

Abhandlung

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Institutional Lending Practices in the Ur III Period (ca. 2110–2003 BCE): the *še ur₅-ra*-Loans from Ĝirsu-Lagaš

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Abstract: The purpose of this paper is to investigate the operation of the *še ur₅-ra* system of institutional loans of barley in late third millennium BCE Babylonia. In particular, it focuses on the *še ur₅-ra*-loans stemming from the Ĝirsu-Lagaš province, one of the most important areas for cereal production of the entire Ur III kingdom. The article argues that the *še ur₅-ra* system, which was based on the availability of large quantities of barley in the provincial network of rural storage facilities, was designed and implemented to (1) reduce food losses, (2) provide state dependents with economic support in times of need, and (3) counteract and mitigate the impact of local crop failures on the institutional workforce at large.

1 Introduction

This article presents the results of my investigation into institutional lending practices in early Babylonia under the Third Dynasty of Ur (ca. 2110–2003 BCE), one of the best-documented eras of all Mesopotamian history.

The highly centralized patrimonial state created by the Ur III kings was organized according to a hierarchical network of individual households linked to each other by mutual rights and obligations.¹ In accordance with the patrimonial principles of authority, the royal household stood at the top of the socio-economic pyramid. Through cooperation with elite supporters and pre-existing local networks of power, the king and his extended family owned or controlled virtually all of the resources and means of production, including the holdings of the temple households and other kinds of state-run enterprises and workshops. The subordination of institutional and hybrid households² to the patrimonial control of the

royal household – and, on a lower scale, of smaller households and production units to larger ones – entailed that subordinate households and units provided resources and labor to superior ones on a regular basis: this flow of commodities and laborers was carefully monitored by the central administration through a sophisticated accounting system.

The core area of the Ur III state was divided into several provinces, each of them comprising two administrative and economic entities largely independent of each other: (1) the provincial sector, headed by a governor (*ensi₂*) who managed his own household along with the local temple households; and (2) the military sector, run directly by the crown which was represented by a general (*šagana*) and his subordinates. A rotational system of taxation (*bala*) was imposed on the provincial economies, which contributed proportional quotas of key commodities (barley, livestock, raw materials, and manufactured items) and labor in order to finance state projects and support the local branches of the royal organization (Sharlach 2004). This obligation could be particularly burdensome for the provincial sector. Scholars have estimated, for example, that more than half of the total barley production from the domain land of the Ĝirsu-Lagaš prov-

¹ For the patrimonial household model applied to the Ur III state, see Steinkeller (2004) and Garfinkle (2008).

² By hybrid households I refer to those independent economic units headed by prominent members of the local elites, which interacted with the royal and provincial organizations; while operating mainly

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outside the institutional sphere; these households were involved in the management of state resources on behalf of institutional clients (Notizia 2019).

ince – the granary of the kingdom – was paid annually to the crown as *ba la*-tax (Pomponio 2012; see also Table 8).

Beyond fiscal relations and political subordination, forms of cooperation between the two main sectors of the state administration are also documented in the textual record. Resources and labor (primarily barley and harvest work) were mobilized on an ad hoc basis by the provincial and royal economies and lent to the other party, often at interest. Moreover, at the provincial level, substantial evidence exists for intra- and inter-household mutual assistance mechanisms.³ During times of shortage, food sharing networks based on the surplus from agricultural production were activated and institutional credit was extended to various types of state dependents with the sole obligation for the borrowers to repay the loans in the future. The economic motivation behind these interest-free loans was not profit or investment, but to provide support to large sectors of the society employed in the cultivation of domain land or otherwise affiliated with the provincial and royal institutions.⁴

In institutional contexts, the credit arrangements involving advances of barley – but also labor and other commodities (Steinkeller 2015, 23 n. 56; Wilcke 2015, 15–18) – were often formalized as written contracts. These administrative documents feature a specific terminology, which includes the standard Sumerian expression for “barley loan” (*še ur₅-ra*), and the verb *su.g*, “to repay, to replace”, usually in the form *su-su(-dam)*, indicating the future obligation on the part of the borrowers to return the principal to the institutional creditor, i. e., the provincial economy.

In the following sections, I will offer a comprehensive discussion of the *še ur₅-ra* system of barley loans based on the rich textual evidence from the institutional archives of the Ġirsu-Lagaš province. First, I will present the general structure and administrative terminology employed in the loan contracts and provide new data on their chronological distribution. Second, I will examine the network of storage facilities involved in the system and the provincial officials responsible for the disbursements, with the aim of identifying patterns of accountability and control. Third, I will provide a detailed description of the

beneficiaries of the *še ur₅-ra*-loans and explore their role in the provincial and royal economies. Finally, I will draw conclusions on the operation, timing, and scale of *še ur₅-ra* system and highlight the possible socio-economic motivations behind the emergence of institutional lending practices in the Ur III period.

2 The *še ur₅-ra* System of Institutional Barley Loans

Among the tens of thousands of Ur III records known to date, more than 400 cuneiform tablets from the administrative archives of the Ġirsu-Lagaš province, and almost the same amount from Umma, include the expression *še ur₅-ra*, “barley loan”. Most of these contracts document a system of institutional loans granted to state dependents in the form of advances, usually interest-free, to be returned to the provincial economies.

In environments where provincial organizations were able to produce large agricultural surpluses and to provide economic support to their dependents in times of need, we find little evidence of non-institutional lending practices.⁵ A different situation existed, for example, in central Babylonia, where individual temple households were considerably smaller than their southern counterparts and the institutional economies could not establish an efficient safety net for all their affiliates.⁶ In these settings, a broad range of money-lending activities are documented in the tablets from the archives of several economic agents who operated at the intersection between the institutional and non-institutional spheres, such as the merchants Ešidum from Adab (Kamil 2018) and Ur-Nuska from Nippur, the overseer of merchants Tūram-ilī, and the chief shepherd SI.A-a, both active in the area of Irišaġrig (Garfinkle 2012).

⁵ The relative scarcity of non-institutional loans at Umma and Ġirsu-Lagaš may be due to accidents of discovery. Since no residential quarters dated to the Ur III period have been systematically excavated in southern Babylonia and no significant group of tablets documenting transactions with a non-institutional background comes from this area, our knowledge of the local “private” economy is extremely limited. However, if such archives ever came to light, they would hardly include large numbers of loan agreements between non-institutional creditors and institutional debtors. In places where the major institutions extended credit to large segments of the population on favorable terms, recourse to money-lenders must have been infrequent.

⁶ See below note 44. For the size of the Inanna temple’s land holdings in Nippur, see Zettler (1992, 132–34) and van Driel (1995, 397–99). For a possible explanation of the regional variations in lending practices attested in the Ur III period, see Steinkeller (2002, 216–17).

³ For instance, draft animals and workers could be temporarily transferred from one institutional household to another or within the various departments of the same unit (see, e. g., Heimpel 1995, 112–14).

⁴ Similar lending practices are also documented in non-institutional contexts. Within professional organizations and extended families, interest-free loans were frequently issued in order to help subordinates and family members cope with temporary food shortages (Garfinkle 2004, 4).

Nevertheless, scattered evidence of non-institutional lending activities also comes from Umma and Ġirsu-Lagaš (Steinkeller 2002), and from the capital city of Ur (Widell 2008). Interestingly, while non-institutional loans were issued in various commodities (mostly silver and barley, but also copper, wool, and animals), the institutional economy extended only loans of barley to its dependents.

A systematic study of the *še ur₅-ra* system of the Ur III period is still a desideratum. The only lengthy discussion of the whole phenomenon was undertaken in the early 1960s (Jones/Snyder 1961, 249–79), when a mere 68 tablets of this type were known, mostly from Umma. Lutzmann (1976) in his detailed monograph on the Ur III loan contracts did not take into consideration this category of institutional loans. Paoletti/Spada (2005) provided a brief introduction to *še ur₅-ra*-loans in their edition of around one hundred tablets from Ġirsu-Lagaš kept in the British Museum, with a preliminary description of the corpus and a catalogue of all the tablets then available.

According to their reconstruction, the *še ur₅-ra*-loans from Ġirsu-Lagaš follow a consistent layout and

phraseology. Their basic structure is very simple and comprises six main sections:

1. The quantity of barley which was borrowed.
2. The administrative label *še ur₅-ra*, “barley loan”, preceded or followed by the beneficiaries of the barley.
3. The institutional storage facility from which the barley was withdrawn.
4. The provincial official responsible for the disbursement.
5. The provincial official who received the barley on behalf of the beneficiaries.
6. The date (month and year).

Unlike loan contracts between individuals operating within the non-institutional sphere of the economy, with which they share the basic layout and vocabulary, the institutional *še ur₅-ra*-loans do not normally record the due date for repayment or the names of the witnesses to the transaction, nor do they contain any interest and penalty clauses.

BM 85421a (= SEL 34–36, p. 266 no. 7)

Unopened envelope
Size: 47×42×25 mm



BM 85421a, obverse (© The Trustees of the British Museum)

obv.

1) 5 engar 0.1.0 *še lugal-ta*

2) 1 nu-banda₃-gu₄ 0.3.0

blank space

3) *še-bi* 1.3.0 gur

4) *še ur₅-ra i₃-dub a-ša₃ ħe-ġal₂-ta*

5) ki saġġa ^dnin-MAR.KI-ta

rev.

1) kišib lu₂-ĤAR-sa-ra nu-banda₃-gu₄

2) ugula saġġa ^dnin-MAR.KI

blank space

3) iti mu-šu-du₇

4) mu ^damar-^dsuen / lugal

Seal

1) lu₂-ĤAR-sa-ra

2) dumu ša₃-la₂-^lsu₃

5 cultivators at 60 *sila* of barley each, 1 chief plot manager at 180 *sila*: the corresponding barley is 1 *gur* and 180 *sila*, as a *še ur₅-ra*-loan. From the silo of the ħe-ġal₂-field, from the chief administrator of (the temple of) NinMAR.KI.

Sealed (= received) by Lu-ĤARSara, chief plot manager.

Under the supervision of the chief administrator of (the temple household of) NinMAR.KI.

Month ix.

Year: Amar-Suena 1.

(*Seal*) Lu-ĤARSara, son of Šalasu.

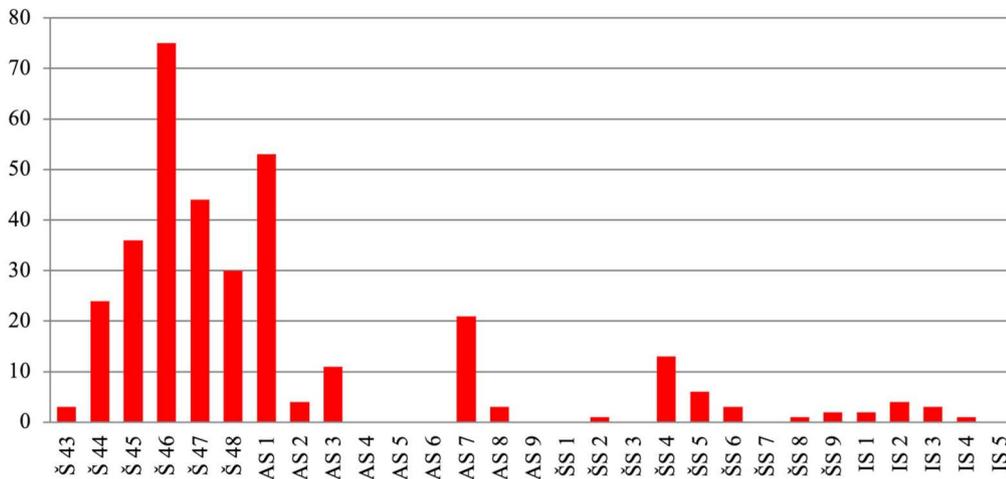


Fig. 1: Chronological distribution of the še ur₅-ra-loans from Ĝirsu-Lagaš (Šulgi 43–Ibbi-Suen 5)

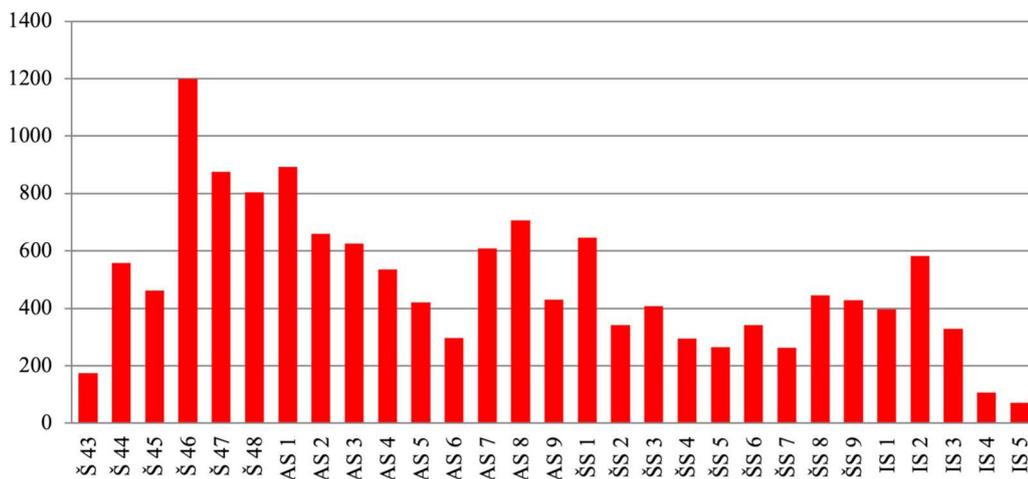


Fig. 2: Chronological distribution of the administrative texts from Ĝirsu-Lagaš (Šulgi 43–Ibbi-Suen 5)

The documents were enclosed in clay envelopes bearing the sealing of the official who received the barley, in order to guarantee their authenticity and integrity, and were retained by the disbursing party until they were transferred to the central accounting office in Ĝirsu. The envelopes featured the same set of information present on the tablets, although the two inscriptions may differ slightly, and the administrative label še ur₅-ra may occasionally be omitted on the envelopes. The tablets recording še ur₅-ra-loans are frequently preserved together with their fragmentary cases or as unopened sealed envelopes.

As shown in Fig. 1, we find the greatest concentration of this type of documents between Šulgi 44 and Amar-Suena 1, although a few cuneiform texts with similar structure and administrative terminology are known from as early as Šulgi 12 (Notizia 2017–19). Starting from the second year of Amar-Suena's reign, we can observe a

sudden decrease in the number of še ur₅-ra-loans, with two major gaps in Amar-Suena 4–6 and Amar-Suena 9–Šu-Suen 1 (Pomponio 2013, 231). At the present state of research it is difficult to establish whether this was simply due to chance of discovery or the result of socio-economic developments and/or political events. In this respect, it is significant that after Amar-Suena's first regnal year the chronological distribution of the še ur₅-ra-loans from Ĝirsu-Lagaš does not overlap with data relating to the entire corpus of Ur III administrative texts from the same province, which do not show such a significant reduction in the number of preserved texts (see Figs. 1–2; based on data retrieved from BDTNS, last accessed July 2021). To the best of my knowledge, the latest še ur₅-ra-loan dates to the first month of Ibbi-Suen 4 (Nisaba 10, 53–54).

The present study focuses on the še ur₅-ra-loans from Ĝirsu-Lagaš, which include much more information

Tab. 1: Storage facilities in the še ur₅-ra-loans from Ġirsu-Lagaš (Šulgi 48–Amar-Suena 1)

Šulgi 48		Amar-Suena 1	
Storage facility	Number of occurrences	Storage facility	Number of occurrences
i ₃ -dub a-ša ₃ -maḥ	(2×)	i ₃ -dub (a-ša ₃) ḥe-ġal ₂	(38×)
i ₃ -dub a-ša ₃ gi-daḥ-ḥa	(1×)	no indication of the silo	(15×)
i ₃ -dub (a-ša ₃) ġiš-gi	(4×)		
i ₃ -dub bara ₂ -si-ga	(6×)		
i ₃ -dub (a-ša ₃) ḥe-ġal ₂ (gu-la)	(5×)		
i ₃ -dub e ₂ ^d en-ki	(6×)		
(i ₃ -dub) e ₂ -duru ₅ ad-da	(1×)		
ġa ₂ -nun	(1×)		
no indication of the silo	(4×)		

than similar documents from the neighbouring province of Umma. In fact, the latter often lack details about the beneficiaries and their affiliation, the storage facilities and their location, and the officials responsible for the disbursements;⁷ the absence of these data hinders a proper understanding of the institutional lending practices attested in the Umma province.

I will restrict myself here to the analysis of barley loans dating between Šulgi 48 and Amar-Suena 1. This two-year timespan provides a good number of texts (83 documents) as well as other types of administrative documents which can be used to reconstruct with a high degree of accuracy the functioning of the še ur₅-ra system of institutional loans.⁸

3 The Network of Storage Facilities

Granaries (gu ru₇) and silos (i₃-dub) are usually associated with fields (a-ša₃) and hamlets (e₂-duru₅), and less frequently with temple estates or urban settlements. The term “field” refers here to a large agricultural area identified by a toponym. Depending on its total area, each field was divided into a certain number of cultivation units under the direct management of a temple. More than one institutional household cultivated its own plots in a given field and had access to the threshing floors and storage

facilities (granaries, silos, storehouses) located in villages and hamlets where most of the people involved in agricultural activities resided. In the še ur₅-ra-contracts, numerous granaries, silos, and storehouses (ġa₂-nun) are attested, but only a few storage facilities were involved in the system of institutional loans in more than one year (Table 2).⁹

Between Šulgi 48 and Amar-Suena 1, eight distinct storage facilities are mentioned (Table 1). The i₃-dub (a-ša₃) ḥe-ġal₂ is the only silo which occurs in both years, and it is also the only storage facility which appears in the še ur₅-ra-loans of the year Amar-Suena 1. It is mentioned again thirteen years later in two barley loans dating to Šu-Suen 5 (CUSAS 16, 168; Nisaba 10, 93). The main official responsible for the disbursement of loans of barley in year Šulgi 48 was a certain Ur-Nanše, who was associated with four depots (i₃-dub bara₂-si-ga, i₃-dub a-ša₃-maḥ, i₃-dub (a-ša₃) ġiš-gi, i₃-dub a-ša₃ gi-daḥ-ḥa). He is likely to be identified with Ur-Nanše, son of Lu-duga, the chief of the granary (ka-guru₇), who was active from Šulgi 40 to at least Amar-Suena 6 in the Guabba district.¹⁰ As for the year Amar-Suena 1, the saġġa-administrator of NinMAR.KI was the only provider of barley from the i₃-dub (a-ša₃) ḥe-ġal₂, with the exception of the texts Nisaba 13, 32 and Nisaba 13, 42, where a certain Ur-Saḥar-Bau issued 300 liters to the smith (simug) Kurani-isa and the modest amount of 120 liters to the cultivator (engar) Utu-pae, son of Bazi.¹¹

⁷ Note that the few extant institutional še ur₅-ra-loans from Ur record the same set of information as the Ġirsu-Lagaš texts: see, e. g., UET 3, 1325 (Šulgi 40 xii) and UET 3, 1329 (Šulgi 44 xii).

⁸ A more comprehensive study on the institutional and non-institutional barley loans of the Ur III period will appear in a forthcoming publication by the author.

⁹ Note that in some documents there is no indication of the storage facility from which the barley was withdrawn.

¹⁰ See Borrelli (2020a) for a list of the ka-guru₇ of the Ġirsu-Lagaš province.

¹¹ In Šulgi 48 the disbursements of barley loans from the i₃-dub (a-ša₃) ḥe-ġal₂ were authorized by a certain Ur-Bau, son of Bazi.

Tab. 2: Storage facilities in the še ur₅-ra-loans from Ğirsu-Lagaš (Šulgi 12–Ibbi-Suen 4)

Storage facility	Year
ĝa ₂ -nun	Šulgi 32, 48
ĝa ₂ -nun ereš-diĝir-ra	Šulgi 27
ĝa ₂ -nun gu ₂ i ₇	Šulgi 31
ĝa ₂ -nun-maḥ	Šulgi 47
guru ₇ /i ₃ -dub e ₂ -duru ₅ ^d ĝa ₂ -tum ₃ -du ₁₀	Šulgi 44–45
guru ₇ /i ₃ -dub e ₂ -duru ₅ ^d nin-MAR.KI	Šulgi 44
guru ₇ /i ₃ -dub urub _x ^{ki}	Amar-Suena 3
i ₃ -dub a-ba-al-la	Šulgi 47; Šu-Suen 4
i ₃ -dub a-pi ₄ -sal ₄ in-bi-a-ba	Šulgi 45
i ₃ -dub a ₂ -sun ₂	Šulgi 46
(i ₃ -dub) ambar ^{ki}	Amar-Suena 7
i ₃ -dub bara ₂ -si-ga	Šulgi 34, 43, 46–48
i ₃ -dub du ₆ -sa-bar-ra	Šulgi 46
i ₃ -dub inim- ^d inanna	Šulgi 46
i ₃ -dub inim-ma-AN	Šulgi 46
(i ₃ -dub) ki-sur ^r -ra ^{ki}	Šulgi 32
i ₃ -dub me-luḥ-ḥa	Amar-Suena 3; Šu-Suen 8
i ₃ -dub muš ₂ -ar-mu-na-gub-ba	Šulgi 47
i ₃ -dub ^d nin-ĝir ₂ -su-a ₂ -zi-da- ^d nanše	Šulgi 46
i ₃ -dub ^d nin-ḥur-saĝ-lu ₂ -ku ₃ -nun	Šulgi 46–47
i ₃ -dub pa ₅ -enku	Šulgi 46
i ₃ -dub SIPA-da-ri ₂	Šulgi 45
i ₃ -dub ^d šul-gi-gu ₂ -gal	Šulgi 44
i ₃ -dub ^{ĝi} štir ba-bil ₂ -a	Šu-Suen 4
i ₃ -dub tul ₂ -ta (→ guru ₇ /i ₃ -dub urub _x ^{ki})	Amar-Suena 3
i ₃ -dub ur-niĝar _x ^{ĝar} (→ guru ₇ /i ₃ -dub urub _x ^{ki})	Amar-Suena 3
i ₃ -dub ur-saĝ-pa-e ₃	Šulgi 46
i ₃ -dub a-ša ₃ a-ĝešt ⁿ -na	Ibbi-Suen 1
i ₃ -dub a-ša ₃ ambar-sur-ra	Šulgi 45
(i ₃ -dub) a-ša ₃ du ₆ -ĝi ₆	Šu-Suen 5
i ₃ -dub (a-ša ₃) e ₂ -gibil _(a) -le (tur)	Šulgi 46; Šu-Suen 4
i ₃ -dub a-ša ₃ eden	Šulgi 45
i ₃ -dub a-ša ₃ gi-daḥ-ḥa	Šulgi 48
i ₃ -dub a-ša ₃ -gibil	Ibbi-Suen 2–3
(i ₃ -dub) a-ša ₃ ĝir ₂ -nun	Šulgi 32
i ₃ -dub (a-ša ₃) ĝiš-gi	Šulgi 48
i ₃ -dub (a-ša ₃) ḥe-ĝal ₂ (gu-la)	Šulgi 48; Amar-Suena 1; Šu-Suen 5
i ₃ -dub a-ša ₃ la-za-wi	Šulgi 44
i ₃ -dub a-ša ₃ -maḥ	Šulgi 48
(i ₃ -dub) a-ša ₃ nin-a ₂ -zi-da	Amar-Suena 7
i ₃ -dub a-ša ₃ nin-maḥ	Šulgi 45
i ₃ -dub a-ša ₃ saḥar-sur-ra	Šu-Suen 5
i ₃ -dub a-ša ₃ su ₃ -ga ₂ gu-la	Šu-Suen 6
i ₃ -dub (a-ša ₃) ^d šul-gi-zi-kalam-ma	Šulgi 47
(i ₃ -dub a-ša ₃) ub-lu ₂ -pa ₃ -da	Amar-Suena 7–8
i ₃ -dub a-ša ₃ uru-ni	Šu-Suen 4
i ₃ -dub a-ša ₃ iri-ul	Ibbi-Suen 1

Storage facility	Year
i_3 -dub e_2 den -ki	Šulgi 48
i_3 -dub e_2 lugal -ku ₃ -ga	Ibbi-Suen 2
i_3 -dub e_2 -duru ₅ a-tu	Šulgi 45; Amar-Suena 3
(i_3 -dub) e_2 -duru ₅ ad-da	Šulgi 48
i_3 -dub e_2 -duru ₅ ka ₅ ^a	Šulgi 46
i_3 -dub (e_2 -duru ₅) NIM-e-ne ^(ki)	Šulgi 45–46; Šu-Suen 5
(i_3 -dub e_2 -duru ₅) ur-ĝar ku ₃ -dim ₂	Šulgi 45
i_3 -dub e_2 -duru ₅ ur-LI	Šulgi 45
i_3 -dub igi (e_2) ba-gara ₂	Šulgi 45
i_3 -dub igi ĝis kiri ₆	Šulgi 46

In total, 586.3.2 *gur* of barley (= 176,000 l) were disbursed from the i_3 -dub (a -š a_3) ħe-ĝal₂ in years Šulgi 48 and Amar-Suena 1.¹² The minimum storage capacity of this important facility in the year Amar-Suena 1 was around 268,400 liters (Borrelli 2020a, 52).

As the account BPOA 2, 1951 (Šulgi 48) demonstrates, once the borrowed barley had left the silos, it was often loaded on boats (m a₂-a si-ga) and thus transported to its final destination via the waterway system of the Ĝirsu-Lagaš province. In other instances, a reference to a boat or a sailor can occur instead of the name of a storage facility.¹³

4 Beneficiaries and Recipients of Institutional Loans

The agricultural personnel of the provincial temple households constitute the most important group of beneficiaries of institutional barley loans. Arable land of the Ĝirsu-Lagaš fields was cultivated by plot managers (*engar*) working for the various temple households. Each cultivator was in charge of a parcel of domain land (g ana₂-gu₄) – which ideally measured 6–8 bur₃ (ca. 39–52 ha)¹⁴ – and of one team of draft animals (oxen or donkeys) for plowing (g u₄/anše-apin). He was assisted by two ox drivers (š a_3 -gu₄, dumu-gu₄-gur, dumu-da-ba), a varying number of *eren*₂-workers, assigned

to cultivation and irrigation tasks, and unskilled laborers (*un-il*₂). Managers and overseers, including “scribes in charge of 10 domain units” (*dub-sar-gu*₄-10), “chief plot managers” (*nu-banda*₃-gu₄), “foremen of ox drivers” (*ugula ša*₃-gu₄) and “foremen of *eren*₂-workers” (*ugula eren*₂-na), directed and supervised the agricultural activities. At the top of the administrative hierarchy was a restricted group of high-ranking managers (the *saĝĝa*-administrator, the archivist, the land surveyor and his assistant, the chief of the granary), also designated as “elders” (*ab-ba ab-ba*) in the sources. Several specialized workers (carpenters, leather-workers, felters, reed workers) completed the personnel of the agricultural organization (*ĝiri*₃-se₃-ga gu₄).

Arable land was cultivated en masse by the institutional households (Fig. 3), which also provided their cultivators with farming equipment, seeds, and draft animals. According to Maekawa (1999, 67), at Ĝirsu-Lagaš there were 480 cultivation units of domain land under the control of the provincial governor and managed through the temple households, while 120 units were reserved for the crown, for a total of 600 parcels of institutional land. A single domain unit required 18 *gur* (= 5,400 l) of barley for the plowing and sowing process, including seed, fodder for draft animals, and wages for hirelings, while the standard yield ratio was 30 *gur* (= 9,000 l) per bur₃ (1 bur₃ ≈ 6.48 ha), i.e., 861 kg/ha, assuming that 1 litre of barley = 0.62 kg (Widell 2013, 64). The temple households of Ninĝirsu and NinMAR.KI were the largest in scale, followed by those of Šulgi and Nanše (Maekawa 1996, 175). The *saĝĝa*-administrator of the household of the goddess NinMAR.KI alone was responsible for the cultivation of ca. 100 units of domain land in the southernmost provincial district of Guabba (“Coast/Bank of the Sea”). An almost equal number of parcels were administered by the *saĝĝa*-administrator of the household of the god Ninĝirsu, the patron god of Ĝirsu-Lagaš. It is worth noting that the high officials running some of the major temple

¹² 150.1.0 *gur* (Šulgi 48) + 436.2.2 *gur* (Amar-Suena 1).

¹³ See, e.g., PPAC 5, 1618 (Amar-Suena 1 vii): m a₂ ki-ša-ra-ta. Cf. also TCTI 2, 4295 (Amar-Suena 7): m a₂ NI.SI₄ m a₂-la ħ₆; TCTI 2, 4048 (Amar-Suena 7): m a₂ NI.SI₄-ta.

¹⁴ Not including the parcels to be allotted (g ana₂-šuku) and leased out (g ana₂ apin-la₂), corresponding to 2–4 bur₃, and the portion of ca. 10 bur₃ of land left fallow and mostly used for pasture.

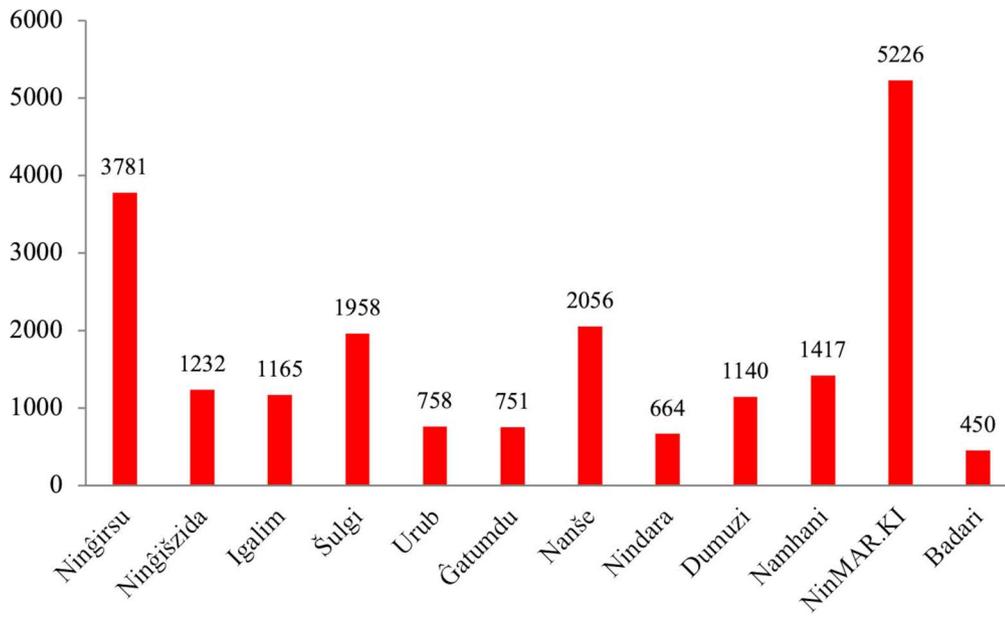


Fig. 3: Cultivated land (in ha) and institutional households in Ġirsu-Lagaš in year Šulgi 41 (after Borrelli 2020b, 8 Fig. 1)

households of the province between the last years of Šulgi and the beginning of Amar-Suena's reign were also the sons of the governor Ur-Lamma, who held the office for 18 years until Amar-Suena 3 (Maekawa 1996).

Out of a 6–8 bur_3 parcel of domain land ($gan_a_2 - gu_4$), a plot of 6–12 iku (2.16–4.32 ha; 1 bur_3 = 18 iku) was reserved for the cultivator ($šuku_enger$). At harvest time, he received from his institution a barley allotment ($še_šuku-ra_enger$) corresponding to ca. 10–20 gur (assuming the ideal 30 gur per bur_3 ratio), probably to be shared with the subordinate ox drivers. However, the soil was not of equal quality in every cultivated area and maintaining high levels of agricultural output depended on the availability of water.¹⁵ According to the available sources, the actual productivity level of the allotment plots was frequently lower than 20 gur per bur_3 . Subsistence plots ($gan_a_2 - šuku$) were also assigned to the other personnel of the agricultural organization as well as to other dependents of the temple institutions. The area of the parcels varied depending on the social position and occupation of the assignee, with high-ranking officials who could manage 5 bur_3 or more of land and $eren_2$ -laborers receiving 4–6 iku (Maekawa 1986). In addition, occasional distributions of barley and garment allotments

for the permanent workforce of the agricultural organization are recorded in administrative documents.¹⁶

We also know that not all of the plot managers were entitled to receive subsistence land. In the records they were assigned barley under the administrative label $še_šuku-ra_enger_nu-dab_5$, “subsistence barley for cultivators who do not hold (allotment plots)” (Maekawa 1986, 99). Moreover, as a consequence of the frequent transfer of workers between different institutions, groups of $eren_2$ -laborers not permanently attached to a specific temple establishment were distributed barley ($še_eren_2-e_šuti-a$) as compensation for their occasional work on behalf of the household where they were employed.

In the $še_ur_5-ra$ -loans of years Šulgi 48–Amar-Suena 1, the majority of those who borrowed barley were members of the agricultural organization of the various institutional households (Table 3), including their high-ranking managers (“elders”). Although their affiliation is rarely recorded on the tablets, it can be inferred through a prosopographical analysis (1) of the supervisors of the transactions, (2) of those who received the barley on behalf of the beneficiaries and sealed the account, and

¹⁵ In the Ġirsu-Lagaš province the average annual yield during the decade from Šulgi 42 to Amar-Suena 3 was ca. 23 gur of barley per bur_3 (\approx 681 kg/ha) (Maekawa 1984, 84).

¹⁶ Cf. PPAC 5, 308 (Amar-Suena 7): barley and garment allotments for $eren_2$ -workers, plot managers, ox drivers, and various workers of several temple households ($še_tug_2e_2-gal-ta_šuti-a_eren_2_enger_š_a_3-gu_4u_3lu_2didli-me$); TCTI 2, 3816 (Šu-Suen 7): garment allotments for 50 $eren_2_š_a_3-gu_4lu_2hu-bu_7bu-me_e_2nin_ġir_2-su$.

Tab. 3: Agricultural personnel in the še ur₅-ra-loans (Šulgi 48–Amar-Suena 1)

Šulgi 48	Amar-Suena 1
144 eren ₂ 25 engar 5 nu-banda ₃ -gu ₄ e ₂ ^d nanše-me	eren ₂ ša ₃ -gu ₄ engar ab-ba ab-ba (e ₂ ^d dumu-zi)
144 eren ₂ 25 engar 5 nu-banda ₃ -gu ₄ (e ₂ ^d nanše)	eren ₂ ša ₃ -gu ₄ engar nu-banda ₃ -gu ₄ (e ₂ urub _x ^{ki})
engar nu-banda ₃ -gu ₄ e ₂ ^d šul-gi	eren ₂ ša ₃ -gu ₄ engar (e ₂ ^d nin-ĝir ₂ -su)
engar nu-banda ₃ -gu ₄ (e ₂ ^d nin-ĝir ₂ -su)	eren ₂ ša ₃ -gu ₄ engar (e ₂ ^d nin-ĝiš-zi-da)
10 PNs engar	5 engar 1 nu-banda ₃ -gu ₄ (e ₂ ^d nin-MAR.KI)
eren ₂ bala ¹ -a e ₂ ^d nin-ĝir ₂ -su	2 engar 1 nu-banda ₃ -gu ₄
eren ₂ e ₂ ^d inanna	2 engar 4 ša ₃ -gu ₄
eren ₂ (e ₂ ^d dumu-zi)	ša ₃ -gu ₄ engar e ₂ ^d inanna-me (2×)
eren ₂ e ₂ ^d šul-gi	20 ĝuruš 20 ša ₃ -gu ₄ e ₂ ^d inanna-me
220 eren ₂ (e ₂ ^d šul-gi)	eren ₂ (e ₂ ^d nanše)
eren ₂ (4×)	eren ₂ (6×)
	17 ĝuruš

(3) of the foremen and overseers of the laborers. This is not always an easy task since the occupations or administrative titles of the recipients and foremen/overseers are almost never mentioned. Thus, the 220 eren₂-workers of BM 21296 (= SEL 34–36, p. 264 no. 3) (Šulgi 48) who borrowed 88 gur (= 26,400 l) of barley were probably affiliated with the “house of the divine Šulgi”, if the Lugal-zuluḫu who rolled his seal (kišib) on the (not preserved) envelope is to be identified with Lugal-zuluḫu, son of the provincial governor, who was also the chief administrator of that temple household in the year Šulgi 47 (Maekawa 1996, 176). The latter is also attested in the še ur₅-ra-loan MVN 12, 310 (Šulgi 48 xi^{dini}) as the supervisor of the transaction (ugula lugal-zuluḫu₂) involving cultivators and chief plot managers of the e₂ ^dšul-gi.

Two interesting texts deserve further discussion since they allow one to estimate the percentage of agricultural personnel of a temple household that needed to request a še ur₅-ra-loan: BM 20994a (= SEL 34–36, p. 263 no. 2) (tablet and fragment of clay envelope) and MVN 12, 304 (tablet). The first document records over 50 gur (= 15,540 l) of barley borrowed as a še ur₅-ra-loan by the agricultural personnel of the temple household of the goddess Nanše ([e₂] ^dnanše-me). The text provides the exact number of beneficiaries and the amount of barley received by each of them: 144 eren₂-workers at 60 liters each; 25 cultivators (engar) at 240 liters each; 5 chief plot managers (nu-banda₃-gu₄) at 180 liters each. The official who supplied the barley was Ur-Nanše, but the name of the storage facility from which the barley was disbursed has unfortunately been lost. Interestingly, the receipt was sealed on behalf of the beneficiaries by Abbakala, the son of the saĝĝa-administrator of the Urub household (e₂ urub_x^{ki}). The second administrative text (MVN 12,

304) preserves the same data as regards the amount of barley and the number and type of beneficiaries. The two loan documents differ in that BM 20994a is dated only to the year, while MVN 12, 304 was written during the month xi. As expected, in MVN 12, 304 the barley was received by Ur-Eninnu, the saĝĝa-administrator of the temple household of Nanše (ur-e₂-ninnu saĝĝa ^dnanše šuba-ti), from the silo i₃-dubbara₂-si-ga. Admittedly, it is difficult to explain why, in BM 20994a, the son of a high-ranking administrator of an institutional household sealed a receipt involving the personnel of another economic unit, unless one assumes a certain degree of cooperation between the two temple households, both located in the district of Kinunir-Niĝin. Be that as it may, the differences in the two texts clearly indicate that they refer to two different transactions.¹⁷ The temple household of Nanše was one of the main economic units of the province and the third largest in terms of cultivated land after that of Ninĝirsu and NinMAR.KI. The agricultural department of the temple estate managed 50 domain units in the year Šulgi 47 (TUT 5), while 70 cultivators (engar) are recorded in Amar-Suena 2 (HSS 4, 4). According to another document (BM 24967 = Borrelli 2014, no. 36), 58 plowteams (55 gu₄-apin, 3 anše-apin) were available in the temple of Nanše during Amar-Suena 3. A tablet probably written between Amar-Suena 3 and Šu-Suen 3 (TCTI 1, 877)¹⁸ indicates a slightly different assortment of draft animals (44 gu₄-apin, 16 anše-apin) but an almost

¹⁷ Alternatively, the information recorded in the documents could refer to two distinct steps in the administrative procedure.

¹⁸ In this document the estate of the divine Amar-Suena (e₂ ^damar-^dsu-en) is listed. Only after Šu-Suen 2 the temple household returned to its original name (e₂ nam-ḫa-ni).

Tab. 4: Permanent staff and additional workers of the Ġirsu-Lagaš institutional households

PPAC 5 729 (undated)		
<i>Institutional household</i> (e_2)	<i>Permanent staff</i> ($e_2 ren_2$)	<i>Additional workers</i> ($bar-ra kar-ra$)
NinĠirsu	326	80
NinĠiszida	153	65
Igalim	50	64
šabra	170	66
Ġišbare	54	22
Nindara	88	90
Dumuzi	205	$3^?//180^?$
Nanše	310	130
NinMAR.KI	346	210
Šulgi	280	92
Amar-Suena	$[x]+51$	100
Bagara	$[x]$	34
Ġatumdu	$2^?//120^?+[x]$	40
Urub, Inanna, Ninsun	$3^?//180^?+[x]$	37
Badari	165	–
<i>Total</i>	4,505 $e_2 ren_2$	

equal number of teams. Another text most likely dating to the same years (PPAC 5, 729) shows that 440 workers were employed in the e_2 $^d nanše$, including both permanent staff (310 $e_2 ren_2$) and additional workers (130 $bar-ra kar-ra$). Although it is not clearly indicated in the document, I suspect that these figures only refer to the agricultural organization of the temple household (Table 4). As regards the barley allotments for plot managers ($še šuku-ra engar$), CT 10, 18 BM 12922 (Amar-Suena 2), an account which calculates the winnowed barley ($še Ġiš e_3-a$) of all the provincial temple households, provides the following data: 3 $guru_7$ 639.0.5 7 $sil_3 gur še gana_2-gu_4$, 698.0.0 $gur še šuku-ra engar$. If we divide the latter figure by the number of cultivators (70 $engar$) attested in HSS 4, 4 (Amar-Suena 2), the resulting yearly allotment for each plot manager would be around 10 gur (= 3,000 l).

As BM 20994a and MVN 12, 304 demonstrate, in the year Šulgi 48 over 100 gur (= 30,000 l) of barley were withdrawn from the silo $i_3-dub bara_2-si-ga$ and from another storage facility and delivered to 174 members of the agricultural organization of the Nanše temple. If the two transactions refer to the same personnel, as I am convinced they do, and the temple had 50 cultivators and a total of 310 permanent agricultural specialists around the year Šulgi 47 (TUT 5; PPAC 5, 729), it follows that more than half of the workforce ($e_2 ren_2$ -laborers, plot managers, and their supervisors) involved in cultivation needed

to resort to institutional credit in the form of $še ur_5-ra$ -loans, two times within one year. What is more, according to other documents, this was also the case in years Šulgi 44, 46–48, as well as in Amar-Suena 1 (Table 5).

The silos from which the barley was delivered in years Šulgi 46–48 were the $i_3-dub bara_2-si-ga$, most likely also in the fragmentary Nisaba 10, 46 (Šulgi 46 xi) and BM 20994a (Šulgi 48), and the $i_3-dub ^d nin-ḥur-saġ-lu_2-ku_3-nun$ in Nisaba 33, 833 (Šulgi 47 x). Although both facilities were located in the Guabba district (CT 5, 36 BM 17751; Šulgi 48) and were therefore conceivably under the authority of the chief administrator of the temple of NinMAR.KI, evidence exists that, in year Šulgi 46, the temple of Nanše stored part of its barley (up to 900 gur = 270,000 l) in the $i_3-dub bara_2-si-ga$ (UDT 66) and on one occasion “workers sitting out the corvée duty” ($e_2 ren_2 bala tuš-(a)$), affiliated with the same temple household, received barley as food supply ($ša_3-gal$) from the $i_3-dub (e_2-duru_5) ^d nin-ḥur-saġ-lu_2-ku_3-nun$ (PPAC 5, 1093).

As Tables 10 and 11 show, other temple estates borrowed considerable quantities of barley from the institutional economy more than one time during years Šulgi 48 and Amar-Suena 1. In particular, I want to discuss here the $še ur_5-ra$ -loans concerning the small temple household of the goddess Inanna. It was located in the Kinunir-Niġin district where the temple households of Nanše, Nindara, Bagara, Ġatumdu, and Urub also oper-

Tab. 5: Barley loans for the temple household of Nanše

Text	Date	Agricultural personnel
Nisaba 10, 8	Šulgi 44	engar-ne (64.0.0 gur; še-sumun) ← i_3 -dub e_2 -duru ₅ ^d nin-MAR.KI
Nisaba 10, 97	Šulgi 44 xi	57 ġuruš ša ₃ -gu ₄ dumu-gu ₄ -gur (11.2.0 gur) ← i_3 -dub e_2 -duru ₅ ^d nin-MAR.KI
Nisaba 10, 46	Šulgi 46 xi	type of worker not indicated (6.0.0 gur) ← i_3 -dub [bara ₂ -si-ga]
Nisaba 13, 11	Šulgi 46 xi ^{diri}	eren ₂ (23.2.0 gur) ← i_3 -dub bara ₂ -si-ga
Nisaba 13, 38	Šulgi 46 xi ^{diri}	25 engar 50 dumu-gu ₄ -gur dumu-da-ba (10.0.0 gur) ← i_3 -dub bara ₂ -si-ga
Nisaba 33, 833	Šulgi 47 x	136 ġuruš 12 eren ₂ tur-tur (28.4.0 gur) ← i_3 -dub ^d nin-ġur-saġ-lu ₂ -ku ₃ -nun
PPAC 5, 1513	Šulgi 47 xi	dumu-gu ₄ -gur (10.0.0 gur) ← i_3 -dub bara ₂ -si-ga
BM 20994a	Šulgi 48	144 eren ₂ 25 engar 5 nu-banda ₃ -gu ₄ (51.4.0 gur) ← [i_3 -dub bara ₂ -si-ga]
MVN 12, 304	Šulgi 48 xi	144 eren ₂ 25 engar 5 nu-banda ₃ -gu ₄ (51.4.0 gur) ← i_3 -dub bara ₂ -si-ga
PPAC 5, 1620	Amar-Suena 1 ix	eren ₂ ([x]+22.2.2 gur) ← i_3 -dub a-ša ₃ ġe-ġal ₂

ated. In the sources, the agricultural activities and the personnel of the Inanna temple were frequently recorded together with those of other institutions: the estates of Nanše, Bagara, Ġatumdu, Urub, Ninsun, and quite unexpectedly that of NinMAR.KI.¹⁹ When the latter temple household was involved, all the transactions fell under the authority of its saġġa-administrator.²⁰ According to BM 24967 (Amar-Suena 3), the domain land cultivated by the Inanna temple was of a modest size (8 gu₄-apin, 2 anše-apin).²¹ The names of 12 plot managers (engar) affiliated with the estate are listed in MVN 9, 99 (Šulgi 42).²² In this document, a balanced account of Adda, the saġġa-administrator of Inanna, the repayment of a loan of more than 13 gur of barley, borrowed by the named cultivators (še ur₅-ra engar-e-ne), is recorded. According to MVN 17, 10 (undated) and WMAH 191 (Amar-Suena

2), the yearly barley allotment for each plot manager (še šuku-ra engar) was around 10 gur (118 gur ÷ 10/12 engar), i.e., ca. 3,000 liters. Four še ur₅-ra-documents dated between Šulgi 48 and Amar-Suena 1 concern the Inanna temple: one dates to the tenth month of Šulgi 48 (MVN 11, 37), and three to months nine (NYPL 347) and ten (PPAC 5, 939; SAT 1, 328) of Amar-Suena 1. The total amount of barley recorded in these texts is quite low in comparison with the large quantities of barley issued as še ur₅-ra-loans for other institutional estates: just 4,120 liters in two years. The beneficiaries were eren₂/ġuruš-workers, ox drivers, and plot managers. In NYPL 347 (Amar-Suena 1 ix) two crews of 20 ġuruš-workers and 20 ox drivers²³ were under the supervision of two foremen (ugula), Ur-Abġinun and Zina, the chief plot manager (nu-banda₃-gu₄) who sealed this receipt and also SAT 1, 328 (Amar-Suena 1 ix). In PPAC 5, 939 (Amar-Suena 1 x) the recipient was Ur-Igizibara, under the supervision (ugula) of the saġġa-administrator of NinMAR.KI, who was also the supervisor of the disbursement in SAT 1, 328 (Amar-Suena 1 ix). The year before (MVN 11, 37), the barley for the eren₂-workers was received by a certain Ur-Enlila on behalf of Ur-Bagara, son of Gu'u, while the seal rolled on the envelope belonged to Ur-Ninmug, son of the "chancellor" (sukkal-maġ) Lu-Bau. Ur-Bagara is likely to be identified with the homonymous overseer (nu-banda₃) of Priests and Officials, p. 101 App. 4a–b (undated). All

¹⁹ Cf. ASJ 19, p. 144 no. 128 (undated); MVN 11, 89 (undated); PPAC 5, 729 (undated); Priests and Officials, p. 101 App. 4a–b (undated); CT 10, 18 BM 12922 (Amar-Suena 2); TUT 111 (Amar-Suena 2); BM 24967 = Borrelli 2014, no. 36 (Amar-Suena 3).

²⁰ CT 10, 48 BM 21447 (Šulgi 43): barley allotments for the cultivators (še šuku-ra engar) belonging to the households of Urub, Ninšubur, and Inanna, delivered by Ur-Bau saġġa ^dnin-MAR.KI; CT 10, 18 BM 12922 (Amar-Suena 2): še gana₂-gu₄/še šuku-ra engar e_2 ^dnin-MAR.KI e_2 ba-gara₂ e_2 ^dġa₂-tum₃-du₁₀ u₃ e_2 ^dinanna ugula saġġa ^dnin-MAR.KI.

²¹ See CT 9, 28 BM 20007 (Šulgi 33) for land sown with barley and emmer in six different fields, under the supervision of the saġġa-administrator of Inanna.

²² The same number of plot managers occur in CT 10, 48 BM 21447 (Šulgi 43), while Priests and Officials, p. 101 App. 4a–b (undated) records 10 engar.

²³ Note that Priests and Officials, p. 101 App. 4a–b (undated) has 29 eren₂ working for the e_2 ^dinanna, a number which probably included also the ox drivers.

these foremen and overseers (Ur-Abhinun, Zina, Ur-Igizibara, Ur-Bagara) co-occur in other documents related to the Inanna temple, such as MVN 11, 89 (undated)²⁴ and, most interestingly, CT 5, 19 BM 12912 (Šulgi 48), a ten-column balanced account of še ur₅-ra-loans to cultivators, chief plot managers, and eren₂-workers (niĝ₂-kas₇-ak še ur₅-ra engar nu-banda₃-gu₄ u₃ eren₂-na) of various temple households.²⁵

The granaries which contributed barley for the še ur₅-ra-loans of the Inanna temple were the following: the i₃-dub e₂ den-ki (Šulgi 48) and the i₃-dub (a-ša₃) ħe-ĝal₂ (Amar-Suena 1). For the first silo, the conveyer (ĝiri₃) was a certain Sasaga, son of Ba'a (see Table 10), who also appears in the same function in year Šulgi 48 in other documents recording expenditures of barley and emmer from the same storage facility. As MVN 12, 271 (Šulgi 48) and PPAC 5, 1667 (Amar-Suena 2) show, the i₃-dub e₂ den-ki was also one of the depots where the temple household of NinMAR.KI stored its barley.²⁶ As for the i₃-dub (a-ša₃) ħe-ĝal₂, the only storage facility mentioned in the še ur₅-ra-loans of year Amar-Suena 1, the provider was the saĝĝa-administrator of NinMAR.KI. Thus, the manager of the NinMAR.KI estate occurred twice in both the še ur₅-ra-loans PPAC 5, 939 and SAT 1, 328: he was the provider of the barley stored in the i₃-dub (a-ša₃) ħe-ĝal₂ and the supervisor for the deliveries of the same barley to the personnel of the Inanna temple.

Beyond the agricultural personnel of the temple households, še ur₅-ra-loans were also granted to other classes of provincial and royal dependents (Table 6). The beneficiaries frequently appear in the texts as collectives whose total number is not always specified. Thus, for example, according to CTPSM 1, 58 (Amar-Suena 1 ix), the “shepherds and cowherds of the Guabba district” (sipa unu₃ gu₂-ab-ba^{ki}-me), who took care of institutionally-owned herds, received a huge amount of barley (122 gur = 36,600 l) as an institutional loan. Unfortunately, the name of the person who received the barley on behalf of the shepherds and cowherds is not preserved. There is also no indication of the storage facility from which the barley was withdrawn, as is usual when the administra-

tive label “barley of Enlil” (še den-lil₂-la₂) occurs in a še ur₅-ra-loan.²⁷

On several occasions an individual or a small group of beneficiaries, not always followed by occupations/administrative titles, appear in še ur₅-ra-loans. The single individual and the small party of beneficiaries may receive barley directly from a storage facility, often without any specification of providers, foremen, or supervisors. This is the case, for instance, with MVN 12, 294 (Šulgi 48 ix) where the mounted courier (ra₂-gaba) Bau-ibgul received a 6 gur (= 1,800 l) barley loan and sealed the receipt, and MVN 12, 296 (Šulgi 48 x) where Ur-saga and his brother Abbaĝu, sons of an išib-priest, withdrew from an unnamed storehouse (ĝa₂-nun) 2 gur (= 600 l) of barley each. Although the economic motivation behind these transactions is not indicated in the texts, their timing suggests that they were issued as interest-free harvest loans with the aim of helping the borrowers deal with unexpected shortages of barley. The following elements point to an institutional background for these loans: the considerable amounts of barley recorded in a single transaction in comparison to non-institutional loans; the involvement of institutional storage facilities and institutional providers; the presence of specific administrative labels (e.g., še den-lil₂-la₂); the lack of interest, repayment, and penalty clauses, and witness lists.

5 Loans Issued for the Royal Sector and for Personnel Working Outside the Province

In years Šulgi 48–Amar-Suena 1, members of the royal sector received institutional barley loans from the provincial economy as well. A conspicuous quantity (91.2.3 gur = 27,450 l) destined for “(royal) conscripts” (dumudab₅-ba) is recorded in CUSAS 16, 138 (Amar-Suena 1), while a total of 7 gur (= 2,100 l) of barley for seven “captains of (royal) conscripts” (ugula dumudab₅-ba-ne) appears in PPAC 5, 701 (Šulgi 48).²⁸ An unspecified number of eren₂-people affiliated with the household of Lugal-igi (eren₂ e₂ lugal-igi-me) were provided with ca. 5 gur (= 1,500 l) of barley as a še ur₅-ra-loan in Nisaba 10, 32 (Amar-Suena 1 x). The barley issued from the i₃-dub (a-ša₃) ħe-ĝal₂ was delivered by the saĝĝa-administrator

²⁴ Contrary to the copy of Snell (lu₂-dinanna), rev. 6 reads e₂ dinanna (see the photo CDLI no. P116103).

²⁵ Note that e₂ ig-alim (obv. iii 7) is clearly a mistake of the scribe for e₂ dinanna. The estate of Igalim is correctly recorded several lines below (rev. i 1).

²⁶ MVN 12, 271 (180.0.0 (ziz₂) gur i₃-dub e₂ den-ki); PPAC 5, 1667 (170.0.0 ziz₂ gur i₃-dub e₂-duru₅ den-ki).

²⁷ I will return to the “barley of Enlil” (še den-lil₂-la₂) in § 6.

²⁸ On the role of (royal) conscripts in the institutional economy of Ĝirsu-Lagaš, see Borrelli (2020b).

Tab. 6: Beneficiaries of še ur₅-ra-loans in years Šulgi 48–Amar-Suena 1**Royal personnel**

7 PNs ugula dumu-dab₅-ba-ne “7 (named) captains of (royal) conscripts”
 dumu-dab₅-ba “(royal) conscripts”
 eren₂ e₂ lugal-igi-me “eren₂-workers of the household of Lugal-igi”

Military personnel

19 ġuruš aga₃-us₂ ensi₂-me “19 men, guards of the governor”
 30 ġuruš aga₃-us₂ ensi₂(-me) “30 men, guards of the governor”
 aga₃-us₂ ensi₂ dumu niġin^{ki} “guard(s) of the governor, citizen(s) of Niġin”
 PNa ga₃-us₂ saġġa “one (named) guard of the saġġa-administrator”

Shepherds and cowherds

sipa-e-ne “shepherds”
 sipa unu₃ gu₂-ab-ba^{ki}-me “shepherds and cowherds of the Guabba district”
 PNa sipa anše saġġa “one (named) donkey shepherd of the saġġa-administrator”

Sailors and shipyard workers

PNa ma₂-la₄ saġġa “one (named) sailor of the saġġa-administrator”
 lu₂-mar-sa gu₂-ab-ba^{ki} “shipyard workers of the Guabba district”

Cultic personnel

PNa gud₄ bala(-a)/sagi “one (named) gud₄-priest on duty/steward”
 PNa nar “one (named) singer”
 PNa nar-gu-la/nar-sa “one (named) great/...-singer”

Various personnel

PN ašgab “one (named) leather worker”
 2 PNs gu-za-la₂-me “2 (named) throne-carriers”
 e₂ gu-za-la₂-me “(workers of) the house of the throne-carriers”
 40 ġuruš e₂ kurušda-me “40 men of the fattening house”
 eš₃-didli-me “(workers of) various shrines”
 PNa lu₂-bappir “one (named) brewer”
 nu-^{šis}kiri₆ “gardener(s)”
 PNa ra₂-gaba “one (named) mounted messenger”
 PNa simug “one (named) smith”
 20 šu-i “barbers” “20 barbers”
 2 PNs ugula un-il₂-me “2 (named) foremen of menials”

Various personnel occurring in the same še ur₅-ra-loan tablet

(MVN 12, 296)

PN dumu išib; PNa šeš-a-ni
 “one (named) son of an išib-priest and his brother”

(Amherst 57)

2 PNs a-igi-du₈; 2 PNs
 “2 named canal-workers and 2 (named) persons”

(SAT 1, 336)

2 PNs; šu-i gu₂-en-na; PNa dumu pisaġ-dub-ba
 “2 (named) persons, one (unnamed) barber of the throne room, and the (named) son of the archivist”

(Nisaba 18, 119)

PN (ugula bur-saġ) “one (named) supervisor of the store-room” (who also sealed the tablet)
 4 PNs i₃-du₈ “4 (named) doorkeepers”
 2 PNs lu₂-kisal “2 (named) courtyard guards”
 3 PNs aga₃-us₂ “3 (named) guards”
 2 PNs ad-kid “2 (named) reed workers”
 2 PNs gud₄ bala(-a) “2 (named) gud₄-priests on duty”

No occupation/administrative title

One or more persons with no recorded occupation/administrative title

of NinMAR.KI to Ur-Saĝub, the leader of a unit of 10 men each (šeš-gal nam-10). The overseer (nu-banda₃) of the eren₂-people was a certain Ur-saga, son of Lugal-igi. The latter is to be tentatively identified with a military commander, probably a colonel. In HLC 2, 27 (undated) Lugal-igi received an allotment of royal land (gana₂ zi-ga lugal) which was distributed to the personnel of a military camp (uĝnim_x^(ki)) located within the borders of the Ĝirsu-Lagaš province (Lafont 2009, § 2.5).

Barley loans for the royal sector are also referred to in other types of administrative documents. In the unpublished balanced account BM 20070 (Šulgi 42 iii) recently discussed by Steinkeller (2013, 410), Kurtašu, the “mayor” of Du-lugal-ua, borrowed from the provincial sector 5,160 liters of barley for the royal settlers living in his village.²⁹ The text also states that Kurtašu was to return the barley and the interest on it after three years. The interest was 3,096 liters, corresponding to a rate of 20% per year instead of the customary 33% applied on barley. At Umma, there is also abundant evidence for interest-bearing barley loans issued by the provincial economy to royal settlers. However, these arrangements usually took the form of antichretic loans, where the interest was to be repaid in harvest labor (Steinkeller 2013, 382–84). In one instance (AUCT 3, 492; Amar-Suena 7), Šarrum-ili, the colonel of the (royal) conscripts of Ĝirsu-Lagaš (nu-banda₃ dum-dab₅-ba ĝir₂-su^{ki}), borrowed 300 gur (= 90,000 l) of barley from the governor of Umma. The barley in question was to be repaid in full at harvest time, and 1 iku (= 0.36 ha) of land for each 60 liters of barley was to be harvested by his subordinates in lieu of the interest.³⁰

As the Ĝirsu-Lagaš sources amply demonstrate, barley from the provincial granaries could also be issued as še ur₅-ra-loans for military personnel residing far away from the core of the Ur III state. In RTC 428 (Šu-Suen 5 x), a significant amount of barley (240 gur = 72,000 l) stored

in the silo of the saĝar-sur-ra-field was borrowed by Bugakum, a colonel of the military contingent stationed at Sabum (nu-banda₃ sa-bu-um^{ki}),³¹ from the governor of Ĝirsu-Lagaš (ki ensi₂ ĝir₂-su^{ki}-ta), under the supervision of the saĝĝa-administrator of NinMAR.KI. The document explicitly states that the barley was to be returned to Ĝirsu-Lagaš’s institutional economy (še ur₅-ra su-su-dam), although the date of repayment and the amount of interest to be added were not indicated. It is likely that Bugakum requested the loan to feed the military settlers under his command. Assuming a food allowance of 60 liters of barley per month, the barley borrowed by Bugakum would have sufficed to feed 1,200 men for one month or, more likely, 100 men for one year. Furthermore, in the tablet MVN 7, 345 (Šulgi 33 vii) six foresters (lu₂-tir) received a total of 360 liters of barley as a loan, at a rate of 60 liters per man. The barley was issued by a certain Lu-Ĝišbare, and the transaction took place at Susa under the supervision of Lu-ĝirnum.³² As recently demonstrated by Maekawa (2016), early in the third decade of Šulgi’s reign, the king granted to the governor of Ĝirsu-Lagaš the possibility of opening an administrative branch at Susa, in Elam. The large number of laborers brought from Ĝirsu-Lagaš to work in the fields and sesame plantations of Susa, including wood cutters, required a steady supply of food which was provided by the provincial economy, also in the form of institutional barley loans.

6 Discussion

Based on the analysis of 83 institutional barley loans from Ĝirsu-Lagaš dating between Šulgi 48 and Amar-Suena 1, and by comparing these texts with earlier and later loan agreements belonging to the same administrative archives, the following observations can be made on the functioning of the še ur₅-ra system.

Members of the agricultural organization of the provincial temple households, as well as other state (i. e., royal and provincial) dependents such as shepherds, brewers, sailors, military personnel, priests, and craftsmen borrowed large volumes of barley from the institutional economy mainly for direct consumption.³³ The over-

²⁹ The Ur III “mayors” (*hazannum*) and city elders (*ab-ba iri*) administered royal towns and villages and supervised the military settlers living in their communities. They were subordinate to the local military officials (Steinkeller 2013, 351–52).

³⁰ The translation of AUCT 3, 492 (Steinkeller 2002, 131) deserves to be quoted in full: “90,000 liters of barley, a loan, (its interest is to be paid by) harvesting barley; for each 60 liters (of the loan) 1 iku of land is to be harvested; That he will not sue (regarding this transaction), (and) to repay the barley (of the loan at the time of) the harvest, and to return it to its (original) silo, (and), if the barley (of the field in question) is not harvested, in that field, as much as it gets destroyed (because it was not harvested), he (i. e., Šarrum-ili) swore by the name of the king. From the governor of Umma, Šarrum-ili, the colonel of the conscripts of Ĝirsu, received (this barley loan). Date.”

³¹ The city of Sabum was located in the frontier zone between Sumer and Elam and was likely already under the direct control of the Ur III state during Ur-Namma’s reign (Owen 2006–8).

³² Lu-Ĝišbare, son of Ur-ra-AN, occurs in the balanced account ASJ 3, p. 56 no. 5 (Šulgi 36) as the individual responsible for the “barley of Susa” (še šušin^{ki}).

³³ Cf., e. g., SAT 1, 17 (Amar-Suena 1 x) where the barley of the še

whelming majority of the $\check{s}e\ ur_5\text{-ra}$ -loans were drawn up slightly before harvest time at the end of the Sumerian year, between months ix and xii (December and March). Consequently, one may be confident that only a small part of the borrowed barley was destined to be used as seed grain.³⁴ We know that the harvesting of winter crops started at the beginning of March and went on throughout springtime. The months that preceded the harvest were those when the barley available to state dependents was particularly scarce. We can thus assume that in most cases these consumptive loans were undertaken out of necessity, mainly for the sustenance of the debtor's household, or of the institutional organization and professional group he represented, until the next harvest. In several documents wherein workers of the agricultural organizations borrowed barley as a group, they received different amounts according to their administrative title or occupation: e. g., the $eren_2$ -workers and ox drivers usually got 60 liters each, the cultivators between 60 and 240 liters, while the chief plot managers received 180 liters. With some exceptions, other types of state dependents normally received between 60 and 180 liters of barley, very rarely 240 liters or more. As barley loans were issued to the holders of subsistence land on account of future yields from their plots, and as these provincial dependents could borrow barley from the institutional economy more than once a year, it may well have been that the different rates of barley per person recorded in the $\check{s}e\ ur_5\text{-ra}$ -loans represented the expected monthly share of barley from the plots of the holders. Thus, for example, 240 liters of barley borrowed by an $engar$ would correspond to 2,880 liters (240 l \times 12 months), a figure that is virtually the same as the yearly barley allotment ($\check{s}e\ \check{s}uku\text{-ra}\ engar$) per plot manager working for the temple households of Nanše and Inanna (ca. 10 gur = 3,000 l), as mentioned above. In all likelihood, the maximum amount of barley each worker could borrow on a monthly basis was proportional to the annual allotment he received from his $\check{s}uku$ -plot at harvest time. Since the land and labor that served as security for the loans were fully controlled by the institutional households, it is no surprise that no additional guarantee was required to the borrowers and no due date for repayment or penalty clause are indicated in the $\check{s}e\ ur_5\text{-ra}$ -loans.³⁵

$ur_5\text{-ra}$ -loan is further defined as “provisions for the $eren_2$ -workers” ($\check{s}a_3\text{-gal}\ eren_2\text{-na}$).

³⁴ To my knowledge, there are only a few documents which state that the barley was used for seeding ($\check{s}e\ numun\ a\ \check{s}a_3\ eren_2\text{-na} / \check{s}e\ numun\ -\ \check{s}e_3$): Nisaba 10, 78 (Šulgi 45 ix; late sowing?); MVN 11, 44 (Šulgi 46); BM 23060A (Šulgi 46 vi).

³⁵ In accordance with the principle of hierarchical accountability

All of the major Ĝirsu-Lagaš institutions kept their barley until the following agricultural season in the network of granaries and silos located in the rural settlements and agricultural outposts of the province. During the administrative year, numerous disbursements of barley for seeding, fodder for draft animals, wages for workers, and regular deliveries for deities and festivals were authorized. The lack of any evident and direct connection between the beneficiaries of the loans or their supervisors, the institutional storage facilities from whence the barley was withdrawn, and the officials authorizing the disbursements, clearly suggests that, in the depots mentioned in the $\check{s}e\ ur_5\text{-ra}$ -loans, surplus barley belonging to various institutional households was available, which was ultimately controlled by the provincial economy.³⁶ Old barley left unspent in storage facilities was subject to spoilage from rodents, insects, and fungi; a quick turnover of the perishable capital was then in the provincial administration's best interest.³⁷ Barley to be expended as institutional loans was deducted from the stored grain belonging either to the various temple households³⁸ or to the provincial governor; in this case the administrative label “barley allotment of the governor” ($\check{s}e\ \check{s}uku\text{-ra}\ ensi_2$) occurs in the texts.

Another administrative term, $\check{s}e\ ^d\ en\text{-}lil_2\text{-}la_2$, “barley of Enlil”,³⁹ deserves some comment. It occurs only in seven $\check{s}e\ ur_5\text{-ra}$ -loans dated to Amar-Suena 1 (Table 7), as well as in another tablet dating to Amar-Suena 2 (Nisaba 17, 48), and in two documents from the year Amar-Suena 7 (TCTI 2, 3297; TUT 263). It is worth noting that no storage facility is associated with this type

(Wilcke 2005), the sealing officials who received barley on behalf of the end beneficiaries were held responsible for the failure to repay the loans and were required to cover the outstanding debts of their subordinates. The arrears of state dependents could be recovered by their superiors by seizing their personal possessions (e. g., houses, furniture, servants, wives and sons, etc.). For security on loans in the Ur III period, see Steinkeller (2001).

³⁶ For co-storing practices in the Ur III period, see Borrelli (2020a).

³⁷ The administrative label $\check{s}e\text{-}sumun$, “old barley”, occurs in several loans as an attribute of the borrowed barley. In Amar-Suena 2, “old barley” from previous harvests corresponded to ca. 13 % of the total barley available in the granaries of the Ĝirsu-Lagaš province; see CT 7, 8 BM 12926 (Table 8).

³⁸ Interestingly, in HLC 1, 65 (Šulgi 48 ix) and Nisaba 33, 896 (Šulgi 48 ix) it is specified that seed barley belonging to a certain Ur-Damu ($\check{s}e\ numun\ ur\text{-}^d\ da\text{-}mu$) was disbursed from the $i_3\text{-}dub\ e_2\ ^d\ en\text{-}ki$ as a $\check{s}e\ ur_5\text{-ra}$ -loan for the guards of the governor ($\check{s}e\ ur_5\text{-ra}\ aga_3\text{-}us_2\ ensi_2\text{-}me$).

³⁹ BM 25960 (= SEL 34–36, p. 268 no. 10) (Amar-Suena 1 ix) reads: $\check{s}e\ ur_5\text{-ra}\ ^d\ en\text{-}lil_2\text{-}la_2\text{-}a\check{s}$. Cf. TCTI 2, 3297 (Amar-Suena 7 xii): $\check{s}e\ ur_5\text{-ra}\ ^d\ en\text{-}lil_2\text{-}la_2$.

Tab. 7: The “barley of Enlil” in the *še ur₅-ra*-loans of year Amar-Suena 1

Storage facility	Barley	Recipient(s)	Date	Text
NO	27,450 l	dumu-dab ₅ -ba	Amar-Suena 1	CUSAS 16, 138
NO	36,600 l	sipa unu ₃ gu ₂ -ab-ba ^{ki} -me	Amar-Suena 1 ix	CTPSM 1, 58
NO	18,300 l	PN	Amar-Suena 1 ix	BM 85647 (= SEL 34–36, p. 267 no. 8)
NO	300 l	PN	Amar-Suena 1 x	BM 25960 (=SEL 34–36, p. 268 no. 10)
NO	660 l	PN	Amar-Suena 1 x	BPOA 1, 67
NO	3,180 l	eren ₂	Amar-Suena 1 xi	Nisaba 10, 82
NO	4,500 l	PN lu ₂ -bappir	Amar-Suena 1 xi	PPAC 5, 589

of barley, while two providers (Bazi and Ur-Enlila) are known for the year Amar-Suena 1. In the account ITT 3, 6612 (= TĒL 149) (Amar-Suena 8 xi), which is not a loan document, the “barley of Enlil” coming from the “Woodshed” storehouse (*ĝa₂-nun-ĝiš*) was expended as food supply for sailors on *bala*-duty. Likewise, several other administrative texts mostly dated to months ix–xi of years 1 to 8 of Amar-Suena’s reign, record amounts of “barley of Enlil” disbursed as food supplies/barley allotments (*ša₃-gal/še-ba*) for other classes of workers. Moreover, the “barley of Enlil” could be also delivered to the governor (PPAC 5, 396), employed in the production of beer (BPOA 2, 1879; CUSAS 16, 65), and transported to the capital city of Ur (PPAC 4, 104+105). Interestingly, in some of these documents it is clearly indicated that the barley was shipped by boat.⁴⁰

According to CT 7, 8 BM 12926, a well-known balanced account which records the total barley income and expenditures of the province of Ĝirsu-Lagaš for the year Amar-Suena 2 (*niĝ₂-kaš₇-ak še kilib₃-ba ša₃ ĝir₂-su^{ki}*), an enormous amount of 4 *guru₇* (= 4,320,000 l) was put aside as *še den-lil₂-la₂*. Remarkably, the quantity of *še den-lil₂-la₂* was larger than the barley used for “food consignments and barley allotments” (*sa₂-du₁₁ še-ba*) in each of the three districts of the province (Table 8).⁴¹ Grégoire (2013, 288–89) has recently argued that the administrative label “barley of Enlil” represented

the provisions for the cultic activities of the temples of the province. Whether or not this interpretation proves to be correct, the evidence confirms that withdrawals from this special barley reserve could occasionally be authorized to cover the expenses for regular consignments, barley allotments, and *še ur₅-ra*-loans for royal and provincial dependents. In its use, the “barley of Enlil” did not differ much from the *bala*-tax and other planned expenditures incurred by the provincial economy. It appears, however, that the way it was allocated was not predetermined. One can thus conclude that the *še den-lil₂-la₂* represented a barley reserve of which the province could freely dispose.

It is unlikely that interest was charged on short-term institutional loans at Ĝirsu-Lagaš when they concerned the personnel of the provincial temple households and the royal settlers. The repayment clause of these loans is specified simply by the wording *še ur₅-ra su-su(-dam)*, “barley loan to be returned”, and does not mention the application of interest. The obligation to repay the basic sum of the loan applied to all the transactions even if not explicitly indicated. Nevertheless, evidence for the restitution of institutional barley loans (*še ur₅-ra su-ga*) is quite scarce.⁴² There survive only a few large annual summary documents compiled by provincial accountants which track both the outstanding and repaid loans of the agricultural personnel of the various temple households and of other state dependents.⁴³

⁴⁰ The fact that the *še den-lil₂-la₂* was mainly moved via boat is corroborated by TCTI 2, 4076 (Amar-Suena 7 xi) and CUSAS 16, 236 (month viii of an unspecified year). In the first tablet 130 royal settlers were employed for 30 days to tow a boat loaded with the “barley of Enlil” to Ĝirsu. In the messenger text CUSAS 16, 236, the minister Lugal-gigire received provisions for two days to load a boat with the *še den-lil₂-la₂*.

⁴¹ Note that in the account of the “barley of the city to be expended” (*niĝ₂-kaš₇-ak še zi-zi iri*) TCTI 1, 629 (Amar-Suena 7), in addition to 1 *guru₇* (= 1,080,000 l) of *še den-lil₂-la₂*, 780 *gur* (= 234,000 l) of “barley of Nanna” (*še dnanna*) as well as 120 *gur* (= 36,000 l) of “barley of An” (*še an-na*) are recorded. It is tempting

to think that these amounts of barley were to be shipped to the capital cities of Nippur, Ur, and Uruk.

⁴² Cf., e. g., Nisaba 10, 84 (Šulgi 44 ii) where 1,270 liters of barley of the loan repaid by the *eren₂*-workers (*še ur₅-ra eren₂-ne₂ su-ga*) were further redistributed as barley allotments for water drawers and arborists (*še-ba a-bala du₃-a-ku₂*) under the supervision of the head of gardeners (*santana*) Ur-Bau.

⁴³ CT 7, 48 BM 17781 (Šulgi 48): *niĝ₂-kaš₇-ak še ur₅-ra gu₂ i₇-piriĝ-gen₇-du*; CT 5, 19 BM 12912 (Šulgi 48) *niĝ₂-kaš₇-ak še ur₅-ra engar nu-banda₃-gu₄ u₃ eren₂-na*; TUT 111 (Amar-Suena 2) *niĝ₂-kaš₇-ak še ur₅-ra*; CT 7, 40 BM 18430 (undated) *niĝ₂-kaš₇-ak la₂-i₃ še-numun u₃ še ur₅-ra e₂ dnanna*.

Tab. 8: Total barley income and expenditures of the Ĝirsu-Lagaš province in year Amar-Suena 2

CT 7, 8 BM 12926 (Amar-Suena 2)	Barley (liters)	Entries
<i>Income</i>	25,399,847 570,620	še g a n a ₂ - g u ₄ “barley of the domain land” še a - s a ĝ - u s ₂ “barley ...”
		še - g i b i l “new barley”
	3,908,085	še - s u m u n “old barley”
	<i>Total:</i> 29,878,552 liters	
<i>Expenditures</i>	14,937,160	z i - g a b a l a - a “expended within the b a l a -tax”
	3,681,195	š a ₃ ĝ i r ₂ - s u ^{ki} “in the Ĝirsu district”
	1,932,787	g u ₂ i ₇ - n i ĝ i n ^{ki} - š e ₃ - d u “(in) the Kinunir-Niĝin district”
	3,397,940	š a ₃ g u ₂ - a b - b a ^{ki} “in the Guabba district”
		s a ₂ - d u ₁₁ š e - b a “food consignments and barley allotments”
	1,522,151	še g a n a ₂ u r u ₄ - a “seed barley of the cultivated land”
	35,280	še g a n a ₂ b a l a - a “seed barley of the b a l a -land”
	25,920	še a m a r g u ₄ - a p i n “fodder for young draft animals”
	684,000	[...] “...”
	127,324+[x]	še e r e n ₂ [...] b a l a - a “...”
	<i>(Total:)</i> 26,838,443 liters	
		n i ĝ ₂ - z i - z i m u 1 - a m ₃ “expenditures for one year”
	4,320,000	še ^d e n - l i l ₂ - l a ₂ “barley of Enlil”
	<i>Grand total:</i> 31,158,443 liters	
<i>Overdraft</i>	1,279,891 liters	

7 Conclusion

The še u r₅-ra advances perfectly reflect the availability of large quantities of barley – even shortly before the harvest – in the institutional storage facilities of the southern provinces of Ĝirsu-Lagaš and Umma, the two most important areas for the production of cereals during the Ur III period.⁴⁴ In this connection, the high concentration

of loans between Šulgi 44 and Amar-Suena 1 might indicate high average agricultural yields in the Ĝirsu-Lagaš province during this six-year period, which would have been used in turn to counteract and mitigate the effects of local harvest failures on the institutional workforce. Whether the sharp drop in the number of preserved še u r₅-ra-loans after Amar-Suena 1 should be ascribed to a major shift in the economic priorities of the provincial government or to an overall contraction of the agricultural

⁴⁴ It is generally assumed that in the regions where individual temple households had less economic relevance, as in central Babylonia, institutional lending practices were virtually non-existent. However, the recent publication of the cuneiform texts belonging to the so-called “Aradĝu archive” (Studevent-Hickman 2018), stemming from a site in the vicinity of Nippur, has provided new evidence for še u r₅-ra-loans issued in a “northern” institutional setting. Aradĝu has been identified with the š a b r a -administrator of the temple household of the god Ninurta. He received large amounts of barley as še u r₅-ra-loans from the supervisor of the temple of Ninurta

(u g u l a - e₂ ^dn i n - u r t a) to be further distributed to the chief plot managers, cultivators, and ox drivers under his control. These loans are occasionally labelled as “barley loans of Ninurta” (še u r₅-ra ^dn i n - u r t a). See texts nos. 32 (Ibbi-Suen 3 xii), 61 (Ibbi-Suen 3 xii), 84 (Ibbi-Suen 3), 105 (Ibbi-Suen 3 xii), 107 (Ibbi-Suen 3 vi 16), 109 (Ibbi-Suen 3 xii), 114 (Ibbi-Suen 3 xii) published by Studevent-Hickman (2018). Note that the Ninurta temple did not grant loans to institutional workers other than its own agricultural personnel.

Tab. 9: Major institutional households and professional groups mentioned in the še ur₅-ra-loans from Ġirsu-Lagaš**Temple households and shrines**

e₂ ba-ga-ra₂ “temple of Bagara”
 e₂ d^du-mu-zi “temple of Dumuzi”
 e₂ d^ĝa₂-tu-m₃-du₁₀ “temple of Ġatumdu”
 e₂ dⁱg-alim “temple of Igalim”
 e₂ dⁱnanna “temple of Inanna”
 e₂ nam-ḥa-ni / d^amar-d^suen “house of Namḥani /
 temple of the divine Amar-Suena”
 e₂ dⁿanše “temple of Nanše”
 e₂ dⁿin-dar-a “temple of Nindara”
 e₂ dⁿin-ĝir₂-su “temple of Ninĝirsu”
 e₂ dⁿin-ĝiš-zi-da “temple of Ninĝišzida”
 e₂ dⁿin-MAR.KI “temple of NinMAR.KI”
 e₂ dⁿin-sun₂ “temple of Ninsun”
 e₂ d^šul-gi “temple of the divine Šulgi”
 e₂ urub_x^{ki} “temple of Urub”
 e₂-mu-nu-s “female quarter”
 eš₃-di-di “various shrines”

Other institutional households

e₂ da-m-ga-r₃ “house of the merchants”
 e₂ gu-za-la₂ “house of the throne-carriers”
 e₂ sukka₁ “house of the envoys”
 e₂ šabra “house of the šabra-administrators”
 e₂-ku-ruš-da “fattening house”
 e₂-u-du “sheep-pen”

Professional groups

aga₃-us₂ en-si₂ “guards of the governor”
 du-mu-da-b₅-ba “(royal) conscripts”
 e-re-n₂ ĝiš-ma-nu “e-re-n₂-workers of the ĝiš-ma-nu-wood
 (= foresters)”
 lu₂ ma₂-gal-gal “men of ‘big ships’”
 lu₂-mar-sa gu₂-ab-ba^{ki} “shipyard workers of the
 Guabba district”
 lu₂-tir “foresters”
 mu-še-n-du₃ “fowlers”
 si-pa (u-du gukka₁) “shepherds (of fat-tailed sheep)”
 si-pa un₃ gu₂-ab-ba^{ki} “shepherds and cowherds of
 the Guabba district”
 šidim “masons”
 šu-ku₆ “fishermen”

production cannot be established with certainty from the extant documentation.

On the one hand, as the available sources clearly demonstrate, the issuing of loans to state dependents could definitely be considered as a measure to avoid or reduce losses of barley, in an economic scenario in which institutional households experienced difficulty in converting unused barley into easy storable goods and non-perishable wealth.⁴⁵ On the other hand, providing access to institutional credit in times of need in the form of advances of salaries might have also been a structural necessity to prevent economic collapse. As argued by Steinkeller (2002, 116):

“It appears quite certain that, rather than being a commercial, profit-oriented venture, the še-ur₅-ra system was meant to serve as a safety-net, protecting the dependents of a given institution from economic hardship.”

In an agro-pastoral society which frequently faced economic distress, institutional credit provided by provin-

cial administrations in the form of interest-free loans – with the expectation that these would be fully repaid in the future – was indeed a low-cost buffering strategy to ensure the economic and political stability of the fragile Ur III state. This is especially true if one considers that a large percentage of the workforce employed in the cultivation of domain land and virtually all of the institutional households and professional groups of the Ġirsu-Lagaš province, including the local merchant organization, frequently needed to borrow barley through the še ur₅-ra system of institutional loans (Table 9). In addition, by granting interest-free access to the institutional barley reserve, the provincial organizations of Ġirsu-Lagaš and Umma prevented their dependent laborers from turning to local money-lenders for credit and protected themselves and their affiliates from the risk of debt bondage, which could have deprived the institutional estates of part of their personnel (Garfinkle 2004, 26).

Irrigation agriculture in the alluvium required tight managerial control, specialized agricultural personnel, and constant maintenance of the hydraulic infrastructure. Despite inescapable spatial and temporal variability in crop yields, the agricultural productivity in third millennium southern Babylonia was generally high enough to

⁴⁵ Cf. the study by Breckwoldt (1995–96) on the management of grain storage in Old Babylonian Larsa.

provide a substantial surplus of barley. However, agrarian production was exposed to numerous natural and human factors that could adversely affect the agricultural cycle: climatic fluctuations, high water levels and destructive spring floods coinciding with the harvest period, recurring infestation by pests, soil degradation and progressive salinization resulting in extended fallow practices and long-term leaching, and negligence in water and land management (Paulette 2012; Altaewel 2018; Rost 2019). Occasional bad harvests could always occur locally.⁴⁶ Under such circumstances, the social reproduction of both the ruling elites and the workforce employed on their estates largely depended on the increased circulation of the wealth of the land: barley.

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- ⁴⁶ This is best illustrated by a small dossier of tablets from Ĝirsu-Lagaš dating to Šulgi 34. In months viii–xii of that year, a group of fullers employed at the textile workshop attached to the household of the ereš-diĝir-priestess of Bau were forced to borrow barley for their sustenance at a rate of 540 liters per month because their fields had not been irrigated (a zlag₇ a-ša₃-ba a nu-de₂-a-me) and consequently had not been cultivated or had yielded a poor harvest (Notizia 2017–19, 273–74). For the household of the ereš-diĝir-priestess of Bau in the Ur III period, see most recently Borrelli (2021).

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Tab. 10 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/š u ba-ti)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub a-ša ₃ -maḫ	48.0.0	Ur-Nanše		kišib Alla dumu Kuda (Seal: Alla dub-sar dumu Kuda nu-banda ₃)	eren ₂		še ur ₅ -ra eren ₂ -na	Š 48 vii	BM 20858a = SEL 34–36, p. 265 no. 5
i ₃ -dub e ₂ -den-ki (še-numun Ur-Damu-ta)	5.4.0			kišib Lugal-pae (Seal: illegible)	29 ġuruš 0.1.0-ta (aga ₃ -uš ₂ ensi ₂ -me)		še ur ₅ -ra aga ₃ -us ₂ ensi ₂ -me	Š 48 ix	HLC 1, 65
i ₃ -dub e ₂ -den-ki (še-numun Ur-Damu-ta)	6.0.0			kišib Arad-Nanše dumu Bazige (Seal: Arad-Nanše dumu Bazige)	30 ġuruš 0.1.0-ta (aga ₃ -us ₂ ensi ₂ -me)		še ur ₅ -ra aga ₃ -us ₂ ensi ₂ -me	Š 48 ix	Nisaba 33, 896
NO	6.0.0			kišib Bau-ibgul (Royal seal: Bau-ibgul ra ₂ -gaba)	Bau-ibgul ra ₂ -gaba		še ur ₅ -ra-ka-m	Š 48 ix	MVN 12, 294
e ₂ -dur ₃ ad-da	4.0.0	Lu-Ninġirsu		Lu-Bau dumu Alla š u ba-ti	20 š u-i 0.1.0-ta		še ur ₅ -ra-ka-m	Š 48 ix	Nisaba 18, 112
i ₃ -dub e ₂ -den-ki	1.0.0		ġiri ₃ Sasa(ga)	Ur-Enlila š u ba-ti mu Ur-Bagara dumu Gu'u-š e ₃ kišib Ur-Nimmug ib ₂ -ra (Seal: Ur-Nimmug dub-sar dumu Lu-Bau suk-kal-maḫ)	eren ₂	e ₂ ġinanna	še ur ₅ -ra eren ₂ -na e ₂ ġinanna-ka-š e ₃	Š 48 x	MVN 11, 37
ġa ₂ -nun	2.0.0			Ur-saga dumu išib Abbaġu šeš-a-ni š u ba-ti-eš ₂	Ur-saga dumu išib Abbaġu šeš-a-ni		še ur ₅ -ra-ka-m	Š 48 x	MVN 12, 296
i ₃ -dub e ₂ -den-ki	3.0.0		ġiri ₃ Sasaga	kišib Arad-Nanše dumu Bazige (Seal: Arad-Nanše dumu Bazige)	30 ġuruš 0.0.3-ta (aga ₃ -us ₂ ensi ₂)		še ur ₅ -ra aga ₃ -us ₂ ensi ₂	Š 48 x	MVN 12, 300 (collated)
i ₃ -dub e ₂ -den-ki	9.1.0		ġiri ₃ Sasaga	kišib Ur-Lamma dumu Ur-Nungal (Seal: Ur-Lamma dumu Ur-Nungal)	e ₂ gu-za-la ₂ -me e ₂ gu-za-la ₂	e ₂ gu-za-la ₂	še ur ₅ -ra e ₂ gu-za-la ₂ -me	Š 48 x	Nisaba 33, 844

Tab. 10 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šu ba-ti)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub e ₂ en-ki	9.3.0		ġiri ₃ Sasaga	kišib Dagu (ugula) eren ₂ e ₂ kurušda (Seal: illegible)	40 ġuruš 0.1.0-ta e ₂ kurušda		še ur ₅ -ra e ₂ kurušda	Š 48 x	Nisaba 33, 894
i ₃ -dub bara ₂ -si-ga	51.4.0	Ur-Nanše		Ur-Eminnu saġġa Nanše šu ba-ti	25 engar 0.4.0-ta (e ₂ dnanše) 5 nu-banda ₃ -gu ₄ 0.3.0-ta 144 eren ₂ 0.1.0-ta		še ur ₅ -ra [...]	Š 48 xi	MVN 12, 304
i ₃ -dub ġiš-gi	[x]+4.0.0	Ur-Nanše		Ur-Saġġar-Bau šu ba-ti	Ur-Saġġar-Bau		še ur ₅ -ra	Š 48 xi	MVN 12, 309
i ₃ -dub bara ₂ -si-ga	6.0.0	Ur-Nanše	nu-banda ₃ Ur-Bau dumu Ur-saga	kišib/šu ba-ti Arad-Nanše dumu Bazige (Seal: Arad-Nanše dumu Bazige)	aga ₃ -us ₂ ensi ₂ dumu niġin ^{ki}		še ur ₅ -ra aga ₃ - us ₂ ensi ₂ dumu niġin ^{ki}	Š 48 xi ^{dtri}	Amherst 21
i ₃ -dub (a)-ša ₃ ġiš-gi	46.4.0	Ur-Nanše		Ur-Lamma šu ba-ti	eren ₂		še ur ₅ -ra mu eren ₂ -na-še ₃	Š 48 xi ^{dtri}	BM 21033 = SFL 34–36, p. 266 no. 6
i ₃ -dub bara ₂ -si-ga	3.3.0	Ur-Nanše	ugula saġġa Dumuzi	Lu-niġir dumu Ur-saga šu ba-ti	eren ₂	(e ₂ ddumu-zi)	še ur ₅ -ra eren ₂ -na	Š 48 xi ^{dtri}	LAOS 1, 15
i ₃ -dub ħe-ġal ₂	17.3.0	Ur-Bau	ugula Lugal-zuluġu	kišib Lu-diġira dumu [...] (Seal: [Lu-diġira] dub-sar [...] a-ba- [...])	engar nu-banda ₃ -gu ₄ e ₂ dšul-gi šu ba-ab-ti	e ₂ dšul-gi	še ur ₅ -ra	Š 48 xi ^{dtri}	MVN 12, 310 (collated)
i ₃ -dub a-ša ₃ ġiš-gi	45.0.0	Ur-Nanše		kišib Lugal-kagena dumu Atu (Seal: Lugal-kagena dub-sar dumu Atu)	eren ₂		še ur ₅ -ra eren ₂ -na	Š 48 xi ^{dtri}	Nisaba 10, 50
i ₃ -dub ħe-ġal ₂	16.3.0	Ur-Bau	ugula saġġa [NinMAR.KI]	(kišib) Al[la dumu Kaġu [i ₂ -ra]	eren ₂		še ur ₅ -ra eren ₂ -na	Š 48 xi ^{dtri}	Nisaba 10, 91 (collated)
i ₃ -dub a-ša ₃ ħe-ġal ₂ gu-la	23.1.0	Ur-Bau dumu Bazi		mu Ur-Bau šabra-še ₃ Ur-saga dumu Ur-ġiġir šu ba-ti	engar nu-banda ₃ -gu ₄ ġi ₂ -su)	(e ₂ dnin- ġi ₂ -su)	še ur ₅ -ra engar nu-banda ₃ -gu ₄	Š 48 xi ^{dtri}	PPAC 5, 1609

Tab. 10 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub a-ša ₃ gi-daḫ-ḫa	11.2.0	Ur-Nanše		mu Ur-kisal-še ₃ kišib ḫabaluge ib ₂ -ra	sipa-e-ne		zi ₃ -ka še ur ₅ -ra sipa-e-ne-še ₃ še šuku-ra ensi ₂	Š 48 xi ^{dtri}	SAT 1, 317 (collated)
i ₃ -dub a-ša ₃ ḡiš-gi	8.0.0	Ur-Nanše		Lu-kirizal šubati mu Lu-kirizal-še ₃ kišib Eninnakal nu-banda ₃ -gu ₄ ib ₂ -ra	Lu-kirizal		še ur ₅ -ra	Š 48 xi ^{dtri}	SAT 1, 320
i ₃ -dub ḫe-ḡal ₂	5.0.0	Ur-Bau	nu-banda ₃ Lu-Utu	kišib Lu-Dumuzi ugula (Seal: Lu-Dumuzi dumu Ur-ḡipara gudu ₄ dinanna)	eš ₃ -didli-me	eš ₃ -didli	še ur ₅ -ra	Š 48 xi ^{dtri}	SAT 1, 338
i ₃ -dub bara ₂ - si-ga	6.0.0	Ur-Nanše		kišib Lu-kirizal šeš Lugal- pae ugula (Seal: Lu-kirizal dub-sar dumu Lu-Ašnan)	aga ₃ -us ₂ ensi ₂ dumu niḡin ^{ki}		še ur ₅ -ra aga ₃ - us ₂ ensi ₂ dumu niḡin ^{ki}	Š 48 xi ^{dtri}	TLB 3, 148

Tab. 11: The še ur₅-ra loans of year Amar-Suen 1

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	0.2.0 0.2.0 (0.4.0)	saḡḡa NinMAR.KI		kišib Lu-kirizal dumu Ur-Bau	PN PN		še ur ₅ -ra su-su-dam	AS 1	CUSAS 16, 137
NO	91.2.3			Ur-mes dumu Badari šubati	dumu-dab ₅ -ba		še ur ₅ -ra dumu- dab ₅ -ba še den-Il ₂ -la ₂	AS 1	CUSAS 16, 138
NO	3.3.4.5 sil ₃	Bazi		Ur-Ninḡirsu šubati	eren ₂		še ur ₅ -ra eren ₂ -na (for two months)	AS 1 v-vi	MVN 12, 333

Tab. 11 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
NO	0.1.0	[...]		Ur-Damu šubati	eren ₂		še ur ₅ -ra eren ₂ -na ma ₂ ki-ša-ra-ta	AS 1 vii	PPAC 5, 1618
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	1.3.0	saḡḡa NinMAR. KI	ugula saḡḡa NinMAR.KI	kišib Lu-ḫARSARA nu-banda ₃ -gu ₄ (Seal: Lu-ḫARSARA dumu Sala)	5 engar 0.1.0-ta 1 nu-banda ₃ -gu ₄ 0.3.0-ta	(e ₂ dnin-MAR. KI)	še ur ₅ -ra	AS 1 ix	BM 85421a = SEL 34–36, p. 266 no. 7
NO	61.0.0	Ur-Enlila		Lu-essa šubati	Lu-essa		še ur ₅ -ra še den-il ₂ -la ₂	AS 1 ix	BM 85647 = SEL 34–36, p. 267 no. 8
NO	122.0.0	Ur-Enlila		[...]	sipa unu ₃ gu ₂ -ab-ba ^{hi} -me		še ur ₅ -ra še den-il ₂ -la ₂	AS 1 ix	CTPSM 1, 58
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	58.1.2	saḡḡa NinMAR.KI		kišib Ur-Eninnu saḡḡa Ninḡišida (Seal: Ur-Lamma ensi ₂ Lagaš Ur-Eninnu dub-sar dumu Allaḡu šabra arad ₂ -zu)	eren ₂ engar ša ₃ -gu ₄	(e ₂ dnin-ḡiš- zi-da)	še ur ₅ -ra eren ₂ engar ša ₃ -gu ₄	AS 1 ix	MVN 12, 341
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	128.4.2	saḡḡa NinMAR.KI		Ur-Nanše dumu ensi ₂ šubati mu Ur-Nanše-še ₃ kišib Alla dumu Kaḡu ib ₂ -ra (Seal: Ur-Iedena dub-sar dumu Kaḡu)	engar ša ₃ -gu ₄ u ₃ eren ₂	(e ₂ dnin- ḡir ₂ -su)	še ur ₅ -ra engar ša ₃ -gu ₄ u ₃ eren ₂	AS 1 ix	MVN 12, 342
NO	3.0.0	Ur-Likala		Ur-Damu šubati	eren ₂		še ur ₅ -ra eren ₂ -na	AS 1 ix	Nisaba 18, 118
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	8.0.0	saḡḡa NinMAR. KI	(20 ḡuruš) ugula Ur-Abbinun (20 ša ₃ -gu ₄) ugula Zina nu-banda ₃ - gu ₄	kišib Zina nu-banda ₃ -gu ₄ (ib ₂ -ra) (Seal: Zina nu-banda ₃ -gu ₄ dumu Ubat)	20 ḡuruš 0.1.0-ta (ugula PN) 20 ša ₃ -gu ₄ 0.1.0- ta (ugula PN nu-banda ₃ -gu ₄)	e ₂ dninna- me	še ur ₅ -ra	AS 1 ix	NYPL 347

Tab. 11 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šuba-ti)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub a-ša ₃ ħe-ġal ₂	[...] [...] 22.2.2 KI	saġġa NimMAR. KI	ugula saġġa Nanše	Lugal-zagesi šuba-ti	[PN] nu-banda ₃ -gu ₄ [nu-banda ₃]PN nu-banda ₃ PN	(e ₂ dnanše)	še ur ₅ -ra eren ₂ -na	AS 1 ix	PPAC 5, 1620
i ₃ -dub a-ša ₃ ħe-ġal ₂	1.1.0	saġġa NimMAR.KI		kišib Lu-gula nu-banda ₃ -gu ₄ (Seal: Lu-gula dumu Lugal-... nu-banda ₃ -gu ₄)	2 engar 0.1.0-ta 4 ša ₃ -gu ₄ 0.1.0-ta		(še ur ₅ -ra)	AS 1 ix	SAT 1, 332
a-ša ₃ ħe-ġal ₂	0.3.0 0.2.0 0.3.0 0.3.0 (2.1.0)	saġġa NimMAR.KI		kišib Gugu (a-igi-du ₈ ; one of the recipients) (Seal: Ur-Lamma a-igi-du ₈ dumu E-LAGAB.LAGAB.BI.X)	PN a-igi-du ₈ PN a-igi-du ₈ PN PN		še ur ₅ -ra	AS 1 x	Amherst 57
i ₃ -dub a-ša ₃ ħe-ġal ₂	0.2.0 0.2.0 (0.4.0)	saġġa NimMAR.KI		kišib Ur-Dumuzi (Seal: Ur-Dumuzida dumu Atu)	PN PN (ugula UN-il ₂ -me)		še ur ₅ -ra su-su-dam	AS 1 x	AUCT 3, 356
i ₃ -dub a-ša ₃ ħe-ġal ₂	7.3.4	saġġa NimMAR. KI	ġiri ₃ Ġirine (ugula) eren ₂	mu Ur-kisal ugula-še ₃ kišib Lu-gula nu-banda ₃ -gu ₄ (Seal: Lu-gula dumu Lugal-... nu-banda ₃ -gu ₄)	eren ₂		še ur ₅ -ra eren ₂ -na	AS 1 x	BM 22900 = SEL 34–36, p. 267 no. 9
NO	1.0.0	Ur-Enlila	nu-banda ₃ Gudea	kišib Lu-Bau (Seal: Lu-Bau dumu Ur-gigir)	Lu-Bau		še ur ₅ -ra den- lil ₂ -la ₂ -aš	AS 1 x	BM 25960 = SEL 34–36, p. 268 no. 10
NO	2.1.0	Ur-Enlila		kišib Ur-kisikika (Seal: Ur-kisikika dub-sar dumu Nanšekam)	Ur-kisikika		še den-lil ₂ -la ₂ su-su-dam	AS 1 x	BPOA 1, 67
i ₃ -dub ħe-ġal ₂	6.0.0	saġġa NimMAR.KI		Unil (šuba-ti)	nu- ^{ŠS} kir ₆		še ur ₅ -ra nu- ^{ŠS} kir ₆	AS 1 x	CT 3, 19 BM 14604
i ₃ -dub ħe-ġal ₂	0.2.0	saġġa NimMAR.KI		[...]namtara šuba-ti	[...]namtara		še ur ₅ -ra	AS 1 x	CTPSM 1, 59

Tab. 11 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
NO	0.3.0	saġġa NimMAR.KI		Dada nar-gu-la šubati	Dada nar-gu-la		še ur ₅ -ra	AS 1 x	CUSAS 16, 136
i ₃ -dub ħe-ġal ₂	0.2.0			Lugal-dumugir šubati mu Lugal-dumugir-še ₃ kišib Lu-Nadua dumu Ur-Dumuzi (Seal: Lu-Nadua dumu [Ur-Dumuzi])	Lugal-dumugir		še ur ₃ -ra	AS 1 x	HLC 1, 64
i ₃ -dub a-ša ₃ ħe-ġal ₂	26.4.0	saġġa NimMAR.KI		Ur-Numušda saġġa Urub šubati	eren ₂ engar ša ₃ -gu ₄ nu-banda ₃ -gu ₄	(e ₂ urub _x ^{ki})	še ur ₃ -ra eren ₂ engar ša ₃ -gu ₄ nu-banda ₃ -gu ₄	AS 1 x	MVN 11, 136
i ₃ -dub ħe-ġal ₂	14.0.0	saġġa NimMAR. KI	Luna maškim'	Ur-Nanše dumu Ur-Bau šubati	lu ₂ -mar-sa gu ₂ - ab-ba ^{ki}		še ur ₅ -ra lu ₂ - mar-sa gu ₂ -ab- ba ^{ki}	AS 1 x	MVN 15, 47
NO	(3.2.0)	Ur-Enlila		kišib Ur-Ningišzida dumu Ur-saga (Seal: Ur-Ningišzida dub-sar dumu Ur-saga)	17 ġuruš 0.1.0-ta		še ur ₃ -ra	AS 1 x	Nisaba 10, 5
i ₃ -dub a-ša ₃ ħe-ġal ₂	5.1.0	saġġa NimMAR. KI	nu-banda ₃ Ur-saga dumu Lugal- igi	Ur-Saġub šeš-gal nam-10 šubati	eren ₂	e ₂ lugal- igi-me	še ur ₅ -ra eren ₂ e ₂ lugal-igi-me	AS 1 x	Nisaba 10, 32
i ₃ -dub a-ša ₃ ħe-ġal ₂	90.0.0	saġġa NimMAR. KI	ugula saġġa Dumuzi	Ur-Bau dumu Lu-Dumuzi šubati	eren ₂ engar ša ₃ -gu ₄ ab-ba ab-ba	(e ₂ ddumu-zi)	še ur ₅ -ra eren ₂ engar ša ₃ -gu ₄ ab-ba ab-ba	AS 1 x	Nisaba 10, 35
i ₃ -dub a-ša ₃ ħe-ġal ₂	(1.0.0)	saġġa NimMAR.KI		Lu-gula nu-banda ₃ -gu ₄ šubati	2 engar 0.2.0-ta 0.3.0 nu-banda ₃ -gu ₄		še ur ₅ -ra-še ₃ 0.3.0 nu-banda ₃ -gu ₄	AS 1 x	Nisaba 10, 38
i ₃ -dub ħe-ġal ₂	0.2.0	saġġa NimMAR.KI		Lugal-gigire aga ₃ -us ₂ saġġa šubati	Lugal-gigire aga ₃ - us ₂ saġġa		še ur ₅ -ra	AS 1 x	Nisaba 10, 42

Tab. 11 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub he-ġal ₂	1.0.0	saġġa NIMMAR.KI		mu Ur-kisal 'x x' NimMAR. ki-še ₃ kišib Lugal-ursag gala-maḥ ḥu-rim ₃ ^{ki} (Seal: Lugal-ursag gala-maḥ ḥu-rim ₃ ^{ki})	Ur-kisal 'x x' NIMMAR.KI		še ur ₅ -ra	AS 1 x	Nisaba 10, 66 (collated)
i ₃ -dub a-ša ₃ he-ġal ₂	0.2.0 0.2.0 0.2.0 (1.1.0)	saġġa NIMMAR.KI		Bazige (<i ₃ -dab ₅ >) šu ba-ti (he is one of the beneficiaries)	PN PN PN		še ur ₅ -ra su-su	AS 1 x	Nisaba 10, 86
i ₃ -dub he-ġal ₂	0.2.0 0.3.0 (1.0.0)	saġġa NIMMAR.KI		kišib Ur-Lamma dumu Lu-Suen (Seal: Ur-[Lamma] dub-sar dumu Lu-Suen) (he is probably one of the beneficiaries)	PN PN		še ur ₅ -ra	AS 1 x	Nisaba 13, 8
i ₃ -dub he-ġal ₂	0.2.0	saġġa NIMMAR.KI		kišib/šubati Atu gudu ₄ bala(-a) (Seal: Atu sagi dumu Duga)	Atu gudu ₄ bala(-a)		še ur ₅ -ra	AS 1 x	Nisaba 13, 21
i ₃ -dub a-ša ₃ he-ġal ₂	1.0.0	Ur-Saġar- Bau	ġiri ₃ Luga'a gudu ₄ ^d inanna ḥu-rim ₃ ^{ki}	kišib Kurani-isa simug (Seal: Kurani-isa dumu Dada simug-gal)	Kurani-isa simug		(še ur ₅ -ra) su-su-dam	AS 1 x	Nisaba 13, 32
i ₃ -dub a-ša ₃ he-ġal ₂	0.2.0	Ur-Saġar- Bau		mu Ur-temenaka-še ₃ kišib Utu-bane (Seal: Utu-pae dumu Bazi engar)	Ur-temenaka		še ur ₅ -ra	AS 1 x	Nisaba 13, 42
i ₃ -dub ni-he-ġal ₂ (sic)	(3.4.0)	saġġa NIMMAR.KI		kišib Lu-melam (Seal: Lu-melam dub-sar dumu Ur-Lamma ugula bur-saġ) (he is one of the beneficiaries)	0.3.0 Lu-melam 4 i ₃ -du ₈ 0.2.0-ta 2 lu ₂ -kisal 0.1.0- ta 3 aga ₃ -us ₂ 0.2.0-ta 2 ad-KID 0.1.0-ta 2 gudu ₄ bala(-a) 0.2.0-ta		še ur ₅ -ra	AS 1 x	Nisaba 18, 119

Tab. 11 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	40.0.0	saḡḡa NIMMAR.KI		(Seal: illegible)		e ₂ [ba]-gara ₂ e ₂ ḡga ₂ - tum ₃ -du ₁₀	še ur ₅ -ra e ₂ [ba]- gara ₂ u ₃ e ₂ ḡga ₂ - tum ₃ -du ₁₀	AS 1 x	Nisaba 33, 855
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	1.2.0	saḡḡa NIMMAR.KI saḡḡa NIMMAR.KI	ugula saḡḡa NIMMAR.KI	Ur-Igizibara šubati	engar ša ₃ -gu ₄	e ₂ ḡinan- na-me	še ur ₅ -ra engar ša ₃ -gu ₄ e ₂ ḡinan- na-me	AS 1 x	PPAC 5, 939
i ₃ -dub ḫe-ḡal ₂	0.2.0	saḡḡa NIMMAR.KI		kišib NIMMAR.KIka ašgab (Seal: illegible)	NIMMAR.KIka ašgab		še ur ₅ -ra	AS 1 x	PPAC 5, 1105
NO	0.2.0 0.2.0 (0.4.0)	saḡḡa NIMMAR.KI		kišib Sukkal-DI.NE dumu Ur-Nanše ib ₂ -ta (Seal: Sukkal-DI.NE dub-sar dumu Ur-Nanše)	PN PN (gu-za-la ₂ -me)		še ur ₅ -ra	AS 1 x	PPAC 5, 1582
NO	4.1.0	Ur-Enlila		Gudea šubati	eren ₂		ša ₃ -gal eren ₂ -na še ur ₅ -ra	AS 1 x	SAT 1, 17
i ₃ -dub ḫe-ḡal ₂ -la	0.3.0 0.3.0 0.2.0 (1.3.0)			Seal: Lugal-sukkal dub-sar dumu Ga'a (one of the recipients is also son of Ga'a)	PN PN PN		še ur ₅ -ra	AS 1 x	SAT 1, 323=324 (collated)
i ₃ -dub ḫe-ḡal ₂ -la	0.2.0	saḡḡa NIMMAR.KI		kišib Kurani-isa nar (Seal: Kurani-isa dumu Lugal-[gigir])	Kurani-isa nar		še ur ₅ -ra	AS 1 x	SAT 1, 326
i ₃ -dub a-ša ₃ ḫe-ḡal ₂	3.1.4	saḡḡa NIMMAR. KI	ugula saḡḡa NIMMAR.KI	kišib Zina nu-banda ₃ -gu ₄ (Seal: Zina nu-banda ₃ -gu ₄ dumu Ubar)	engar ša ₃ -gu ₄	e ₂ ḡinan- na-me	še ur ₅ -ra engar ša ₃ -gu ₄ e ₂ ḡinan- na-me	AS 1 x	SAT 1, 328
i ₃ -dub ḫe-ḡal ₂	0.2.0	saḡḡa NIMMAR.KI		Ḡestuagu šubati mu Ḡestuagu-še ₃ kišib-ni dami ib ₂ -ra (Seal: Ur-mes dub-sar dumu Ur-Lamma ugula bur-saḡ)	Ḡestuagu		še ur ₅ -ra	AS 1 x	SAT 1, 330 (collated)

Tab. 11 (continued)

Storage facility	Barley	Provider	Conveyor Foreman Overseer	Recipient (kišib/šubati)	Beneficiaries	Institution	Remarks	Date	Text
i ₃ -dub ħe-ġal ₂	0.2.0	saġġa NIMMAR.KI		Kaġu šubati mu Kaġu-še ₃ Kaġu Ur-Lamma ib ₂ -ra (Seal: Ur-Lamma dub-sar dumu Lugal-saga saġ-d _{u₅} [...])			še ur ₅ -ra	AS 1 x	SAT 1, 331
i ₃ -dub a-ša ₃ ħe-ġal ₂	0.2.0	saġġa NIMMAR.KI		mu Ur-DUN-še ₃ kišib Unil santana ib ₂ -ra (Seal: Unil)	Ur-DUN sipa anše saġġa		še ur ₅ -ra	AS 1 x	SAT 1, 333=334 (collated)
i ₃ -dub ħe-ġal ₂	0.2.0	saġġa NIMMAR.KI		Dada nar-sa šubati	Dada nar-sa		še ur ₅ -ra	AS 1 x	SAT 1, 335
i ₃ -dub ħe-ġal ₂	0.4.0	saġġa		mu Šakuge dumu Ur-Nin- tu-še ₃ kišib Sukkal-DI.NE	PN		še ur ₅ -ra	AS 1 x	SAT 1, 336
	0.3.0	NIMMAR.KI		(Seal: Sukkal-DI.NE dub-sar dumu Ur-Nintu)	PN šui gu ₂ -en-na PN dumu pišaġ- dub-ba				
NO	5.3.0	Bazi		Ur-niġar šubati	Ur-niġar		še ur ₅ -ra-še ₃	AS 1 xi	BM 28345 = SEL 34–36, p. 268 no. 11
i ₃ -dub ħe-ġal ₂	0.3.0	saġġa NIMMAR.KI		Ur-Abġinun ma ₂ - šubati	Ur-Abġinun ma ₂ - laġ, saġġa		še ur ₅ -ra	AS 1 xi	Nisaba 10, 7
NO	10.3.0	Bazi	ġiri ₃ Ur-Bau	Ur-kisikika šubati	eren ₂		še ur ₅ -(ra) eren ₂ -na še den-lil ₂ -la ₂	AS 1 xi	Nisaba 10, 82
NO	15.0.0	Bazi		Ur-mes lu ₂ -bappir šu bati	Ur-mes lu ₂ -bap- pir		še den-lil ₂ -la ₂ še ur ₅ -ra	AS 1 xi	PPAC 5, 589