Appendix B: Data Dictionary

FactSales

Attribute	Description	Source Table/Field	Transformation
SalesKey	Primary surrogate key for fact table	N/A	Auto-generated IDENTITY(1,1)
CustomerKey	Foreign key to DimCustomer	sales_orders/Customer_ID	Lookup transformation using Customer_ID
ProductKey	Foreign key to DimProduct	products/Product_ID (via sales_order_details/Product_Number)	Lookup transformation using Product_ID
SupplierKey	Foreign key to DimSupplier	products/Supplier_ID	Lookup transformation using Supplier_ID
TerritoryKey	Foreign key to DimTerritory	sales_territory/Territory_ID (via sales_orders)	Lookup transformation using Territory_ID
TimeKey	Foreign key to DimTime	sales_orders/Order_Date	Convert to YYYYMMDD integer format, lookup to DimTime
Order_ID	Business key for order identification	sales_order_details/Sales_Order_Number	Direct mapping
Order_Line_ID	Line item identifier within order	sales_order_details/Order_Line_ID	Direct mapping
Unit_Price	Actual selling price per unit	sales_order_details/Unit_Price	Direct mapping
Unit_Cost	Standard cost per unit	products/Standard_Cost	Direct mapping
Unit_List_Price	Manufacturer suggested retail price	products/List_Price	Direct mapping
Units_Sold	Quantity of units sold	sales_order_details/Order_Qty	Direct mapping
Line_Revenue	Total revenue for order line	sales_order_details/Line_Total	Direct mapping
Line_Cost	Total cost for order line	Calculated	Standard_Cost × Order_Qty
Line_Gross_Profit	Gross profit for order line	Calculated	(Unit_Price - Standard_Cost) × Order_Qty

DimCustomer

Attribute	Description	Source Table/Field	Transformation
CustomerKey	Surrogate primary key	Auto-generated	IDENTITY(1,1)
Customer_ID	Business key for customer	customers.Customer_ID	
Customer_Name	Full customer name	customers.First_Name, customers.Last_Name	Concatenated with space

Segment	Customer type classification	customers.Person_Type	
Country_Region_Code	ISO country code	state.Country_Region_Code	LEFT JOIN via customer_address and state
Country_Name	Full country name	country_region_codes.Country_Name	LEFT JOIN via state and country_region_codes

DimProduct

Attribute	Description	Source Table/Field	Transformation
ProductKey	Surrogate primary key	Auto-generated	IDENTITY(1,1)
Product_ID	Business key for product	products.Product_ID	
Product_Name	Product name	products.Product_Name	
Category_ID	Product category identifier	product_categories.Product_Cat_ID	INNER JOIN via product_sub_category
Category_Name	Product category name	product_categories.Cat_Name	INNER JOIN via product_sub_category
Subcategory_ID	Product subcategory identifier	product_sub_category.Product_Subcategory_ID	INNER JOIN from products
Subcategory_Name	Product subcategory name	product_sub_category.Product_Name	INNER JOIN from products
Standard_Cost	Manufacturing cost per unit	products.Standard_Cost	
List_Price	Recommended retail price	products.List_Price	

DimSupplier

Attribute	Description	Source Table/Field	Transformation
SupplierKey	Surrogate primary key	Auto-generated	IDENTITY(1,1)
Supplier_ID	Business key for supplier	suppliers.Supplier_ID	
Supplier_Name	Supplier company name	suppliers.Supplier_Name	
Address	Supplier street address	suppliers.Address	
City	Supplier city location	suppliers.City	

DimTerritory

Attribute	Description	Source Table/Field	Transformation
TerritoryKey	Surrogate primary key	Auto-generated	IDENTITY(1,1)
Territory_ID	Business key for sales territory	sales_territory.Territory_ID	
Territory_Name	Sales territory name	sales_territory.Territory_Name	

| Country | Territory country | sales_territory.Country_Region_Code | Via country_region_codes lookup |
| Salesperson_ID | Assigned salesperson | sales_territory.Territory_ID | Via sales_persons lookup |

DimTime

Attribute	Description	Source Table/Field	Transformation
TimeKey	Date in YYYYMMDD format (PK)	sales_orders.Order_Date	CAST(FORMAT(Order_Date, 'yyyyMMdd') AS INT)
Day	Day of month (1-31)	sales_orders.Order_Date	DAY(Order_Date)
Month	Month number (1-12)	sales_orders.Order_Date	MONTH(Order_Date)
Year	Four-digit year	sales_orders.Order_Date	YEAR(Order_Date)
Quarter	Calendar quarter (1-4)	sales_orders.Order_Date	Derived from Month ((Month-1)/3)+1
DayOfWeek_Num	Day of week number (1-7)	sales_orders.Order_Date	DATEPART(WEEKDAY, Order_Date)
DayOfWeek_Name	Day name (Monday-Sunday)	sales_orders.Order_Date	DATENAME(WEEKDAY, Order_Date)
Season_Northern	Season for Northern Hemisphere	sales_orders.Order_Date	Derived: Dec-Feb=Winter, Mar-May=Spring, Jun-Aug=Summer, Sep-Nov=Autumn
Season_Southern	Season for Southern Hemisphere	sales_orders.Order_Date	Derived: Dec-Feb=Summer, Mar-May=Autumn, Jun-Aug=Winter, Sep-Nov=Spring