and failure.

**Perceived threat to job security:**

Most employees are doubtful about productivity-related measures and are also afraid of them. They consider the term "productivity" as a symbol of expediting performance or automation. They believe that productivity consequences and measures are not reasonable and ultimately this becomes the cause of their unemployment.

**Supervisory Resistance:**

Supervisors might disagree with productivity improvement activities for a couple of reasons. They probably lack sufficient knowledge and skills to apply reformed procedures and modern technology. They actually prefer their own limited strategies which they are familiar with. They even may not welcome warmly those outside consultants who offer great strategies and ideas.

**Ambiguous Objectives:**
Managers often overemphasize their purposes and express them vaguely. These exaggerated purposes may even be useful for giving speeches but are less valuable as for performance and productivity improvement. Clarity, precision, and the state of being measurable are of great importance in expressing goals. In case, these assigned goals are non-existence, employees even wouldn't be able to consider the nature of their goals and would tend to choose from among a set of easy goals which have already been estimated. If individuals set goals by themselves they will more likely consider goal difficulties, increase their endeavors, and enhance insistence in efforts. On the other hand, goals have other effects too. They consider occupation and duty strategies which are defined as learning programs and problem solving approaches which play a role in achieving successful performance [25].

When the goal commitment is high, assigning difficult and particular goals would have special advantages over occupation performance. On the other hand, in case of low goal commitment its influence will be extremely weak [26].

Reluctance to Abandon:

Proper plans might fail in performance and show no improvement in achieving goals. If so, abandoning plans and investing in new plans is the only ways to success. But in some parts there is reluctance and inability to abandon such plans. Escalation of Commitment occurs when decision makers invest a large amount of money and it seems that the project won't be totally completed [27].

Insufficient Analytic skills or Analytic Staffing:

Systematic productivity improvement is generally based on analysis of improvement procedures and should be carefully designed. Most organizations confront with source scarcity and are in need of systems for analyzing financial problems. They intend to apply expense reduction and analytical skills strategies but lack such capabilities.

Absence of Cost –Accounting System:

Academic budgets are pretended to be less than usual as for individuals, activities, and plans and this deliberate deception is always done in the best manner. Therefore, managers often are unaware of various public services’ cost accounting and the expenses are inaccurately reported.

Inadequate Performance Data:

Without a proper system for performance evaluation, it is more likely that evaluation will have tendency toward intellectualism. One can hardly ever find a comprehensive performance evaluation system in organizations. Thus, without a performance evaluation system it is tough to achieve efficiency and comprehensive criteria of effectiveness.

Inadequate Performance Evaluation:

Systematic performance evaluation whether in individual or plans level does not follow any certain order or rule and has a tendency toward reckless behavior. Some supervisors consider their performance evaluation obligation as an interference making factor in their responsibilities and do not consider it as a coherent part of their activities. As a result, a few number of plans are systematically evaluated and it can not be said that if these plans have achieved their goals or not. Also, efficiency of the plans is not logically determined. Informal judgments about efficiency and effectiveness plans will also have tendency toward being interpretive and intellectual.

Inadequate Dissemination of Program Information and Reluctance to Use What Is Known:

Most analysts believe that if information about services and plans of successful organizations be available, productivity will be improved. In spite of this, studies reveal that there has been exaggerating on managers’ interest and willingness in obtaining information about productivity improvement.

Fragmentation:

Over the past years, researchers have pointed out that additional fragmentation of organizations weakens coordination of plans as well as organizational advantages and reduces efficiency and effectiveness. It seems that fragmentation of branches is a big barrier and even in case of jealousy and distrust among branches there would be no chances for coordination and profitability.

Bureaucratic Rigidities:

Red Tape and bewilderment in administrations are labelled to bureaucratic rigidities. Organizational structure rarely paves the way for innovation and these structures are often designed to maintain bureaucracy control and to confine corruption opportunities. This structure is an approval to assure meritocracy in employment, equality and justice in providing services and equalizing performance.

Inadequate Research and Development:

New methods and approaches to solving problems are increasing dramatically and this is substantial especially in application of new technologies. In spite of the fact that both public and
private sectors are among the fundamental elements of national economy, there has been less attention to research and developments in these sectors.

**Requirement of Large Initial Investment for Productivity Improvement Efforts:**

Sometimes with a minor expense and even unchanging expenses a fairly great productivity can be achieved. For instance, a good idea offered by employees might be performed easily and result in immediate benefits in the quality of services or expense reduction. Meanwhile, achieving productivity requires essential investment. Such investment which is usually composed of equipment and other investment assets is often required in preliminary analysis of improvement chances and various expenses are put forward at the beginning, conversion, and revision of operational systems.

**Performance Myths:**

Variety and abundance of myths which have been mistakenly accepted as a truth in organizations is a barrier in achieving productivity improvement. For instance, this saying "happy employee is productive employee" is an improper sermon. Both employee satisfaction and organizational productivity are favorable goals which should be followed by conscientious and responsible employees but there is no necessity that one of them result in another.

**Research Hypothesis And Question:**

**Main hypothesis:**

Organizational barriers are considered as productivity barriers in Islamic Azad Universities in Ardebil Province.

In accordance with the research hypothesis the research question is proposed as:

Which variables of organizational productivity barriers are of highest priority?

**Materials and Methods**

In terms of research classification based on purpose, this study is an applied research while in terms of research classification based on methodology; this study is a survey research out of descriptive researches. The aim of survey researches is to recognize traits, features, approaches, behaviors, and other issues related to people by referring to them [28].

**Statistical Population and Sample:**

Population specifications with regard to interview with university assistant heads and separation of research places are shown in the following table:

<table>
<thead>
<tr>
<th>University Name</th>
<th>Faculty members</th>
<th>Employees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardebil Azad University</td>
<td>240</td>
<td>410</td>
<td>630</td>
</tr>
<tr>
<td>Khalkhal Azad University</td>
<td>64</td>
<td>85</td>
<td>149</td>
</tr>
<tr>
<td>Parsabad Azad University</td>
<td>55</td>
<td>70</td>
<td>125</td>
</tr>
<tr>
<td>Meshkinshahr Azad University</td>
<td>28</td>
<td>27</td>
<td>55</td>
</tr>
<tr>
<td>Germi Azad University</td>
<td>30</td>
<td>35</td>
<td>65</td>
</tr>
<tr>
<td>Bilasavar Azad University</td>
<td>11</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>428</strong></td>
<td><strong>639</strong></td>
<td><strong>1067</strong></td>
</tr>
</tbody>
</table>

Population in Table 2 consists of employees and faculty members of Islamic Azad Universities in Ardebil Province who are 1067 people. Sample volume was gained by the use of Cochran Formula:

\[
n = \frac{t^2 pq}{d^2} \left( 1 + \frac{t^2 pq}{N} \left( \frac{1}{0.05^2} \right) \right) - 1
\]

A total of 246 people were selected as the sample. The major feature of the formula is that population volume can be involved in it so that a logical sample can be obtained. The sampling was carried out on a random sample 40% of the population is faculty members and the other 60% is employees. These proportions are used in sampling too. Sample specifications along with separation of research places are shown in the following table:
Table 3: Sample Specifications with separation of research places

<table>
<thead>
<tr>
<th>University Name</th>
<th>Faculty members</th>
<th>Employees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ardebil Azad University</td>
<td>54</td>
<td>93</td>
<td>147</td>
</tr>
<tr>
<td>2 Khalkhal Azad University</td>
<td>15</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>3 Parsabad Azad University</td>
<td>12</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>4 Meshkinshahr Azad University</td>
<td>8</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>5 Germi Azad University</td>
<td>7</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>6 Bilasavar Azad University</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>148</td>
<td>246</td>
</tr>
</tbody>
</table>

Method and instruments of collecting data:

In this research, in order to investigate productivity barriers in Azad Universities of Ardebil Province a 16-item questionnaire was designed. A total number of 246 questionnaires were randomly distributed among participants and finally 215 filled-out questionnaires were collected.

Reliability and Validity of The questionnaire:

Validity is considered to be the degree to which the tool measures what it claims to measure. In this regard, with the assistance of professional faculty members in the field of management the questionnaire was prepared. Questionnaire reliability refers to measuring a variable with the same questionnaire and in similar situations twice and getting consistent, reliable, and accurate results. Cronbach's alpha coefficient has been used to calculate reliability coefficient. Reliability of any questionnaire should have at least 0/7 of Cronbach's alpha coefficient which in the present questionnaire is over 0/85.

Data Analysis Method:

In order to process information SPSS software has been used and while applying Population Mean Test, the main hypothesis test has been carried out. When the variance is not obvious it should be estimated from sample and then variance estimation test should be considered as the criteria. Thus, the following distribution formula of T Student ought to be used:

\[ K = \frac{\bar{X} - \mu}{\frac{S}{\sqrt{n}}} \]

The Friedman Test was used to prioritize productivity barriers indexes:

\[ K = \frac{12}{kn(k + 1)} \sum R_j^2 - 3n(k + 1) \]

Results and Discussion

In this part, hypotheses are dealt with by the use of collected data from participants. In order to recognize productivity barriers in Azad Universities of Ardebil Province the Population Mean Test has been carried out. Since the questions have been ranged from 1 to 5 point scale based on Likert Scale, number 3 was determined as "central limit". If the average of a population or group becomes larger than 3, that factor would be proposed as productivity barrier in university. In all tests of the present research, Confidence Probability is considered to be 95%. The following is the results of SPSS software in terms of deductive statistics.

Main Hypothesis: Organizational barriers are considered as productivity barriers in Islamic Azad Universities in Ardebil Province.

According to the tables the research hypothesis is confirmed by 95% Confidence. Organizational barriers Mean is more than 3. Because Sig. (2-tailed) is less than 0/05 the null hypothesis is rejected which means that organizational dimensions of the present research are regarded as productivity barriers.

Research Question: Which variables of organizational productivity barriers are of highest priority?

Table 4: Descriptive Statistics in Organizational Barriers

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std.Deviation</th>
<th>Std Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Barriers</td>
<td>215</td>
<td>3.4991</td>
<td>0.49512</td>
<td>0.4741</td>
</tr>
</tbody>
</table>

Table 5: Mean Significance Test in Organizational Barriers

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Upper</td>
</tr>
<tr>
<td>10.529</td>
<td>214</td>
<td>0.000</td>
<td>0.49913</td>
<td>0.4057</td>
<td>0.5926</td>
</tr>
</tbody>
</table>
Table 7: Categorization of organizational productivity barriers indexes by Friedman Test

<table>
<thead>
<tr>
<th>Organizational Barriers</th>
<th>Rank Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Showing legal limitations of freedom of action by the old employees to new ones</td>
<td>7/40</td>
</tr>
<tr>
<td>Lack of control mechanism as for accountability of personnel in branches</td>
<td>8/63</td>
</tr>
<tr>
<td>Perverse Reward system for proper performance</td>
<td>9/45</td>
</tr>
<tr>
<td>Insufficient management commitment to productivity</td>
<td>8/67</td>
</tr>
<tr>
<td>Irrelevance of motivational plans especially monetary incentives with personnel performance</td>
<td>8/50</td>
</tr>
<tr>
<td>A wrong belief that productivity is a threat to employees job security</td>
<td>7/62</td>
</tr>
<tr>
<td>Supervisory Resistance to modern technologies and procedures</td>
<td>6/85</td>
</tr>
<tr>
<td>Unwillingness to abandon plans which have ended in stalemate</td>
<td>8/03</td>
</tr>
<tr>
<td>Insufficient analytical skills and lack of analytic staffing</td>
<td>9/90</td>
</tr>
<tr>
<td>Absence of Cost Accounting System in branches</td>
<td>8/41</td>
</tr>
<tr>
<td>Inadequate Performance Evaluation and inadequate data for performance evaluation</td>
<td>8/60</td>
</tr>
<tr>
<td>Lack of information about successful universities' plans as for adjustment and comparison</td>
<td>8/66</td>
</tr>
<tr>
<td>Geographical fragmentation and separation of branches</td>
<td>8/52</td>
</tr>
<tr>
<td>Bureaucratic Rigidities in branches</td>
<td>8/86</td>
</tr>
<tr>
<td>Inadequate development and research</td>
<td>9/10</td>
</tr>
<tr>
<td>Requirement of large initial investment for productivity improvement efforts</td>
<td>8/82</td>
</tr>
</tbody>
</table>

Insufficient analytical skills on behalf of employees and Perverse Reward system are respectively the main barriers. Supervisory Resistance to modern technologies and procedures play the least important role as a barrier from the viewpoint of university personnel. The level of significance is meaningful at the level of 0/95.

In accordance with the tested hypotheses and removing organizational productivity barriers some suggestions are being proposed:

a) Welcoming employee innovation and intuition in operational procedures.

b) Establishing control mechanism as for employee accountability considering their performance.

c) Creating systems so as to emphasize high pay for high performance.

d) Obligating branches to employees appraisal performances and creating a proper system for performance evaluation.

e) Setting out common goals between managers and employees and clarifying expectations.

f) Managers' willingness to apply appropriate technologies and procedures which would facilitate performance evaluation such as cost-accounting system and performance budgeting.

g) Organizing professional groups in order to use successful universities' experiences for improvement.

h) Facilitating performance procedures such as Reengineering.

i) Creating opportunities for faculty members so that they get more encouraged to participate in research activities.

Reference


