

## **Chapter 5**

### **Issues and Challenges in implementation of e-Recruitment Process**

Implementation of e-Recruitment processes in the public service recruitment organisations of central and state government was studied and it is seen that most of them are gradually moving towards increased use of IT. The introduction of IT normally starts with the computerisation of backend processes followed by the front end processes which involve the candidates. However, as is apparent from the status of implementation of e-Recruitment as discussed in the previous chapter, wide variations amongst the recruitment organisations are seen in this regard. Based on the qualitative inputs received by the way of interviews, following are the main issues and challenges faced by the recruitment organisations in implementation of e-Recruitment.

#### **Limited Internet Access to the Target Population**

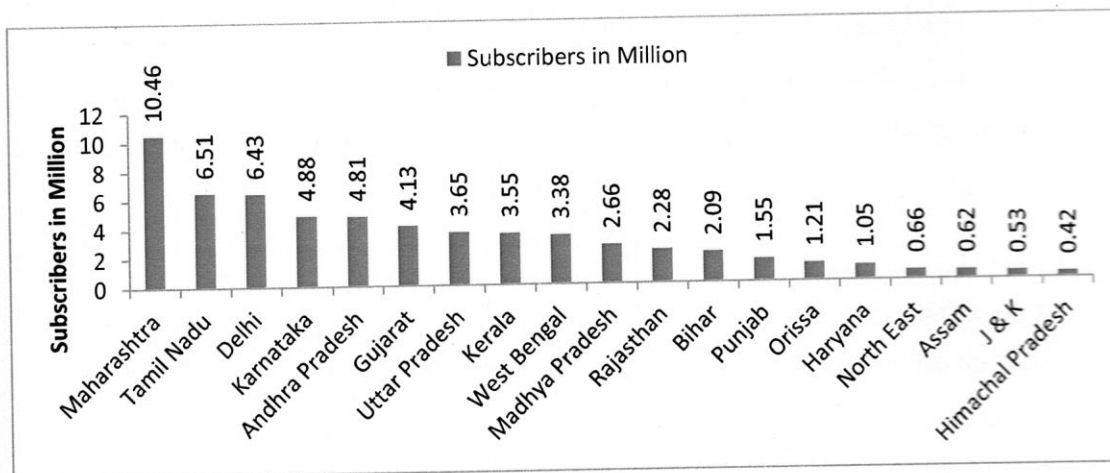
This is a major challenge as perceived by the organisations. It is felt by the officers that as the applicants come from different areas of the country which also include far flung villages there is a merit in continuing with the traditional way of communication by post. As traditional offline communication is seen as a requirement, it acts as a disincentive to introduction of online processes. Still, the recruiting organisations go for online applications or admit cards due to large number of applicants. Due to this reason some organisations have kept both offline as well as online modes of applications. They also send the communication like admit cards to the candidates through post apart from uploading the same on their websites. As per the report of National Workshop held on expert group's recommendation, On-line registration should be made compulsory everywhere in all areas except North East where the ICT infrastructure is not extensively available. So, an additional one year may be given to NE Region before going completely on-line. This challenge affects mainly the following processes – Online Applications, online admit cards/ interview call letters, online result/ mark lists, online grievance redressal system.

However, at the same time it is seen that many organisations have completely discontinued the offline applications, admit cards, results etc. None of the interviewed

officer from these organisations expressed any problem originating from making the online applications/ admit cards mandatory on account of non-availability of internet access. This is due to the fact that even if direct internet access in the target population may be limited, a service industry by way of internet or web cafes has sprung up everywhere in the country. These cafes not only provide internet access, but in many places also provide complete service of filling of online forms along with fee payment and charge a service fee for the same from the candidates. There are other issues posed by the fact that on line applications are not filled by the candidates but by some intermediary like –

- Introduction of online application is expected to reduce the costs both for the recruitment organisations as well as the candidates. But there is a possibility of exorbitant service charges being levied by the intermediaries whom the candidates have to pay in case online mode of application is made mandatory and they do not have internet access.
- Introduction of online application is expected to reduce the issues related with wrong data feeding as the candidate himself is feeding the data and is supposed to be more careful regarding his particulars than any data entry operator. In case of an intermediary feeding the data on behalf of the candidate, this advantage gets diluted. It was reported that as such intermediaries provide similar service to a large number of candidates, frequency of wrong data entry/ uploading of wrong photographs etc. is higher than when the applicant himself fills the form.

As per the data of Internet and Broadband connections in the country, total internet subscribers and broadband subscribers in the country were 18 million and 9 million respectively in the year 2007 (TRAI, 2010) which has grown to 251.59 million and 60.87 million respectively in 2014 (TRAI, 2014). Hence there definitely is an improvement in the internet access, however, more efforts are required to achieve the target of 175 million broadband connections by 2017 set by the government as well as a wide spread growth of internet access in rural and remote parts of the country. There is a wide variation of availability of access across various states which is indicated by the state wise number of broadband subscribers as shown in the following figure.



**Figure 15: State wise number of broadband subscribers in India**

Source: TRAI consultation paper on Broad band, Sept 2014

### **Non-availability of Infrastructure**

This challenge is perceived to be the most important challenge as far as implementation of online examination is concerned. In view of Ex DG, NIC,

*“It (online exams) has not taken off due to inadequate availability of infrastructure in the country to conduct large scale examination. Infrastructure in the country is slowly evolving. Due to this, to conduct one examination for lakhs of candidates, the time taken is long as multiple batches on multiple days are required to complete one cycle. In view of a number of recruiting organisations conducting a large number of examinations, creating an infrastructure to meet the demand is difficult. No enterprise will invest a huge sum if its use is sporadic and there are no assured returns.”*

As per one respondent,

*“Number of capable Vendors is very limited. Capacity of each vendor per shift of examination is also limited which will result in almost seven-eight fold increase in the number of shifts required. [This] will require a large and computerised Question Bank”.*

## **Data Security Concerns**

Data security is always the first concern for any recruitment organisation while planning for introduction of any changes in the recruitment procedures. It is perceived as a very important issue in implementation of a user friendly website, online application system, one time registration and online examinations. From the in-depth interviews, following reasons come across for this perception –

- There is a concern that if candidate specific data is made available on a website, it can be accessed by unscrupulous elements that can use the data to vitiate the recruitment process. For example, a hypothetical fear is that if admit cards are made available on the website and the entire database is somehow hacked which contains contact details; it can be used to access the candidates and to mislead them.
- There is a fear that if the database generated through online processes like online application is lost/ corrupted due to any technical reason, there is no way to salvage the problem without involving the applicants and inviting negative publicity.

Recruitment being a very sensitive activity, fear regarding data security is genuine and natural. Although technology provides robust solutions to ensure data security in today's age of internet banking and e Commerce, lack of technical skill set within the recruitment organisations compounds the perceived importance of the issue.

## **Large number of candidates/ examinees**

One major issue being faced by all the public service recruitment organisations today is the exponential increase in the number of applicants in the last decade or so.

UPSC handled total 8,10,520 applicants in 2000-01 which increased to 19,99,113 in 2010-11 and has become 29,36,532 in last financial year i.e. 2013-14 (UPSC, 2014). Staff Selection Commission received 13,38,136 applications in 2007-08 (SSC, 2008) which increased to approximately 163 Lakh applications in 2012-13 (SSC, 2013).

Increase in the number of applicants makes the conduct of recruitment process difficult. In fact, this is also the main driver for use of technology as it is very difficult to handle large number of candidates if manual processes are followed. At the same time, any change in the recruitment process becomes more difficult to explore due to

fear of any unforeseen issues which may come up and may become unmanageable given the large number of candidates to handle.

This is a major challenge for conduct of online examinations due to inadequate infrastructure capability of the private firms presently providing the service. It is very difficult to conduct written examinations in online mode simultaneously across the country for more than a lakh candidate. As per the status reported in chapter 4, public service recruiting organisations have so far used the online examination mode only for those examinations which have a relatively smaller number of candidates. If the examination is conducted in multiple batches, it may extend the examination to multiple days. This raises not just practical feasibility issues in view of many recruitment cycles to be carried out in a year but also the concerns regarding comparative difficulty levels of multiple question papers used for multiple batches.

### **Concerns regarding Confidentiality/ secrecy**

To maintain the integrity of selection process, ensuring secrecy and confidentiality is of utmost importance especially with regard to the question bank or question papers used for the examinations. Over the years, recruitment organisations have developed systems for maintaining the secrecy and confidentiality around the pen-paper mode of testing which include secrecy of the question bank, printing process, strict physical security controls for distribution of question papers. Implementation of online examinations requires different types of controls and makes the old system almost irrelevant. As soon as the question related data is converted into soft form, new threats of leakages arise. Most of the recruiting organisations that have started online exams have done the same with help of outsourcing. Due to non-availability of a robust high speed internet backbone, the examination is conducted in a distributed structure, i.e., instead of conducting the exam online from a central server data is pushed to local servers at the examination centres some time before the start of exam and the examination is conducted using these local servers across the country. At the end of the exam, all the exam data is uploaded from examination centres onto the central server. Hence, the data does not remain under physical control at a single central server site. Although paper based question papers are also distributed to multiple locations well before the examination date but an elaborate procedure of sealing and



opening the papers in presence of multiple authorities is carried out, which, it is felt helps in fixing individual responsibility. As has been pointed by one respondent –

*“In a physical form of examination lot of check and balance is available in writing that makes government official accountable. -Conducting online examination with help of one outsourced agency will jeopardize the system of involvement of multiple agencies e.g data processing, Question booklet printing and evaluation. -Some time even question booklet is printed from more than one agency without telling anyone. - Cheating, Impersonation and malpractice will be easier in online examination.”*

As per another respondent –

*“Outsourcing the administration of online examination, while retaining the key etc. with the organisation in a transparent and workable manner, is a key issue for big organisation”.*

Hence there is a feeling that instead of outsourcing the entire setup, government should retain some control over the online exam process. It was recommended by an expert group that –

*“Control over the examination technology environment such as data centres, servers, work stations should be of SSC / government.” (National workshop, 2014)*

### **Payment of fee & Reconciliation**

Payment of fee for online applications and its reconciliation is a major issue. As one respondent pointed out

*“Payment of fee has been an issue. All candidates don't have debit or credit cards or internet banking if payment gateway option is there. If payment of fee is through challan in a bank or post office, it's hassle-some for the candidate to pay the fee in bank or post office and log in the system again to update his payment details.”*

As mentioned, due to credit cards/ debit card/ net banking not being a very prevalent mode of payment, most of the payments are made offline through Bank or

Post office challans. After making the payment, candidate has to feed the payment information on the online application system. Reconciliation takes place by matching the particulars entered by the candidate with the records obtained from the bank. If there is any data entry error on part of the candidate or bank, fee payment cannot be confirmed. Various ways are adopted by the recruitment organisations to handle the payment mismatch problem. List of such mismatches is placed on the website or emails are sent to the candidates asking them to produce any proof of payment on receipt of which they are allowed to take part in the recruitment process. Recently, a better way of reconciliation has been started by periodically data sharing between the online application system and the bank. In this system which has been implemented by many organisations, candidates are asked to fill the form in one shot and then asked to pay the fees through challan at bank counters after one working day which is utilized for data sharing. When the candidate approaches the bank for payment, data received from the online system is used for receipt of payment and no further reconciliation is required.

In case of online payment through net banking/ credit card/ debit card another issue of break in transaction arises. If, while making payment, the communication between the online payment gateway and the online application system gets disturbed, payment is not recorded by the online application system even though money is deducted from bank account/ card. As a result, candidate ends up making repeated payments for one application. Ideally, such payments should be either taken into account or need to be refunded. However, the logistics involved are so cumbersome that the recruitment bodies clearly mention in the notification that no refunds will be made.

Whatever be the system of payment deployed by the recruiting organisation, issues are faced by the applicants while paying the exam fee/ application fee and help desks are invariably provided by the recruiting bodies to handle such grievances as per the information available on websites and the exam notifications. How effective these help desks are, is however, not known.

### **Limited Technology Capacity of the Organisation**

The public service recruitment organisations are still working in age old manual ways wherein all discussions/ decisions require files to be processed and paper documents are preferred over online communication. With this type of working style, technical

infrastructure has not developed internally in these organisations. Even availability of sufficient number of computer terminals and proper internet bandwidth is not there in most of the places what to talk of high-end servers. As a result, the manpower working in these organisations are not techno savvy and find it difficult to handle IT systems. In order to start any initiative of e-Recruitment, these issues act as handicaps.

### **Lack of Technical Skill Set**

Lack of technical skill set within the organisation is one major challenge faced by the recruiting organisations as per the perception of the officers involved in implementation of e-Recruitment. This problem affects almost all e-Recruitment activities. At present most of the organisations are being helped by NIC (National Informatics Centre) and/or the IT departments of respective state governments in hosting and designing/ maintaining of websites. NIC is a Premier Information Technology Organisation in India providing network backbone and e-Governance support to Central Government, State Governments, UT Administrations, Districts and other Government bodies. NIC assists in implementing Information Technology Projects, in close collaboration with Central and State Governments. However, in house technical skill set is still required to plan and implement the IT projects as well as to handle the routine recruitment functions once e-Recruitment is implemented. As per Ex DG NIC,

*“It is seen that there is practically no IT knowledge at the lower levels and the higher management gets no support from lower levels for overseeing the IT implementation.”*

Outsourcing to private technology solution providers is seen as a temporary solution to the problem lack of in house technical skill set. However as Chairman, SSC pointed out –

*“In the initial stage, public service recruitment organisations may depend on outsourcing for implementation of IT solutions. However, this is not a permanent solution to the problem. In the long run, there is a need of recruiting technical manpower as well as training and capacity building of the manpower.”*



At present some recruiting organisations have an IT Cell with Data Entry Operators, programmers normally headed by a System Analyst and some have recently recruited or in the process of recruiting technical manpower. However, in view of continuous up gradation of skills required in the IT sector, keeping a government setup up-to-date in terms of technology is also an issue.

Lack of technical skill set also means that there is low IT awareness. Main issue in implementation of e-Recruitment processes as per Ex DG (NIC) is that the recruitment organisations are not IT savvy. In fact, they have to be first IT aware and then become IT savvy. There is a requirement of acknowledgement of importance of IT within these organisations. Also, there is a need of building capability to at least oversee the IT implementation which is lacking.

### **Limited Top Management Commitment**

For any change to take place in government systems, a top driven approach is required. Limited top management commitment is seen as an issue which is evident by variation in the level of implementation of e-Recruitment processes amongst similarly placed organisations in terms of the jurisdiction and geographical area.

### **Limited Computer skills of target population**

Apprehension that the target population i.e. the candidates have limited computer skills or that the computer skill is not uniform amongst the candidate is one major factor that is stopping the recruitment bodies in starting online examination. As expressed by Chairman, SSC –

*“Whether equal computer skills are there in different parts of the country especially in remote areas, small towns or villages, Left Wing Extremism affected areas etc. is an important aspect to be considered before deciding in favour of online examinations.”*

As the recruitment examinations are competitive examinations, a level playing field is expected to be provided to all the candidates. Any external factor should not affect the performance of a section of the candidates so that the examination tests what it actually intends to test.

### **Fear of misuse by candidates**

This issue is faced mainly in implementation of online grievance system. It transpired from the telephonic interviews that a facility to raise grievances online may lead to increase in number of non-serious queries on the system. Additionally, as identification of candidates is not possible in such a system, it is difficult to determine whether the responses are going to genuine candidates or not. Hence, most organisations prefer receiving grievances in letter format accompanied by copies of required documents which also make handling the grievances easier in their opinion.

### **Budget Constraints**

Technical infrastructure is mostly not available with the organisations as the routine work does not require the same. Hence, implementation of e-Recruitment processes requires some initial expenditure followed by regular maintenance or operational expenses. This is perceived as one issue by the respondents. In case of online examinations, it is a big challenge as the expenditure per candidate increases by few folds. In view of large number of candidates, justifying the change from traditional paper pen examination to online examination becomes very difficult. However, as more organisations start online examinations, economies of scale are expected to bring down the expenditure. As one respondent commented –

*“The initial cost for online Exam may be look astronomical but in long run will become lowest per recruitment cycle when compared with the traditional system.”*

### **Public unwillingness to use online systems/ computers**

This is an assumption on part of the functionaries involved that the applicants/ candidates are not willing to use information on websites or online systems and this acts against disincentive in implementation of e-Recruitment. However no incidence of any organisation reversing back the changes made towards e-Recruitment due to public pressure came to notice during interactions.

### **On-going offline system**

It is seen that implementation of e-Recruitment processes seem to be easier for comparatively newly set up organisations. It is felt that long running offline or manual

processes create a mental block and resistance to change which is difficult to overcome.

### **Staff resistance**

This issue is a part of any change management. The staff working in the public service recruitment organisations is habitual of working in the old manual/ offline ways and introduction of IT requires reviewing and revising old procedures which is resisted internally in these organisations.

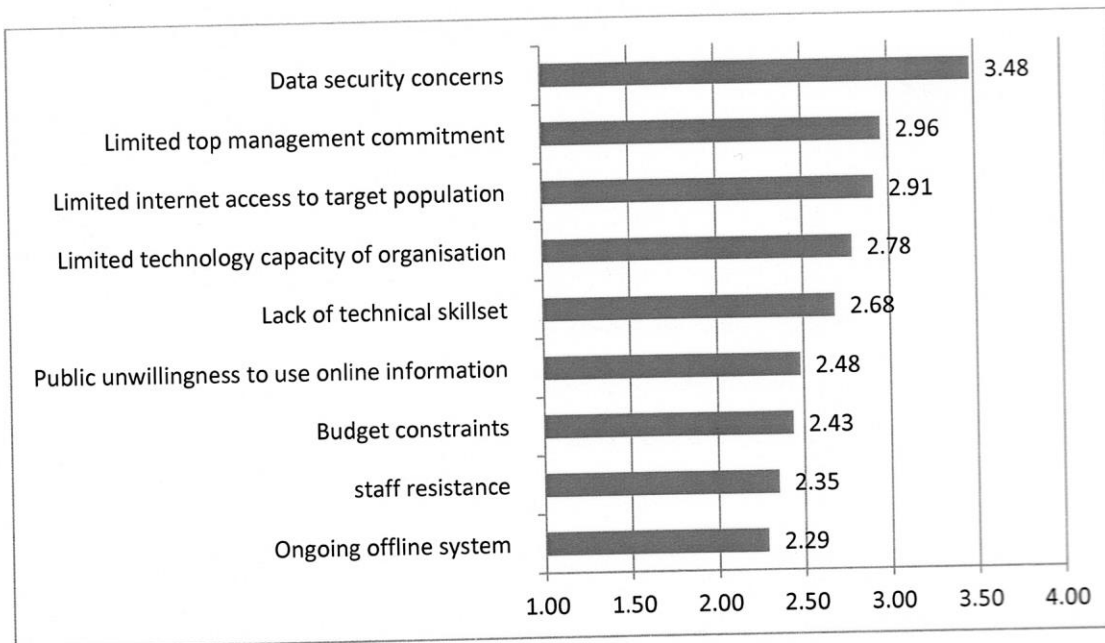
### **Perceived Importance of Issues and Challenges**

Qualitative inputs regarding the main issues and challenges were utilised to create questions regarding perception of level of importance of these issues for various processes. As individual perceptions vary based on the outlook and experience, quantitative analysis for the purpose of finding an overall perspective is required.

Respondents were asked to choose one of the following options against each issue – Very Important, Important, Less Important, Not important. Assigning values 4, 3, 2 and 1 to the options respectively, weighted averages have been calculated to arrive at the perceived importance of the listed issues e-Recruitment process wise and are shown in the following figures.

### **Issues and Challenges faced in maintaining a user friendly Website**

A user friendly website containing all recruitment related information is the public face of the recruiting organisation and is very important for overall efficiency of the system. Respondents were asked to rate the level of importance of various issues on a scale of 4 to 1 from Very important to not important and the average importance levels are shown in figure 16.



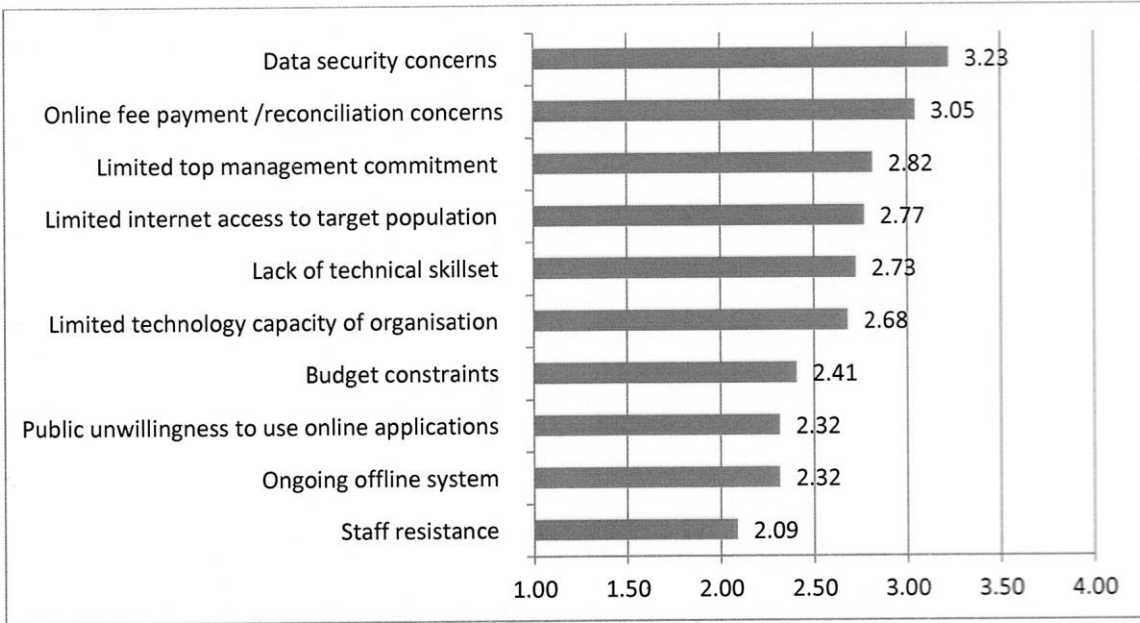
**Figure 16: Perceived importance of Issues/challenges faced in maintaining a user friendly website with all relevant information for recruitment**

(on a scale of 1 to 4 where 1=Not important, 2= Less important, 3= Important, 4= Very important)

Based on the responses, above chart shows that data security is seen as the top most issue, which is quite surprising as most of the key data supposed to be placed on the website is not confidential. The issues of limited technology capacity of the organisation and lack of technical skill set seem to contribute to the apprehensions regarding security of data. Limited top management commitment also features as a major issue. Remaining issues are given weightage below 2.5 and hence have a lesser impact.

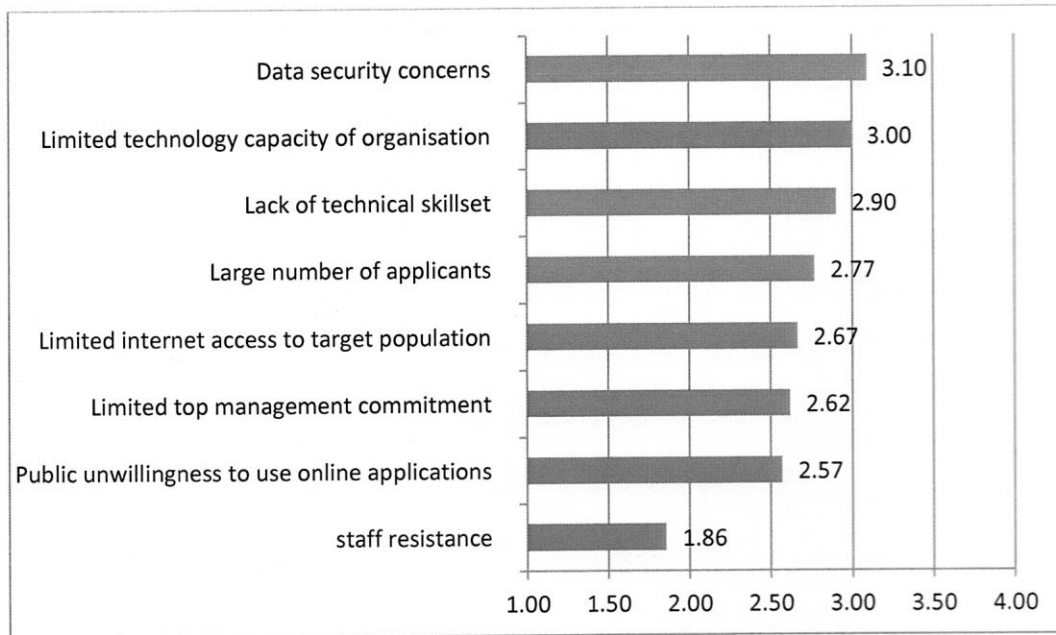
### **Issues and challenges faced in implementation of online application system**

Responses were obtained on three aspects of implementation of online application system – i) Implementation of online applications, ii) Discontinuing offline applications, and iii) Implementation of one time registration system. The perceived importance of issues is shown in the following figures.



**Figure 17: Perceived importance of Issues/challenges faced in implementation of online application submission system for recruitment.**

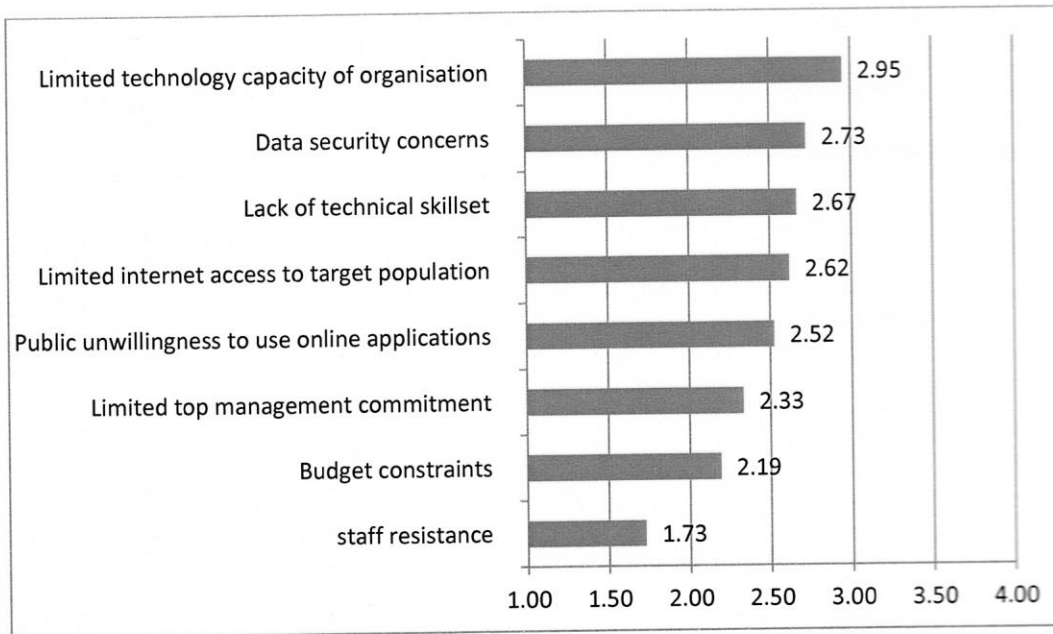
(On a scale of 1 to 4 where 1=Not important, 2= Less important, 3= Important, 4= Very important)



**Figure 18: Perceived importance of Issues/challenges faced in making online application submission mandatory and discontinuing offline applications.**

(on a scale of 1 to 4 where 1=Not important, 2= Less important, 3= Important, 4= Very important)





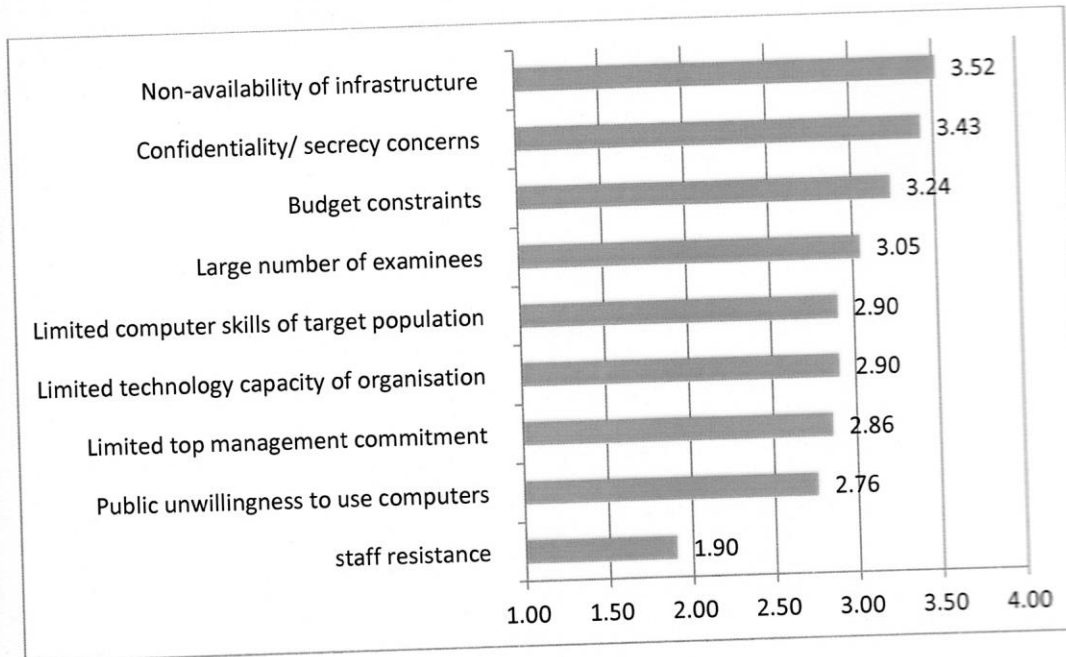
**Figure 19: Perceived importance of Issues/challenges faced in implementation of one-time registration of applicants.**

(on a scale of 1 to 4 where 1=Not important, 2= Less important, 3= Important, 4= Very important)

Concerns about Data security, limited technology capacity of the organisation, limited technical skill set and top management commitment are seen as the major issues similar to other e-Recruitment processes. However, online applications has a unique challenge in terms of the problems faced in payment of examination fee and its reconciliation. This aspect of the implementation involves multiple stakeholders in the form of Banks, Post office, Payment gateway providers and co-ordination with all becomes a challenge.

## Issues and challenges faced in implementation of Online Examinations

Figure 20 shows the average importance levels of various issues as perceived by the respondents for implementation of online examinations.



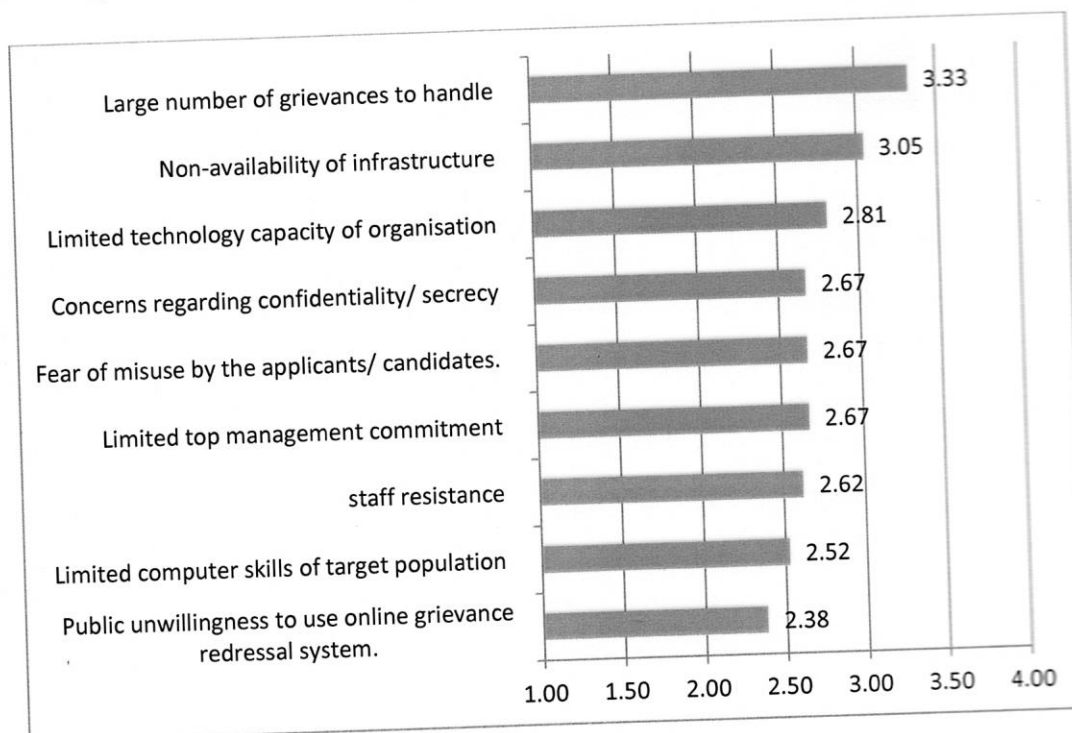
**Figure 20: Issues/challenges faced in implementation of online examinations.**

(on a scale of 1 to 4 where 1=Not important, 2= Less important, 3= Important, 4= Very important)

Non availability of infrastructure in the country for conduct of online examinations compounded by large number of examinees is seen as major challenge which seems to be hindering the implementation of online examinations. The organisations which have started online exams have restricted the same to a few examinations involving a limited number of candidates. Confidentiality and secrecy concerns in changing the examination mode from offline to online as well as higher cost of conduct of examination are also seen as main issues.

## Issues and challenges faced in implementing Online Grievance Redressal system

Online grievance redressal system is still not implemented in most of recruiting organisations and also does not seem to be a priority item for the key functionaries involved. Average importance levels of various issues faced in implementation of online grievance system is shown in figure 21.



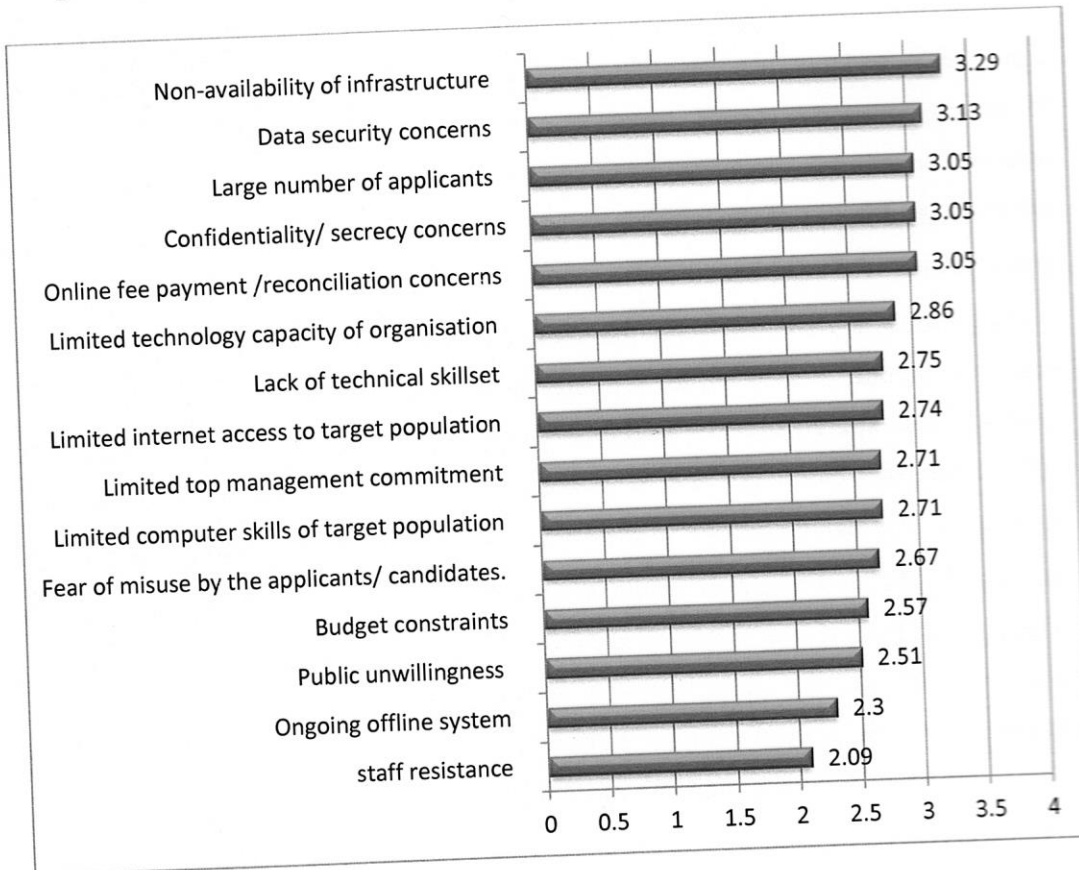
**Figure 21: Issues/challenges faced in implementation of online grievance handling system for a public service recruitment organisation.**

(on a scale of 1 to 4 where 1=Not important, 2= Less important, 3= Important, 4= Very important)

As the public service recruitment bodies handle a large number of candidates, sheer number of the grievances is seen as a major challenge in implementing the online system. Also, presently, these organisations have a primarily offline/ manual way of working within the setup. Hence, no infrastructure exists for handling the grievances online in the system which makes converting only receipt of the grievance to online mode useless. This makes the issues of non-availability of infrastructure and limited technology capacity of the recruitment organisations important.

## Ranking of Issues/ Challenges as per perceived importance

Following figure shows the average perceived importance of issues/ challenges irrespective of the e-Recruitment processes affected.



**Figure 22: Issues/ challenges in the decreasing order of perceived importance**

From the above figure it is clear that Non-availability of infrastructure, Data security, large number of applicants, Confidentiality and secrecy concerns, Limited technology capacity of the recruitment organisations and limited technical skill set are required to be addressed immediately in order to speed up the implementation of e-Recruitment. Broader issues like limited internet access to target population, lack of computer skills of target population which are beyond the jurisdiction of recruiting organisations figure lower than the expectation based on the qualitative inputs received through interviews. Resolution of these issues requires initiative from government side.

Public unwillingness, ongoing offline system and staff resistance figure at the bottom of the priority list. It may be due to non-acceptance of these factors as issues by majority of the key functionaries or another reason may be that these are seen as manageable issues.