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New technologies in food assistance: electronic vouchers for Iraqi refugees in the Syrian Arab Republic

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1. Introduction[1]

As a response to the Iraqi refugee crisis in the Syrian Arab Republic, WFP has provided in-kind food aid through a regional emergency operation (EMOP) since January 2007. Of an estimated total of 1.2 million Iraqi refugees, assistance is provided to 124,000. The refugees depend on humanitarian assistance or informal employment, as they cannot obtain formal work permits, licences to operate businesses or access to social services. However, about 90 percent of the refugees reside in urban areas where food markets are functioning. Challenges that have emerged during the operation include high resale and barter of the in-kind goods provided, beneficiary discontent with the lack of variety of the food items in the basket, and long distances to distribution centres to collect the food ration.

Against this background, WFP Syria is considering new options, including the provision of food assistance through vouchers. In October 2009, a four-month pilot was initiated, covering 1,000 households in two neighbourhoods of Damascus. The pilot had three components: (i) testing vouchers as a new modality for food assistance in Syria; (ii) testing electronic delivery through text messages; and (iii) testing an electronic system for managing voucher distribution and reporting through linking computers in government shops with a central hub managed by WFP. The delivery of food vouchers through text messages is the first of its kind globally.

This chapter reviews the voucher pilot and its innovative components. Based

on data from the database that manages the voucher distribution, the chapter also reports on how beneficiaries used the vouchers. A small post-distribution monitoring (PDM) and the log-book from the help desk assisting beneficiaries help build understanding of the challenges faced during implementation and of how beneficiaries view the programme. Lessons learned round off the analysis. Although challenges remain in getting the scheme to work smoothly, the potential for efficient delivery and the benefits of on-time reporting are the major advantages of electronic vouchers.

2. Context, design and implementation

2.1 Context

The WFP in-kind food basket for the emergency assistance directed to Iraqi refugees consisted initially of a two-months ration of rice, pulses and oil that was distributed with complementary food from the Office of the United Nations High Commissioner for Refugees (UNHCR), including pasta, tea, tomatoes, tomato paste, bulgur wheat and sugar, and non-food assistance. As the refugees have no legal options for income generation, the WFP ration provides a full 2,100 kcal. However, the food is resold or bartered to a large degree; large shares of rice, of 26 to 55 percent, and 17 to 34 percent of pulses are sold to buy food not included in the ration, to buy other varieties of the same items or to cover other expenses such as rent, utilities, health or education. Storing a two-month ration in an urban setting is also a problem for many beneficiaries. Additional complications with the food distribution relate to the distribution centres being far away[2] and long queues.

To respond to these challenges, the stakeholders have agreed measures such as reducing the quantity of cereals provided, diversifying pulses, and including additional items in the food basket. These planned measures will be implemented in an EMOP starting in May 2010. In addition, a market assessment in 2007 and a study in 2009 recommended the use of unconditional vouchers, allowing beneficiaries to choose items from a pre-specified list using vouchers with a fixed value. Accordingly, a pilot was set up as part of the ongoing EMOP. This aimed to ensure a wider diversity of locally accepted food items, that the beneficiaries would be able to choose the quantities themselves, and that the stores would be closer to beneficiaries than the distribution centres are.

The distribution of in-kind food assistance relies on notifying the beneficiaries through text messages, which is possible because 97 percent of the refugees have mobile phones. It was decided to take advantage of this possibility also for the voucher distribution.

2.2 Innovative aspects of implementation

Two cycles of voucher exchanges took place within the pilot, one short cycle of two weeks in October and one full cycle of six weeks in November to December 2009. The monetary entitlement for each cycle was US$34, covering two months of entitlements, and the beneficiaries could exchange their vouchers whenever and on as many occasions as they wanted during the cycle. The monetary value of the voucher was based on the local market value of the in-kind distribution ration. In conjunction with the voucher pilot there was, exceptionally, a rice distribution during the first cycle. Consequently, the voucher value for that cycle was reduced by the value of the rice distributed.

For each cycle, UNHCR called on beneficiaries to report to the UNHCR centre on a certain date, for registration. Of the 1,000 beneficiary households randomly selected for the pilot, 909 registered.[3] Beneficiary households were issued with UNHCR's verification code and directed to a WFP booth at the same centre, to receive a free SIM card offered to WFP by the telecommunications company MTN. Subsequently, WFP conducted an information session introducing verified beneficiaries to the voucher system, its purpose and the expected advantages, entitlements and procedures. Beneficiaries were thereafter provided with information pamphlets indicating where they could exchange their vouchers and providing them with a WFP help desk number for enquiries and complaints. This help desk enabled WFP to receive and respond to complaints and issues related to implementation.

The partner for the voucher exchange was the General Establishment for Storing and Marketing of Agricultural and Animal Products (GESMAAP), a government body charged with consumer price stabilization. WFP equipped each GESMAAP shop with the necessary hardware, including computers, printers, bar-code readers and modems. Shop staff also received training in carrying out the voucher operation. During the pilot, beneficiaries could exchange their vouchers at three GESMAAP shops, which sell basic food items at prices that are an average of 10 to 15 percent lower than local market prices. The stores sell mostly locally produced food items or imported ones that are locally accepted. Eight items are currently available to voucher holders: rice, oil, eggs, cheese, flour, lentils, canned tuna and chickpeas. These items were chosen to be in line with beneficiary preferences. GESMAAP agreed to fix the price of voucher food items during the pilot, to protect beneficiaries from price fluctuations and the effect of inflation. Figure 5.1 illustrates a sample electronic voucher notification, its on-site verification, and eligible commodities.

Figure 5.1 Electronic vouchers: notification, verification and eligible commodities

As well as the delivery of vouchers through text messages, another innovative feature of the pilot was the electronic system that managed the entire distribution, reporting and monitoring process. This system was used to register information on the demographic profile of each household, its UNHCR verification code, entitlements, voucher collection date, voucher exchange dates, and products and quantities exchanged. This made it possible to reconcile transactions and accounts, and provided real-time reports on the pilot, allowing prompt reporting and monitoring and decreasing the risk of misuse of the vouchers. When UNHCR registered a beneficiary household, its details were entered into the database. Within 48 hours, the WFP server automatically sent a text message to the household, advising it on distribution dates, its specific entitlement in Syrian pounds, and its unique WFP PIN number.

At the GESMAAP shop, the beneficiary presented both the verification bar code and the PIN number so that the shop could access the beneficiary file in the electronic system. Each shop had to have on-line access to the WFP server to obtain information from the system; no files were stored in the shop itself. The shop entered details of the items and quantities selected by the beneficiary. The system verified the entered data against the entitlement, and automatically issued GESMAAP with an electronic invoice, which was signed by the beneficiary as a means of payment, and kept in the shop for billing WFP later on. At the same time, the system sent a new text message to the beneficiary with the updated balance of the entitlement and a new PIN number for future use. With good connectivity, these procedures – receiving the invoice and the new SMS – occurred within two minutes of processing the transaction.

At the end of each cycle, GESMAAP sent electronic invoices to WFP, which reconciled the claims with its database records and identified any discrepancies. Once all transactions were cleared, a payment request was processed.

Box 5.1 A beneficiary shares his experience of the voucher pilot

Kareem's family is one of the 1,000 households selected to participate in the pilot project: "When I learned that the system allows us to choose and buy from a variety of choices including fresh food, I felt very fortunate," he said. When he received the voucher text message, he went immediately to a government store and bought eggs, cheese, tuna fish and a good quantity of chickpeas, rice and oil. Kareem explained the process when he made his first purchase: "It was very easy and user friendly; I received a text message, I went to the government store down the road, and chose food items I needed. When it came to settling the bill, I only had to provide the PIN number sent to my mobile phone by WFP and show my bar-coded verification paper to the shop attendant, and the purchase was complete! That night, my family had the best dinner they had had in years."

Kareem was grateful for the convenience of this innovative scheme compared with traditional in-kind distributions: "Not only was my family happy, but the fact that we no longer need to travel to distributions and struggle back with a two-month ration of food has lessened a huge amount of the burden. We can now obtain whatever we need at any time and in our preferred quantity." He also mentioned the significant impact he felt on the quality of the ration. Kareem hopes the scheme will be a success and the food options expand: "My children are asking for milk and jam, and I was told that WFP is considering providing more food suitable for children."

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3. Monitoring the outcomes

3.1 The use of vouchers

The database developed for the voucher project, a small PDM conducted on 30 households, and the beneficiaries' enquiries to the help desk shed light on how beneficiaries used their vouchers and on their views of how the programme was working.

During the first distribution cycle, 833 households – 3,015 individuals – or 92 percent of the 909 registered households exchanged their vouchers. In the second cycle, 841 households exchanged their vouchers. The reasons why some registered households did not exchange their vouchers are still being investigated.

Table 5.1 reports on the products the vouchers were used for. The same trend is observed in both cycles: most of the voucher value was used for oil. Eggs were purchased more in the second cycle than in the first. Some of the commodities, such as Thai rice, wheat flour, lentils and chickpeas in the second cycle, were hardly purchased at all. The PDM revealed that the beneficiaries would have preferred different types of lentils and chickpeas; this will be addressed in the second phase of the pilot. The low purchase of rice is explained by the parallel

in-kind rice distribution, and some beneficiaries did not prefer the type of Thai rice offered.

Table 5.1 Use of vouchers during the first and second distributions, and corresponding calorie values			
Item	Cycle 1 (%)	Cycle 2 (%)	Daily calories per person in cycle 1 (kcal)
Oil	41%	38%	761
Eggs	24%	33%	89
Tuna	13%	11%	27
Cheese	10%	11%	24
Chickpeas	5%	2%	54
Thai rice	4%	3%	812*
Wheat flour	2%	1%	50
Lentils	1%	0%	7
Total	**100%**	**100%**	**1 824**

*Includes the calorie value from the rice distributed in-kind.
Source: Database developed to manage and monitor the voucher programme.

Table 5.1 also reports the corresponding calorie values based on the average exchange of food items per person. The nutrition level is estimated to be 1,824 kcal per person per day for the first cycle, and 1,738 kcal for the second. These are comparable to the nutritional value of the WFP food basket, which amounts to 2,054 kcal.

3.2 Beneficiaries' views of the programme

In the PDM, almost all surveyed households – 97 percent – expressed satisfaction with the voucher programme. However, a third of the beneficiaries wanted a larger selection of food items, such as milk, canned food, sugar, tea and jam. Only 13 percent would rather have received money than vouchers.
Only 17 percent of the households reported that they had sold part of the food ration. Those that reported resale were motivated by the need to pay for utilities, buy different food items, or share with neighbours. Although the sample for the PDM was small and no major conclusions can be drawn from this result alone, market visits and observations confirm that the voucher programme reduced the

resale of products. During the in-kind distribution, there is an immediate appearance of ration food items on the market. This has not been observed with the voucher items.

While almost all interviewees were content with their treatment at the GESMAAP shops, only 60 percent were happy with the distance to the nearest shop. This situation arose because one of the three shops selected had problems with its Internet connection and could not continue exchanging vouchers. Unfortunately, this was in the area with the highest concentration of Iraqi refugees. However, the interviews and direct observation reveal that queuing time was dramatically reduced by the voucher programme. While beneficiaries were queuing for three to five hours to receive their in-kind ration, they spent only 30 to 45 minutes in the GESMAAP shops.

The WFP help desk and resulting log-book of calls were used as an additional monitoring tool, to ensure that implementation problems were solved immediately. Although the nature of complaints was not always specified, especially at the beginning of the pilot, analysis of the data received through the calls suggests that most of the problems encountered related to SIMs not working and recipients not receiving text messages (Table 5.2).

Table 5.2 Complaints and enquiries received by the WFP help desk during the first distribution cycle

	Cycle 1	
Nature of complaints	Number of enquires	% of total enquires
SIM not working (activation)	81	21.3
SMS not received	76	19.9
PIN not working	27	7.1
PIN not received	23	6.0
Voucher exchange process	1	0.3
Other problems	11	2.9
Enquiries	162	42.5
Total	**381**	**100**

Source: Database developed to manage and monitor the voucher programme.

The main reason for the SMS-related problems is that beneficiaries had their own (original) SIM cards and were not able to keep the MTN-provided SIM cards operational at the same time as their own. WFP staff devoted much time and effort to solving this problem. Discussions are under way with MTN to allow beneficiaries to receive the messages on their own SIM cards, rather than having to change cards.

Some of the complaints related to implementation could be addressed, and did not appear to any large extent during the second cycle. This especially concerns issues related to WFP's PIN number.

4. Challenges identified and lessons learned

4.1 Pros and cons of the vouchers

The monitoring and evaluation exercise undertaken during the programme identified some advantages and disadvantages of the voucher programme compared with in-kind food distribution. These are outlined in Table 5.3. In general, the voucher programme has several advantages, and the potential for a successful electronic voucher scheme is huge. The major advantages of the electronic scheme relate to the efficient and secure management of the voucher exchange process and the prompt reporting and monitoring. There are also many advantages for the beneficiaries, as they can choose the quantites and types of products from a nearby shop, rather than travelling long distances for a two-month ration. However, one of the major challenges identified is the need for a gradual scale-up of the voucher programme, especially outside the capital. Currently, only 3 percent of beneficiaries receive vouchers. The challenges related to scaling up include the need to ascertain the capacity of implementing partners and the quality of Internet connectivity for managing the voucher exchanges.

Table 5.3 Pros and cons of vouchers compared with in-kind food distribution	
Pros	**Cons**
- Queuing time 30–40 minutes rather than 4–5 hours - Food types sold in GESMAAP shops meet local preferences better than the in-kind basket. The voucher programme facilitates diversification of food items - Less resale of commodities, as beneficiaries can choose products according to their needs - Less spoilage, as beneficiaries can exchange their vouchers any time during the distribution cycle, rather than receiving a two-month ration at once - The electronic system allows efficient management of the voucher scheme, and prompt reporting and monitoring enable rapid adjustment of activities if needed - The use of two secret numbers (the verification code and the PIN) to access beneficiary records and real-time electronic transactions limits the possibility of illegal entry and modification of records - Strengthens partnerships with government and the private sector, thereby facilitating hand-over to national safety net programmes	- Capacity for only 200 beneficiaries per shop per day, rather than the 700–1 500 at the distribution centres; capacity can be increased by using more shops - Relatively high set-up costs for equipment ($1,700/shop) and software ($30,000); these are less of a concern when the voucher programme is scaled up - The programme's functioning outside the capital and/or with a large number of beneficiaries has not yet been tested - A stable power supply, Internet connectivity, and a high-quality mobile phone network are preconditions for electronic vouchers

Although the implementing partners are crucial in this operation, they also contribute to the challenges. GESMAAP has shops in more than 1,000 locations in all parts of the country, and its 160 mobile units are able to reach additional locations and meet emergency needs. These features make GESMAAP an ideal partner for scaling up. However, efforts are needed to replace some food items with products of better quality, especially lentils and chickpeas.

The help desk data revealed that there were challenges relating to the receipt of text messages. This problem continued during the pilot's second distribution cycle; imposing MTN SIM cards on the beneficiaries turned out to be impractical.[4] Much effort and time were needed to forward text messages to beneficiaries who had not received the original ones. In addition, the low capacity of the network (2G) sometimes resulted in slow processing of transactions

between the shops and the WFP server, giving rise to two problems: (i) transactions were not recorded in the system, and had instead to be processed manually at the shop level; and (ii) transactions were recorded in the system but the shop did not receive an invoice. Negotiations with MTN have resulted in the provision of a better-quality network (3G) for future pilot use.

4.2 Way forward

The gradual phasing in of the electronic voucher programme will require a second pilot involving twice the numbers of households and GESMAAP shops. Based on lessons learned during the first pilot, some adjustments will be made. There appears to be a need to change some of the items that the vouchers can be exchanged for; there are plans to do this in line with beneficiary preferences.

The country office spent much time and effort in developing the software application for managing the voucher distribution. This was done on the understanding that the system would serve operational needs in the future, so it has the capacity to deal with a large number of beneficiaries in different locations. For the second pilot phase, there are plans to test the software in mobile store units. The system will also be tested in contexts where distribution is decentralized but reporting is at the regional and central levels.

Considering the encouraging results of the first pilot and the country office's investments, the voucher programme is likely to be integrated as a regular component of the EMOP assisting Iraqi refugees. This would entail a scale-up of the programme in Damascus, where most refugees are concentrated, and its introduction in other governorates.

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[1]   The author wishes to thank team members in the Syria country office for their strong team spirit, openness to new ideas and dedication.

[2]   In Damascus, beneficiaries travel on average 20 km to the distribution centre.

[3]   The rather high number of unregistered households is likely to be due to the mobility of the refugees. Some of the sampled beneficiaries might have left the country or were residing in a different location during the voucher distribution.

[4]   More than 80 percent of the refugees use a competing operator for their own SIM cards.