

# Assessing the Readiness of Civil Registration Bureau of South Khorasan Province to Exploit the Experiences of National Smart ID card Establishment throughout the World

By

*Hossein Moradi and \*Hossein Kardan Moghaddam*

Faculty Member of Birjand University of Technology Birjand , Iran,

\*Corresponding author

## Abstract

*The national Iranian Smart ID card program is now in the pilot study stage and is about to enter the third phase that is establishment in different provinces throughout the country. Hence, assessment of each province's readiness for a flawless establishment and the continuous operation of Smart ID card in Iran seems essential. Therefore, this paper attempts to present approaches to problems and complications of establishment of Iranian Smart ID card through assessment of the readiness of South Khorasan Province to exploit the experiences of national Smart ID card establishment throughout the World. In order to achieve this, a semi structured interview with the managers of this bureau was used and their taken or planned measures regarding each significant experience of national Smart ID card were analyzed, measuring their adequacy or inadequacy. According to the results, this province is relatively ready to run the national Smart ID card, yet in order for a flawless establishment of the project, other measures must be taken in specific provincial and national areas that are thoroughly surveyed here.*

**Keywords:** *Civil Registration of South Khorasan Province, South Khorasan Province, Deployment Experiences, Provincial Framework;*

## 1. Introduction

Smart cards are among the great achievements of humans in the information technology era. This card which is similar to ordinary plastic cards in size uses a microprocessor or memory chip installed in it. When this card is in the proximity of a card reader, its processing power can be used for different purposes (Mohammed, et al., 2004) [1]. The smart card technology supports a wider range of applications and physical shapes in comparison with plastic cards. Anyway, currently these cards have numerous applications as in health and social services cards, banking cards, network access cards, phone cards, ID cards (like government IDs or employee IDs), transportation ticket and toll cards, electronic passport and physical access cards. If one looks into an Iranian's pocket, some notes, coins, driver's license, library card, paper ID card and other card can be seen, but with the smart card technology, all these would be substituted by a single multi-purpose card which will be usable for all the aforementioned purposes (Taherdoost et al., 2011) [2].

Accordingly, the national Iranian smart ID card program has started in 2009 with the aim of "presenting a comprehensive model to enable all services in cyber space based on a national ID card for on- and off-card services both on- and offline" (National Smart Card Project department, 2010 and Moradi et al., 2012). [3], [4]. The Iranian national smart ID program is presently (first half of 2013) is at the pilot stage and will soon enter the third phase that is establishment in different provinces of the country. Accordingly, studying the experiences of establishing various kinds of smart card in other countries and exploiting these experiences in the province and Iran seems essential.

Thus, this study attempts to assess the readiness of South Khorasan's Civil Registration Bureau to establish the Smart ID card program through identifying the experiences and key success and failure

factors of smart ID card programs throughout the world and evaluating the taken measures by this bureau to exploit the mentioned international experience. Undoubtedly, implementing such an investigation not only makes the bed for the Smart ID card in this province but also can lead to an increment of success rate of this program in South Khorasan Province and other similar provinces. It is noteworthy that this study will attempt to answer the following two questions:

1. How ready is the South Khorasan's Civil Registration Bureau to exploit the international experience in establishing the Smart ID card program in Iran?
2. According to the experience in establishing the Smart ID card in different parts of the world, what are the weaknesses and taken measures of South Khorasan's Civil Registration Bureau in flawlessly establishing the Smart ID card program in Iran?

In order to answer the following questions, first the research method is assessed, then the procedures is named that include 2 general stages of presenting and localizing the initiative framework of province's experience and important structure of establishing Smart ID card and assessing the current readiness of South Khorasan's Civil Registration Bureau to establish this program. In the end, the findings of the research at province and state level are given.

## 2. Methodology

The method of this research is approachable from different aspects of time, objective, data collection and data analysis. Since the study considers present time, it is an experimental study. Also, since it is attempted to assess the readiness of South Khorasan's Civil Registration Bureau to exploit Smart ID card using a predetermined framework, it is an evaluative study as far as objective is considered. Meanwhile, in order to collect data, a semi-structured questionnaire was used in the end. Moreover, since the data collected here is qualitative and qualitative approaches have been used to analyze the data (tables), in terms of data analysis, this study is qualitative in nature.

## 3. Procedure

The two main phases of conducting this study are as follows:

- **Presenting and localizing the initiative framework of province's experience and important structure of establishing Smart ID card (Phase 1):** review of related literature and identifying the experiences of establishment of different types of smart card, presenting a suggested model to categorize the experiences of all smart cards, presenting a primary suggested framework of experiences of establishing smart cards throughout the world and finally, presenting the final framework of important and province-level experiences of establishing smart ID cards in South Khorasan Province.
- **Assessing the current readiness of South Khorasan's Civil Registration Bureau to establish this program (Phase 2):** semi-structured interview with managers and authorities of South Khorasan's Civil Registration Bureau and assessing the adequacy or inadequacy of different types of planned measures or taken measures regarding smart ID cards for any given experience in the framework of useful experiences of establishing these cards in South Khorasan province.

### **Presenting and localizing the initiative framework of province's experience and important structure of establishing Smart ID card (Phase 1)**

- Given the extensiveness of this study, the results of the first phase is thoroughly published in the paper titled "presenting a framework at province-level to establish Iranian smart ID card in South Khorasan Province based on studying and localizing the experiences of other countries" (Moradi

Hosseini, Bahreininejad Ardeshtir, 2013). [5]. But the results of phase 2 are presented in this paper. The taken steps in first phase of the study for developing the conceptual model, hypotheses, assessment, localization of conceptual model and the aforementioned hypotheses are:

#### **A. Developing hypotheses and conceptual model**

**I. Review of literature and identifying the experiences of establishing different types of smart card in the world:** extracting papers and reports related to key factors of failure and success of different smart cards in a number of organizations and big companies and also the articles related to different cases of smart card establishment (Training center and National Smart Card department 2010) [6], Training center and National Smart Card department, 2010) [7], Training center and National Smart Card department C., 2010) [8], Charismathics (2009) [9], Saade, Ronald (2009) [10], Smart Card Alliance (2003) [11], U.S. GSA (2004) [12]).

**II. Presenting a suggested model to categorize the experiences of different smart card establishment:** accumulating and categorizing the experiences of establishing different types of smart card and presenting a suggested model to categorize the experiences of smart cards, presenting the list of all experiences in establishing smart cards throughout the world.

**III. Presenting the initially suggested framework of experiences of establishing different types of smart card:** extracting and summarizing the unique and important experiences from the list of experiences of establishing smart card programs in the world and giving the summary of these experiences in the suggested model to categorize these experiences and presenting an initial framework after basic assessment by several experts (presenting research hypotheses).

#### **B. Assessing and localizing the hypotheses and presenting a conceptual model**

**IV. Assessing and localizing the initially suggested framework of experiences of establishing different types of smart card (in two phases):** The posited hypotheses in the initially suggested framework of experiences of establishing different types of smart card were assessed based on the feedback received from the completed questionnaires by experts and authorities in Civil Registration Bureau of South Khorasan Province and the all-national experiences related to the hypotheses that were rejected based on the one-sample t-test of the framework. Then, the hypotheses related to remaining experiences from the initially suggested framework of experiences of establishing different types of smart cards based on the semi-structured interviews with managers of Civil Registration Bureau of South Khorasan Province were reviewed and some semi-national experiences that were not removed in the previous phase were omitted this time. Therefore, at the end of this phase only province experiences remained.

**V. Presenting the final framework of significant and province experiences in establishing smart ID cards in South Khorasan Province:** eliminating the experiences related to rejected hypotheses in assessment and localizing phase of the initially suggested framework of establishing different types of smart card and presenting the remaining experiences in form of the final framework of significant and province experiences in establishing smart ID cards in South Khorasan Province (Moradi Hosseini, Bahreininejad Ardeshtir, 2013). [5].

#### ***Review of literature in the first phase of research***

In relation to establishment of various smart cards across the world, many experiences have been published among which some of the most important related sources are discussed. But it must be noted that none of these sources have tried to offer a complete model of establishment of smart cards. Hence, in the following part only works have been mentioned that described the experiences of establishment of smart cards. These include two categories of “the experiences of establishment of smart cards in

different countries” and “the experiences of establishment of smart cards in different organizations and big companies” which will be considered later on. The first category includes the experiences of establishment of smart cards which have been mentioned in different sources. Fortunately, the experiences of almost 30 countries in the Middle East, Far East and Europe are given in [6], [7] and [8], respectively. After careful analysis of these, the experiences of some European countries were selected. The reasons for selecting these were significance, novelty and also the number of experiences published by them. Accordingly, in this study the experiences of Smart ID card in Belgium, Italy, Estonia and Check Republic were extracted from [8]. The second group of experiences includes papers and reports related to key success and failure factors of various smart cards in a number of organizations and big companies and also papers related to cases of establishing various smart cards. The most important and most relevant sources in this category include [9], [10], [11] and [12] that are thoroughly scrutinized. The reason for selecting these sources is their validity and relevance to this paper and also the abundance and novelty of their experiences. It is noteworthy that three sources of [9], [10] and [12] focus on key success and failure factors and experiences of establishing smart cards in general but [11] emphasizes on cases of establishing them and includes 30 cases which are carefully investigated and some of the most useful and relative among them chosen. The selected items here are [5]:

1. US Navy DENCAS Case
2. Taiwan Health Care Smart Project Case
3. Shell Group Case

**Findings of the first phase of the study**

At the end of phase 1, the final framework of significant province-level and national experiences of establishing smart ID card in South Khorasan Province is given that includes 5 categories, 17 main aspects and 38 province experiences of establishing smart ID card. This framework which is unique in structure and content, can be utilized by the Civil Registrations Bureau in South Khorasan and similar provinces to establish the national smart ID card in Iran through offering a categorized and assessed model of significant experiences in establishing the smart ID card in provinces. The final framework is depicted in table 1. As is witnessed in this framework, the experiences presented here are categorized into 5 main groups of technical standards and necessities, required plans and operational procedures, strategic and motivational necessities, legal obligations and costs and 17 main aspects (Moradi Hossein, Bahreininejad Ardeshir, 2013). [5].

**Table 1, the final framework of significant province-level and national experiences of establishing smart ID card in South Khorasan Province (taken from [5])**

Category	Main Aspects	E	
Technical Standards and Necessities	1. standardization, unification and interaction	1. The chance for interacting with each other (interoperability) at physical level, platform and applications	
	2. the security of smart card system	2. Running high-level control mechanisms to gain access to citizens’ data.	
	3. required communicative equipment and infrastructures		3. selecting the appropriate card reader
			4. addressing the inadequacy of card readers
			5. supplying the required communicative and hardware infrastructures

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	4. smart card management system	6. convenient application and smooth running of used systems
Key plans and operational	5. the life cycle of smart cards from ordering to	7. a comprehensive program for each phase of the smart card life cycle from the time of ordering to its annulment

procedures	annulment	8. defining and clarifying the user registration process, data input and issuing the cards (centralized or decentralized) with thorough details
		9. the possibility of quick access to procedures in case of loss or theft of the card, deactivation, backing up card's data and replacing it
		10. low failure rate and ease and accessibility of the card issuing process.
	6. preparations, cooperation and instructing the end-users of system	11. informing the public and all stakeholders of the program
		12. initial introduction of smart card to citizens and making the necessary preparations for a smooth establishment of the system and its continuous operation
		13. instructing citizens on how to use smart cards
		14. instructing technical system operators and Civil Registration Bureau users
		15. introduction and instruction of the system to end users
	7. supporting the end users and maintaining the system	16. the appropriate plans and procedures of system maintenance and system supporting the end user
		17. direct support of the end user
	8. system supplies	18. providing supplies according to the priority
		19. timely distribution based on priorities
	9. system project management (requirements, domain, communications, test, methodology)	20. using quick establishment methodologies
		21. phased-delivery system in different phases and attempting to successfully run each milestone of the project
		22. modifying requirements clearly for the contractor's agreement with the employer on them
		23. having clear, open and transparent connections between all stakeholders

Managerial and motivational necessities	10. structural and organizational issues	24. change management/process re-engineering
	11. leadership and human resources	25. project team dedication and their uncompromised attempts to achieve success
		26. allotting man power and adequate resources
		27. having a qualified project leader
	12. creating commitment and motivation in citizens and staff	28. being motivation-oriented
13. selecting appropriate partners and inciting feelings of commitment and motivation in them	29. using qualified contractors with proven potential to implement comprehensive, unified and highly secure breakthroughs	
	30. a layered approach to assigning roles and responsibilities between partners is necessary	
	14. assessment and revision of system	31. a tendency to reviewing the issues and continuously attending them
		32. assessing system operation efficiency
		33. appreciating the effectiveness of the new system in efficiency, quality, empowering staff, customer and end user satisfaction
Legal obligations	15. regulations supervising the system	34. instructing the card owners by the program partners regarding rights, responsibilities and possible dangers
Costs	16. the costs of smart card system	35. support and finance
		36. considering all the infrastructure, implementation and running costs
	37. distributing costs between stakeholders	
	17. the revenues of smart card system	38. exploiting the revenue-generation opportunities and creating a win-win situation between the government and commercial stakeholders of the program

**Assessing the current readiness of Civil Registrations Bureau to establish the smart ID card program (phase 2):**

The second phase (final stage) of research includes the current readiness of the Civil Registration Bureau to exploit the experiences of establishing the smart ID card program in South Khorasan province with the results in this paper. In order to run this stage of the study, it was essential to compare the current readiness of the Civil Registration Bureau in establishing the smart ID card program with ideal circumstances. Since it is possible to imagine ideal circumstances based on the final framework in Khorasan Province, in this stage of the study a semi-structured interview with managers and authorities of the province was used. In the mentioned semi-structured interview, the study framework was incorporated and in order to get the feedback from these managers and authorities in the province a new

column titled “the status of taken measures regarding this experience” was added to the final framework of establishing smart ID card in South Khorasan Province. In order to briefly describe each measure, another column was added too. The choices and scores regarding the criterion for status of taken measures are depicted in the column for criterion of status of taken measure in South Khorasan Province (table 2):

**Table 2: the choices of criterion of taken measures status in South Khorasan Province and the results of the related interview**

Results of the interview	Criterion of taken measures status in South Khorasan Province	
Experiences	Score	Criterion content
6	0	This experience is insignificant or has not been taken into account in this province
1	1	It will be considered in the next year
16	2	Some action will be taken by the end of the year or immediately after the program announcement
15	3	A specific measure has been taken or will be taken in the next 3 to 4 months

#### 4. Findings

A collective account of the semi-structured interview results with managers of Civil Registration Bureau of South Khorasan Province is given in table 2. Meanwhile, the detailed account of taken measures and their assigned scores in this province is given in table 3. It is noteworthy that the average of the acquired scores based on the final framework of experiences of establishing smart ID card in South Khorasan Province is found to be 2.13 out of 3. Thus, it can be inferred that South Khorasan Province is not problematic in case of most experiences in the final framework of establishing smart ID card and will either consider measures before the end of the year or quickly take measures after the announcement of the program. Hence, considering the fact that South Khorasan Province only faces serious problems and limitations in relation with 18% of the experiences (that is 7 out of 38 experiences in the final framework), it can be concluded that South Khorasan Province possesses a relative readiness to adapt the national smart ID card program. Indeed, it goes without saying that more planning and attempts are necessary to address these limitations. Also, the 7 mentioned experiences were shadowed in table 3 for more emphasis.

**Table 3: The status of taken measures in South Khorasan Province considering significant province and national experiences in establishing smart ID card**

significant province experiences in establishing smart ID	Status of taken measures	Score
1. The interoperability opportunity at physical, platform and application level	There is no problem since all software and hardware are brand new	3

2. implementing high-level control mechanisms to gain access to citizen data	There is no problem since the system operations in non-smart national IC cards were also considered	3
3. selecting appropriate card readers	It is an extra-organizational task and is not foreseen in the description of duties of the Civil Registrations Bureau	0
4. addressing lack of card readers	It is an extra-organizational task and is not foreseen in the description of duties of the Civil Registrations Bureau	0
5. providing the required communicative and hardware infrastructures	Connection to Tehran is made via fiber optics and dedicated lines are used for communication with different towns. Anyway, development of dedicated bandwidth to towns is an agenda this year. The required server has already been purchased and is about to be installed with an equipped server room. Other required hardware will be quickly supplied from Tehran immediately after the announcement of the program.	2
6. convenient usage and smooth running of used systems	Since new PCs have been purchased specifically for smart ID cards, there will be no problems	3
7. a comprehensive schedule for each stage of the life cycle of the smart card since ordering until annulment	Since the general procedure is similar to that of traditional (non-smart) ID card, there will be no problems after the announcement of the	2

	program	
8. defining and clarifying the processes of registration, data input and issuing the card for the users (centralized and decentralized) with complete details	Following the announcement of the program by the headquarters, there is a possibility to describe these procedures for the province and towns	2
9. the possibility of quick access to procedures in case of loss or theft of the card, deactivation, backing up card's data and replacing it	There is no quick systematic access to these processes	0
10. Low failure rate and ease and accessibility of the card issuing process.	There's the chance to apply for the card via internet, towns' bureaus, service counters and rural ICT centers	3



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11. informing the public and all stakeholders of the program	Preliminary informing has begun, yet it will be more seriously followed by the province's media following the announcement of the program	2
12. initial introduction of smart card to citizens and making the necessary preparations for a smooth establishment of the system and its continuous operation	Preliminary informing has begun, yet it will be more seriously followed by the province's media following the announcement of the program	2
13. instructing citizens on how to use smart cards	Since there are lots of similarities between the smart and ordinary ID cards, there is no need to instruct the citizens by the authorities	0
14. instructing technical system operators and Civil Registration Bureau users	After the announcement of the program, it is possible to instruct them quickly	2
15. introduction and instruction of the system to end users	After the announcement of the program, it is possible to instruct them quickly	2
16. the appropriate plans and procedures of system maintenance and system supporting the end user	Given the previous experiences of the province, it will be quickly prioritized after the announcement of the program	2
17. direct support of the end user using helpdesk	It is not foreseen in the present programs in the province	0
18. providing supplies according to the priority	There is no problem	3
19. timely distribution based on priorities	There is no problem	3
20. using quick establishment methodologies	There is the experience of previous quick implementation of orders	3
21. phased-delivery system in different phases and attempting to successfully run each milestone of the project	There is no problem	3
22. modifying requirements clearly for the contractor's agreement with the employer on them	Formulating the primary list of requirements at a national level is in process, but it is possible to inform the towns upon receipt of this list	2
23. having clear, open and transparent connections between all stakeholders	Necessary equipment for communications including video conferencing and VOIP will be operational by the end of the year	2

24. change management/process re-engineering	It is quickly implementable upon announcement	2
25. project team dedication and their uncompromised attempts to achieve success	The motivation and moods of staff is quite suited and potent forces have volunteered in the project team	3
26. allotting man power and adequate resources	Similar experiences exist in the province, thus will be quickly implemented after announcement	2
27. having a qualified project leader	The leadership of the project rests with general manager of Civil Registrations Bureau but it will be transferred to another party in the province	2
28. being motivation-oriented	Creating necessities and motivations for citizens in a national level is in progress but it is not simple to financially reward the personnel (although they are quite motivated already)	0
29. using qualified contractors with proven potential to implement comprehensive, unified and highly secure breakthroughs	There is no problem regarding intra-province contractors	3
30. a layered approach to assigning roles and responsibilities between partners is necessary	There is no problem since province responsibilities is distributed evenly among bureaus, service counters and rural ICT centers	3
31. a tendency to reviewing the issues and continuously attending them	There is no problem since with a healthy competition in towns, there is the tendency for revision of situations	3
32. assessing system operation efficiency	There is no problem since the procedures for assessing the efficiency of traditional (non-smart) ID card exist already	3
33. appreciating the effectiveness of the new system in efficiency, quality, empowering staff, customer and end user satisfaction	It is not foreseen in the current year's schedule but will be considered next year	1
34. instructing the card owners by the program partners regarding rights, responsibilities and possible dangers	Will be quickly implemented upon announcement of the program	2

35. support and finance	There is no significant problem since the program is national and 60 percent of costs will be provided from the capital with the remaining 40 percent on the shoulders of the province	2
36. considering all the infrastructure, implementation and running costs	There is no significant problem since the program is national and 60 percent of costs will be provided from the capital with the remaining 40 percent on the shoulders of the province	2
37. distributing costs between stakeholders	There is no problem since the applicants will be charged with the initial issuing cost and service counters and rural ICT centers are independent financially	3
38. exploiting the revenue-generation opportunities and creating a win-win situation between the government and commercial stakeholders of the program	There is no problem since the professional photographers syndicate and rural ICT centers are partners and stakeholders in this program	3

## 5. Suggestions

### *Suggestions for the province*

Given the results of the second phase of the study, it is suggested that more planning be considered in regard to the following experiences. It is noteworthy that the mentioned province experiences are listed according to Friedman (in descending order of importance) test results:

1. The possibility of quick access to related procedures for theft or loss of the cards, deactivation of the cards, backing up the data on the cards and replacing them.
2. Being motivation-centered (motivating staff and managers of Civil Registration Bureau in relation to this program).
3. Appreciating the effectiveness of the new system in efficiency, quality, empowering staff, customer and end user satisfaction (via designing necessary forms in the website of the bureau)
4. Direct support of the end user using helpdesk
5. Instructing citizens on how to use smart cards
6. Selecting appropriate card readers
7. Addressing lack of card readers

Also, considering the fact that regarding “selecting the appropriate card reader” and “addressing the lack of card readers”, the managers of the Civil Registration Bureau have expressed “it is an extra-organizational task and is not foreseen in the list of tasks of Civil Registration Bureau”, it is felt that the authorities are ignorant in this area. Hence, it is suggested that superior authorities in organizations like the General Headquarter of Civil Registration Bureau or South Khorasan Governor’s office take the initiative and act accordingly.

**National Suggestions**

- According to the results of the second phase, it is predicted that 42 percent of the tasks are operable in South Khorasan Province after the announcement of the plan by the General Civil Registration Bureau. Hence, we suggest the general managers of the bureau to keep the provinces aware of the program details and procedures as much as possible at least six months before commencement to enable planning and preliminary preparations in the province more appropriately.
- Also, it is necessary to provide more extensive instructions for the plans and related processes (experiences 7 to 23) to be in the task descriptions of managers of smart ID card. It goes without saying that with the similarities in appearance and mission of General Civil
- Registration Bureaus throughout the country, planning and trying to address the issues and complications related to the 7 experiences facing South Khorasan Province, other provinces' problems could be reduced in establishing national smart ID card.
- It is noteworthy that according to the results of the first phase of this study, many experiences of establishing smart cards stem from outside the province or are even partially national (5). These experiences that demand national action are categorized according to Friedman test and are presented in table 4 from most national to most province-related. Attending them by managers of the national smart ID card program seems essential.

**Table 4: experiences from establishment of national smart ID card that require action at national level**

The	
1	Increasing the services provided by the card
2	Releasing the applications by a single source
3	Selecting an appropriate smart card management system
4	Win-win cooperation of private and public sectors
5	Suitable card profile adjusted with requirements
6	Following standards
7	Using an appropriate firmware
8	A comprehensive security measure for the whole system
9	Using several technologies in the card
10	Providing privacy in technical and management program
11	Flexibility of software provider to customize and localize a final solution
12	Assigning dynamic and static memory to the card
13	Platform coordination and system unification
14	Using suitable partners that are professional and potent to predict possible issues
15	Awarding letter of credit according to regulations

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16	Developing a formal legislative structure by the government to supply the commercial order amongst partners and having pre-defined and regulated method of allotting budget, responsibilities and controlling the affairs of stakeholders
17	Utilizing closed- and open-source applications on the card and dynamic or static loading of applications on the card
18	Using control procedures to use and publish documents
19	Upgrading security and access to applications on card via pin, biometrics and digital signatures while identification is in progress
20	A management structure with pre-defined roles and responsibilities and operational instructions to reduce possible hazards through sharing responsibilities
21	The necessity of motivations to create bonuses for business partners in case of a successful plan

22	The necessity to define the comprehensive plan of privacy based on the pre-determined needs by privacy experts
23	Development of applications needed for the card management system
24	Using only one contractor
25	The necessity to change the view of the government from program-centeredness to coordinating the supplies necessary for the card while protecting the cooperation of private sector and government entities
26	Compliance of the presented breakthrough with privacy rules
27	Specification of all necessary equipment for the security of databases
28	Including citizens in planning software and system
29	Presenting a clear route-map to implement coordination and control between stakeholders in the establishment of smart cards
30	Optimum use of a shared data field
31	Anti-manipulation and anti-fakery card
32	Considering integration test and system adaptation procedures
33	Revisiting short- and long-term goals periodically
34	Efficient and productive pin code management
35	Security of card customization process
36	The necessity of using a management board from representatives of all government organizations, private corporations and employee-right groups
37	Determining all organizational regulations essential for database and other items
38	Identification and complete appreciation of expected operational domain by the salesperson, partners and employer

39	The possibility of simultaneous use of paper and electronic card in first phase and removing the paper card after the settlement of the electronic one
40	Designing a self-serving portal to establish and manage smart cards and their content online
41	The role of project sponsor
42	Selection of appropriate card retailers
43	Ascending and comprehensive organizational commitment to establish the program
44	Quick identification of essential items to be purchased and commencing their supply
45	Considering electronic smart card as the main document of personal identification
46	Cheapness of system for the end-user

## 6. Conclusion

The main achievement of this study is determining the readiness of South Khorasan's Civil Registration Bureau to establish the Smart ID card program through identifying the experiences and key success and failure factors of smart ID card programs throughout the world. The results indicated that South Khorasan Province only faces problems in 18 percent (that is 7 out of total 38 experiences in the final framework of establishing smart ID card in South Khorasan Province). Hence it can be claimed that Khorasan enjoys relative readiness to adapt the smart ID card program. Indeed, it is obvious that more planning and attempts to address these problems are pretty significant. Also, this project has presented some suggestions at province and country level to cover the existing weaknesses after identifying the weaknesses of South Khorasan's Civil Registration Bureau. It goes without saying that the South Khorasan's Civil Registration Bureau can use the findings of the present study to address current limitations and issues in the aforementioned areas. Furthermore, considering the similarity of mission and structure of the country's Civil Registration Bureaus, they can benefit from the initiative procedure and framework of this study to assess their readiness to establish the Smart ID card program. In the end, it is emphasized again that the general Civil Registration Bureau of Iran can utilize the national suggestions of this study.

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