

Appendix 11. Fact and Dimension Tables for Chapter 3

Fact Tables

Support—Used in Question 2

This table assembles the facts related to the order amount and whether the NCP is currently paying this order amount. The purpose of this table is to provide the CSE organization with a distribution of the various amounts ordered and the rate of success in collecting those amounts. The goal is to identify trends and traits that might explain, for example, “Why is there a higher success rate in \$400 orders than \$500 orders but \$600 orders have the highest success rate within the distribution?” Business Question 3 (Arrears) is identical in construction to this schema. States may make the decision to incorporate the arrears data into this fact table. They have been separated here for clarity.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	X15	CSE: Case-ID	
TMonthly_Amount	N12	Transformation derived from OCSE: Amount_of_Support_Ordered and adjusted to a monthly amount	
TAmount_Code	X4	Distribution of TMonthly-Amount to discrete categories	Example: \$100, \$200, \$300, etc., as determined by the state.
Billing_Status	A12	OCSE Billing_Status	Current, Delinquent, Enforcement.
NNReport_Period	A12	New field that describes whether the period of this report is valid	This is an overview question. If a series of snapshots is to be developed, i.e., October 2000, January 2001, there must be a way to ensure the correct records are selected for each period. This field provides that link. Foreign Key (FK) Linking to the DRef_Date.
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
DNCP_VS_Record_ID	N8		FK linking to the DNCP_VS table. VS = Vital Statistics.
DCP_VS_Record_ID	N8		FK linking to the DCP_VS table.
DCase_Data_Record_ID	N8		FK linking to the DCase_Data table.
DGeographic_Record_ID	N8		FK linking to the DGeographic table.
Record Length: 111 Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic			

Table 11-1. Support

Arrears—Used in Question 3

This table assembles the facts related to order arrears and whether the NCP is currently paying this order amount. The purpose of this table is to provide the CSE organization with a distribution of the various amounts ordered and the rate of success in collecting those amounts. The operation of this question is similar to question 2 and the facts in this table could be merged with those of question 2. They have been treated as separate questions since only a subset of the records found in question 2 would also have information related to question 3. In other words, all fact records in question 2 have current order information, but not all of them are subject to arrears collection. Separating the two questions may improve efficiency depending on the overall population of orders established.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	X15	CSE: Case-ID	
TTANF_Monthly_Arrears	N12	Transformation derived from Order_Arrears_Freq and Order_Arrears_Freq_Amount	
TTANF_Arrear_Code	X4	Distribution of TMonthly_Amount to discrete categories	Example: \$100, \$200, \$300, etc., as determined by the state.
NN_TANF_Arrears_Payment_Current	A3	New field indicates whether the NCP is currently paying toward arrears.	This value is the denominator of one of the incentive measures so it is assumed to exist in some form, although no similar field appears in either the OCSE recommended elements or the CSENet 2000 data dictionary.

Table 11-2. Arrears

Field Name	Length	Information	Notes
TNon-TANF_Monthly_Arrears	N12	Transformation derived from Order_Arrears_Freq and Order_Arrears_Freq_Amount	
TNon-TANF_Arrear_Code	X4	Distribution of TMonthly_Amount to discrete categories	Example: \$100, \$200, \$300, etc., as determined by the state.
NN_Non-TANF_Arrears_Payment_Current	A3	New field indicates whether the NCP is currently paying toward arrears.	This value is the denominator of one of the incentive measures so it is assumed to exist in some form, although no similar field appears in either the OCSE recommended elements or the CSENet 2000 data dictionary.
NNReport_Period	A12	New field describes the valid report period	This field ensures that the correct records are selected for each period. FK linking to DRef_Date.
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
DNCP_VS_Record_ID	N8		FK linking to the DNCP_VS table.
Record Length: 130 bytes			

Table 11-2. Arrears (continued)

Distribution—Used in Questions 4, 5, and 6

The development of this table should be a simple, straightforward operation. However, in the combined CSENet 2000/OCSE data dictionary there are 54 elements that refer to payments, 46 fields that refer to orders, and 20 fields describing arrears. In order to clearly articulate the concepts being developed, generic names have been used.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	X15	CSE: Case-ID	FK linking to DCP_Guard.
Period	X7		FK linking to DRef_Date.
TCurrent_Support_Obligation	N12	Computed support obligation for this period	
TCurrent_Non-TANF_Arrears_Obligation	N12	Computed non-TANF arrears for this period	
TCurrent_TANF_Arrears_Obligation	N12	Computed TANF arrears for this period	
TCurrent_Payment_Amount	N12	Payment(s) received in current period	
TCurrent_Payment_Date	D8	Date current payment Received	
TCurrent_Support_Payment	N12	Computed support payment	
TCurrent_Non_TANF_Arrears_Payment	N12	Computed Non-TANF arrears Payment	
TCurrent_TANF_Arrears_Payment	N12	Computed TANF arrears payment	
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
DNCP_VS_Record_ID	N8		FK in the DNCP_VS table. VS = Vital Statistics.
DCP_VS_Record_ID	N8		FK linking to the DCP_VS table.
DCase_Data_Record_ID	N8		FK linking to the DCase_Data table.
DGeographic_Record_ID	N8		FK linking to the DGeographic table.
DArrears_Record_ID	N8		FK linking to the DArrears table.
DCP_Address_Record_ID	N8		FK linking to the DCP_Address table.
DNCP_Address_Record_ID	N8		FK linking to the DNCP_Address table.
DEnforcement_Record_ID	N8		FK linking to the DEnforcement table.
Record Length: 202 Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphanumeric			

Table 11-3. Distribution

Dimension Tables

DNCP_VS—Used in Questions 2, 3, 4, 5, and 6

This table contains the vital statistics for the NCP. Some states may include additional fields related to NCP vital statistics. Three important points to remember about dimension tables:

- They can be extremely broad, i.e., having a large number of fields.
- Third-form normalization is neither required nor necessarily desired.
- Dimension tables can participate in more than one star schema, which is why some fields may appear here that have no bearing on the current business question.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	X15	CSE: Case-ID	
NNCP_Category	N2	Field use to describe the NCP's category	Examples: (suggested) 0 = Current, no arrears 1 = Current, Support, TANF Arrears, No non-TANF Arrears 2 = Current, Support, TANF Arrears, Non-TANF Arrears 99 = In prison for child support evasion
Date-of-Birth-NCP	D8	CSE Date-Of-Birth	CSE has one field name for both the NCP and CP Date of birth. Ownership is determined by the record type in which the value is found. Renamed for DSS operations.
TNCP_Age	N2	Transformed value derived from Date-of-Birth-NCP	
TNCP_Age_Code	N2	Code derived from TNCP_Age based on state's desired distribution	
NNEducation	A12	New field that reflects NCP's highest level of education. Some states may not have this data available	
NCP_Occupation	A105	OCSE NCP's primary occupation	To further structure this field, the U.S. Department of Labor, Employment and Training Administration (ETA), has an occupation database available at no charge to federal and local governments. See O*Net Occupational Listings . Appendix 12 contains a listing of broad categories; Appendix 15 lists individual occupations.
TNCP_Occupation_Category	A53	More generalized definition than occupation	
NN_Occupation_Code	X11	New Department of Labor occupation code	
NCP_Employer	A106	OCSE NCP's Current Employer	See Bincs database products for information on how this field can be further structured. Because a company name can be entered in several different ways, it is recommended that this field be coded and linked to an interactive query box similar to those found in online address books.
NCP_Race	N1	OCSE	
Wage-Amount	N12	CSE: indicates the amount of wages reported by the non-custodial parent's First employer	NCP second and third employer wages not included in this table. It may be useful to combine all current wages into a field called TWage-Amount. This value would need to be normalized to a standard reporting period (weekly, monthly, etc.).
TMonthly_Wage	N12	Transforms Wage-Amount to a monthly value. If the field TWage-Amount is created (see note above), this field will not be required. A different reporting period may be used.	If a reporting period other than monthly is used, the period in TMonthly-Amount needs to reflect the same period of time.
TMonthly_Wage_Code	X3	Transform similar to Amount_Code in DNCP_Data.	
TNum_Children	N2	Field derived from OCSE: Name_of_Child(ren)_Identified_in_Order	

Table 11-4. DNCP_VS

Field Name	Length	Information	Notes
NTNum_Orders	N2	This is both a new as well as a transformational field and may be too difficult to create, or the value of the information might be minimal. The field is the result of locating and counting all NCP orders that are in force.	One of the difficulties with this field is the use of aliases and different SSNs. The most this field could accurately report is the number of outstanding orders associated with this name and SSN.
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
Record Length: 422 (est) Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic			

Table 11-4. DNCP_VS (continued)

DCP_VS—Used in Questions 2, 3, 4, 5, and 6

This table contains the vital statistics for the CP. Some states may include additional fields related to CP vital statistics.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	A15	CSE: Case-ID	
Date-Of-Birth-CP	D8	CSE: Date-Of-Birth	CSE has one field name for both the NCP and CP date of birth. Ownership is determined by the record type in which the value is found. Renamed for DSS operations.
TCP_Age	N2	Transformed value derived from Date-of-Birth-CP	
TCP_Age_Code	N2	Code derived from TNCP_Age based on state's desired distribution	
NNEducation	A12	New field that reflects NCP's highest level of education. Some states may not have this data available	
Occupation	A105	OCSE CP's primary occupation	To further structure this field, the U.S. Department of Labor, Employment and Training Administration (ETA), has an occupation database available at no charge to federal and local governments. See O*Net Occupational Listings . Appendix 12 contains a listing of broad categories; Appendix 15 lists individual occupations.
TCP_Occupation_Category	A53	Based on occupation more generalized definition than occupation	
NN_CPOccupation_Code	X11	New Department of Labor occupation code	
CP_Employer	A106	OCSE CP's Current Employer	See Bincs database products for information on how this field can be further structured. Because a company name can be entered in many ways, it is recommended that this field be coded and linked to an interactive query box similar to those found in online address books.
CP_Race	N1	OCSE	
Wage_Amount	N12	CSE: indicates the amount of wages reported by the custodial parent's first employer	
TMonthly_Wage	N12	Transforms Wage-Amount to a monthly value. A different reporting period may be used.	If a reporting period other than monthly is used, the period in TMonthly-Amount needs to reflect the same period of time.
TMonthly_Wage_Code	X3	Transform similar to Amount_Code in DNCP_Data	

Table 11-5. DCP_VS

Field Name	Length	Information	Notes
TNum_Children	N2	Field derived from OCSE: Name_of_Child(ren)_Identified_in_Order	
Participant_Status	A17	OCSE: Assistance, Never Assisted, Former Assistance	
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
Record Length: 422 (est) Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic			

Table 11-5. DCP_VS (continued)

DCase_Data—Used in Questions 2, 3, 4, 5, and 6

This table contains all case-related data. States may add additional fields they have available. Important Note: Data in a DSS is relatively static so several calculations have been included in the record, such as NN_Num_Days_Payment1, to improve system performance to the end user. These calculations are performed and inserted during the ETL process.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	X15	CSE: Case-ID	
Case-Type	A19	CSE: indicates the type of child support case	TANF, Foster Care Arrears Only, Foster Care, Medical Care, Non TANF, TANF Arrears Only, Former Assistance, Never Assistance, Non IV-D
Case_Contact_Person	A24	CSE: Assumed to be case worker	
NN_Office	A24	New: Office having administrative control of case	
NN_Judge_Administrator	A24	New: Judge or administrator who established the order	
Date_Application_Received_by_IV-D_Agency	D8	OCSE	
Date_Case_Established	D8	OCSE	
Date_Paternity_Established	D8	OCSE	
Date_Of_Locate_Attempt	D8	OCSE	
Date_Paternity_Established	D8	OCSE	
Date_Of_Locate_Attempt	D8	OCSE	
Date_NCParent_Located	D8	OCSE	
Date_Of_Order	D8	OCSE	
Order-Effective-Date	D8	CSE	
NN_Date_First_Payment	N4	New: Date the first payment for this case was received	This is for the case not the current order
NN_Num_Days_Established	N4	New: Number of days between when the application was received and when the case was established	
NN_Num_Days_Paternity	N4	New: Number of days between when the application was received and when paternity was established	
NN_Num_Days_Locate	N4	New: Number of days between when the application was received and when the NCP was located	
NN_Num_Days_Order	N4	New: Number of days between when the application was received and when the order was established	
NN_Num_Days_Payment1	N4	New: Number of days between when the application was received and receipt of first payment	
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
Record Length: 216 Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic			

Table 11-6. DCASE_Data

DRef_Date—Used In Questions 2, 3, 4, 5, and 6

This is a reference table used in all CSE data marts to express given date values in a number of related ways. There may be a temptation to calculate all of these values on an ad hoc basis. Do not do this. As was pointed out earlier, a table of this size for a 10-year period will take up less than one megabyte. Consider the following question: How many cases were established on a certain day of the week? With a date reference table, the answer will be returned almost immediately. If the day of week value has to be calculated for each “case establishment date” in the data mart, the response will take significantly longer. To re-stress a point: Building a data mart is not about saving disk space or devising eloquent algorithms. It is about providing information to the end user as rapidly as possible.

Field Name	Length	Information	Notes
Date	D8	Date within range of table, usually 10 years	06/14/2002
Year	N4	Year of Today's Date	2002
Fiscal_Year_Quarter	X9	Fiscal Year quarter of Today's Date	3Q FY2002
Calendar_Year_Quarter	X9	Calendar Year Quarter of Today's Date	2Q CY2002
Month	A9	Month Name	June
Day	A9	Day of Week	Friday
Record Length: 48 Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic			

Table 11-7. DRef_Date

DGeographic—Used in Questions 2, 3, 4, 5, and 6

Contains geographic information relevant to the case. Several lookup tables are also required for FIPS codes and ZIP codes.

Field Name	Length	Information	Notes
Record_ID	N8	Primary Key	
Case-ID	X15	CSE: Case-ID	
Order-FIPS-State	N2	CSE: indicates the State FIPS code in which the order was established.	Supported by FIPS Lookup Tables
Payment-FIPS-State	N2	CSE: specifies the 1st and 2nd digits of the FIPS code for the payment mailing address	Supported by FIPS Lookup Tables
Payment-FIPS-County	N3	CSE: specifies the 3rd, 4th and 5th digits of the FIPS code used, for the payment mailing address	Supported by FIPS Lookup Tables
Payment-FIPS-Sub	N2	CSE: specifies the 6th and 7th digits of the payment FIPS code	Supported by FIPS Lookup Tables
Order-FIPS-County	N3	CSE: indicates the county FIPS code in which the order was established	Supported by FIPS Lookup Tables
Order-FIPS-Sub	N2	CSE: specifies the 6th and 7th digits of the FIPS code in the State in which the order was established	Supported by FIPS Lookup Tables
Participant-ZIP-1	N9	CSE: specifies the participant's ZIP Code	ZIP only, not ZIP+4
Mailing-ZIP-1 & Mailing-ZIP-2	N9	CSE: specifies the non-custodial parent's mailing address ZIP Code	Converted to ZIP+4 format
Last-Res-ZIP-1 & Last-Res-ZIP-2	N9	CSE: specifies the ZIP Code of the non-custodial parent's last known residence	Converted to ZIP+4 format
NN_Voting_District_Federal	X10	New: Federal Voting District where CP Resides	Might consider replacing with managing office
NN_Voting_District_Local	X10		Might consider replacing with managing office
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	
Record Length: 100 Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic			

Table 11-8. DGeographic

DArrears_Summary—Used in Questions 3, 4, 5, and 6

This table contains summary arrears information. Add a new record at the end of each billing cycle to reflect the current status instead of updating the existing record with new values.

Field Name	Length	Information	Notes
Record_ID	N8		
Case-ID	X15	CSE	
NCP-SSN	N9	CSE field included here because it is possible that two NCPs for the same case may be paying arrears	
Arrears-TANF-Amount	N12	CSE field indicates the total dollar amount of the TANF arrears balance	
Arrears-Non-TANF-Amount	N12	CSE field indicates the total dollar amount of the non-TANF arrears balance	
Order-Arrears-Total-Amount	N12	CSE field indicates the total dollar amount of arrears owed	Assumed to be total of TANF and non-TANF arrears.
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	

Record Length: 84 bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic

Table 11-9. DArrears_Summary

DNCP_Address—Used in Questions 5 and 6

This table decomposes the NCP’s address information to a very discrete level.

Field Name	Length	Information	Notes
Record_ID	N8		
Case_ID	X15		
NAdd_Value	X9	Alphanumeric portion of address	123, 322-B, etc
NPlace_Name	X32	Name of street, road, boulevard, court, etc.	
NVenue_Type	X15	Street, road, boulevard, court, etc.	
NDomicile_Type	X15	Apartment, house, shelter, dormitory, etc.	
NDom_Sub_Ref	X9	Apartment number, room number, unit number, etc.	
NCity	X24		
NState	A2		
NZIP	N9	ZIP+4	
NSubdivision	X32	Apartment name, subdivision name, etc.	King’s Arms, Friendly Acres, etc.
NCounty	X32		
NCong_District	X3		
NPopular_Name1	X32	Popular name for the area	The swamp
NPopular_Name2	X32	Second popular name for the area	Fort Apache
NAddress_Type	X32	Known Good, Current, Suspected, Last Known, etc.	
Date_Created	D8	Computer Generated	
Date_Modified	D8	Computer Generated	

Record Length: 332 Bytes X = Alphanumeric, N = Numeric, D = Date, A = Alphabetic, B = Byte

Table 11-10. DNCP_Address

DCP_Address—Used in Questions 5 and 6

This table decomposes the CP’s address information to a very discrete level.

Field Name	Length	Information	Notes
Record_ID	N8		
Case_ID	X15		
NAdd_Value	X9	Alphanumeric portion of address	123, 322-B, etc.
NPlace_name	X32	Name of street, road, boulevard, court, etc.	
NVenue_type	X15	Street, road, boulevard, court, etc.	
NDomicile_Type	X15	Apartment, house, shelter, dormitory, etc.	
NDom_Sub_Ref	X9	Apartment number, room number, unit number, etc.	
NCity	X24		
NState	A2		
NZIP	N9	ZIP+4	
NSubdivision	X32	Apartment name, subdivision name, etc.	King’s Arms, Friendly Acres, etc.
NCounty	X32		

Table 11-11. DCP_Address

Field Name	Length	Information	Notes
NCong_District	X3		
NPopular_Name1	X32	Popular name for the area	The swamp
NPopular_Name2	X32	Second street name for the area	Fort Apache
NCP_SSN	N9	SSN	
NNCP_SSN	N9	NCP SSN	
NAddress_Type	X32	Known Good, Current, Last Known, etc.	
NVI_Verified	A3	Violence indicator (VI) has been verified, and this record is authorized	Field should be validated nightly. Value can be applied retroactively. That is, if earlier records did not contain a positive VI and the latest does, all previous records are removed.
Date_Created	D8	Computed value	
Date_Modified	D8	Computed value	Should never be more than 24 hours old.
Record Length: 349 Bytes			

Table 11-11. DCP_Address (continued)

DCPGuard—Used in Questions 5 and 6

This table identifies all records that have a positive Violence Indicator.

Field Name	Length	Information	Notes
Record_ID	N8		
Case_ID	X15		
NCP_SSN	N9	NCP SSN	
CP_SSN	N9	CP SSN	
Record Length: 57 bytes			

Table 11-12. DCPGuard

DEnforcement—Used in Question 6

This table is a generic representation of the various enforcement actions and captures key dates in the evolution of an enforcement action. The key dates used here are for illustration only; each state may add or remove data elements as necessary.

In operation, the system identifies the collection records that have matches in the DEnforcement table. If the review or appeals process has not nullified the enforcement action, it associates T_Current_Payment_Date with one of the key dates below. For example, if the receipt of notification date was 06/15/2002 and a payment was received on 06/17/2002, the association would be with the receipt of notification date

Field Name	Length	Information	Notes
Record_ID	N8		
Case_ID	X15		
NInitiation Date	D8		
NNotification_Date	D8		
NNotification_Receipt_Date	D8		
NReview_Date	D8		
NAppeal_Date	D8		
NImplementation_Date	D8		
NUpheld	A3	Indicates if the enforcement action was upheld during the review and appeal phase.	
Record Length: 74 bytes			

Table 11-13. DEnforcement