

Codebook

Chile Firm-level Adoption of Technology (FAT) Survey

| Variable Name | Variable Label | Variable Type | Answer Code | Answer Label |
|---------------|---------------------------------|---------------|-------------|------------------|
| firm_id | Firm ID | long | | Open ended |
| firmid | Firm ID | long | | Open ended |
| country | Country | String | | Open ended |
| survey_year | Survey Year | String | | Open ended |
| base_wt | Sampling Weight | Numeric | | Open ended |
| formality | Formal Sector | Numeric | | |
| | | | -9 | Don't Know |
| | | | -7 | Not Applicable |
| | | | 1 | Yes |
| | | | 2 | No |
| s1a | Sampling sector | String | | Open ended |
| s1b | Sampling size | String | | Open ended |
| s1c | Sampling location | String | | Open ended |
| s2f | Country | String | | Open ended |
| s4 | Multi-Establishment | Numeric | | |
| | | | -9 | Don't Know |
| | | | -7 | Not Applicable |
| | | | 1 | Yes |
| | | | 2 | No |
| s4a | No. of establishments | Integer | | |
| | | | -9 | Don't Know |
| | | | -7 | Not Applicable |
| s7 | Screening employment size | Integer | | Open ended |
| ref_year1 | Reference Year 1 | String | | Open ended |
| ref_year2 | Reference Year 2 | String | | Open ended |
| a3b | Private foreign ownership % | Numeric | | |
| | | | -9 | Don't Know |
| | | | -7 | Not Applicable |
| a3c | Government or state ownership % | Numeric | | |
| | | | -9 | Don't Know |
| | | | -7 | Not Applicable |
| a4b | Founder - Ownership | Numeric | | |
| | | | -9 | Don't know |
| | | | -7 | Not applicable |
| | | | 1 | Founder |
| | | | 2 | Founder's family |
| | | | 3 | No |
| a4e | Female Owner | Numeric | | |

| | | | |
|-----|--------------------------------------|---------|---|
| a5a | Sector - group | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No 1 Agriculture 2 Livestock 3 Food Processing 4 Wearing apparel 5 Motor vehicles 6 Pharmaceuticals 7 Wholesale or retail 8 Financial services 9 Land transport 10 Health services 11 Leather goods 12 Accommodation 13 Bricks 14 Cement 15 Iron and Steel 101 Other manufacturing 102 Other services |
| a6 | Year of beginning operations | Numeric | |
| a7a | Top Manager - Experience Same Sector | Numeric | -9 Don't Know -7 Not Applicable |
| a7b | Top Manager - Female | Numeric | -9 Don't Know -7 Not Applicable |
| a7c | Top Manager - Highest Education | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| a7d | Top Manager - Studied Abroad | Numeric | -9 Don't know 1 Primary school 2 Secondary school 3 Complete high-school 4 College degree 5 Post-Graduation (MBA, Master or PhD) 6 Vocational training |

| | | | |
|-------|--|---------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b10a | Supply Mgt. - MOST used method | Numeric | 1 Suppliers - manual search 2 Suppliers - management of supply chain info 3 Suppliers - online social media 4 Suppliers - SRM (not integrated w prod planning) 5 Suppliers - SRM (integrated w prod planning) 6 Suppliers - other |
| b10a1 | Suppliers - manual search | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b10a2 | Suppliers - management of supply chain info | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b10a3 | Suppliers - online social media | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b10a4 | Suppliers - SRM (not integrated w prod planning) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|-------|--|---------|---|
| b10a5 | Suppliers - SRM (integrated w prod planning) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b10a6 | Suppliers - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b10c | Years using b10a4, b10a5 | Numeric | -9 Don't Know -7 Not Applicable |
| b11a1 | Marketing - Face to Face Chat | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b11a2 | Marketing - Online Chat | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b11a3 | Marketing - Structured Surveys | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b11a4 | Marketing - CRM | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b11a5 | Marketing - Big Data Analytics | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b11a6 | Marketing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|-------|--------------------------------------|---------|--|
| b11b | Marketing - MOST used method | Numeric | 2 No 1 Marketing - Face to Face Chat 2 Marketing - Online Chat 3 Marketing - Structured Surveys 4 Marketing - CRM 5 Marketing - Big Data Analytics 6 Marketing - Other |
| b11c | Years using b11a4, b11a5 | Numeric | -9 Don't Know -7 Not Applicable |
| b12a1 | Fabrication - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b12a2 | Fabrication - Machines w/o computer | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b12a3 | Fabrication - Computer | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b12a4 | Fabrication - Robots | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b12a5 | Fabrication - Additive manufacturing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b12a6 | Fabrication - Other Adv. Processes | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|-------|---|---------|--|
| b12a7 | Fabrication - Other | Numeric | 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b12b | Fabrication - MOST used method | Numeric | 1 Fabrication - Manual 2 Fabrication - Machines w/o computer 3 Fabrication - Computer 4 Fabrication - Robots 5 Fabrication - Additive manufacturing 6 Fabrication - Other Adv. Processes 7 Fabrication - Other |
| b12c | Years using b12a3, b12a4, b12a5, b12a6 | Numeric | -9 Don't Know -7 Not Applicable |
| b13a | Direct sale | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b1 | Sales - Establishment Premises | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b2 | Sales - Phone, email or sales representatives | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b3 | Sales - Social media platforms/apps | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b4 | Sales - Online Sales (ext. dig. platforms) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------------|--|------------------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b5 | Sales - Online Sales (own website) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b6 | Sales - Electronic orders | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13b7 | Sales - Other | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b13c | Sales - MOST used method | Numeric | |
| | | | 1 Sales - Establishment Premises 2 Sales - Phone, email or sales representatives 3 Sales - Social media platforms/apps 4 Sales - Online Sales (ext. dig. platforms) 5 Sales - Online Sales (own website) 6 Sales - Electronic orders 7 Sales - Other |
| b13d | Years using b12b4, b13b5, b13b6 | Numeric | |
| | | | -9 Don't Know -7 Not Applicable Open ended |
| b13e b13e2 | b13e Sales share (%) - online (own website) | double double | |
| | | | -9 Don't Know -7 Not Applicable |
| b14a1 | Payment - goods exchange | Numeric | |
| | | | -9 Don't Know -7 Not Applicable |

| | | | |
|-------|--------------------------------------|---------|----------------------------|
| | | | 1 Yes |
| | | | 2 No |
| b14a2 | Payment - cash | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14a3 | Payment - Cheque, voucher, bank wire | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14a4 | Payment - Cards | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14a5 | Payment - Online/electronic | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14a6 | Payment - Online (platforms) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14a7 | Payment - Cryptocurrency | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14a8 | Payment - Other | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b14b | Payment - MOST used method | Numeric | 1 Payment - goods exchange |
| | | | 2 Payment - cash |

| | | | |
|-------|---|---------|---|
| | | | 3 Payment - Cheque, voucher, bank wire |
| | | | 4 Payment - Cards |
| | | | 5 Payment - Online/electronic |
| | | | 6 Payment - Online (platforms) |
| | | | 7 Payment - Cryptocurrency |
| | | | 8 Payment - Other |
| b14c | Years using b14a5, b14a6 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| b15a1 | Quality Control - Manual, Visual or Written | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b15a2 | Quality Control - Human Inspection | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b15a3 | Quality Control - Statistical Control | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b15a4 | Quality Control - Automated | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b15a5 | Quality Control - Other | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b15b | Quality Control - MOST used method | Numeric | 1 Quality Control - Manual, Visual or Written |

| | | | |
|-------|--|---------|---|
| | | | 2 Quality Control - Human Inspection |
| | | | 3 Quality Control - Statistical Control |
| | | | 4 Quality Control - Automated |
| | | | 5 Quality Control - Other |
| b15c | Years using b15a4, b15a5 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| b16a | LEED certified | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b16a1 | Energy Efficiency - Energy star equip. | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b16a2 | Energy Efficiency - LED/CFL | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b16a3 | Energy Efficiency - VAV HVAC | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b16a4 | Energy Efficiency - Programmable thermostats | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b16a5 | Energy Efficiency - IoT enabled systems | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| b16b | Treat wastewater | Numeric | |

| | | | |
|-------|--|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b16b1 | Type of wastewater treatment - Primary | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b16b2 | Type of wastewater treatment - Secondary | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b16b3 | Type of wastewater treatment - Tertiary | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b1a | Electrical Connection | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b1b | Power Outages - Year | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b1c | Power Outages - Monthly | Numeric | |
| | | | -9 Don't Know -7 Not Applicable |
| b2a | Own/Share Generator | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b2d1 | Energy use - Natural Gas | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b2d2 | Energy use - Fuel Oil | Numeric | |

| | | | |
|-------|---|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b2d3 | Energy use - LPG | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b2d4 | Energy use - Coal or Wood Fuels | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b2d5 | Energy use - Own renewable sources | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b2d5a | Own renewable sources - % of total energy | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b4a | No. of Desktop or Laptops | Integer | -9 Don't Know -7 Not Applicable |
| b4b | No. of Tablets or Smartphones | Integer | -9 Don't Know -7 Not Applicable |
| b5a | Internet connection | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b5b | Fastest Internet Connection | Numeric | -9 Don't know 1 Dial up 2 DSL or Fiber 3 Wireless or Satellite 4 BPL 5 Other |
| b5f | Own Website | Numeric | |

| | | | |
|------|---|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b5g | Online Social Media | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b5h | Cloud Computer Services | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b7a | Production compared to other firms in country | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b7b | Production compared to other firms in world | Numeric | -9 Don't Know -7 Not Applicable |
| b8a1 | Business Administration - Handwritten Processes | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b8a2 | Business Administration - Computers (standard softwares) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b8a3 | Business Administration - Mobile Apps or Digital Platform | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b8a4 | Business Administration - Computers (specialised softwares) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|------|--|---------|---|
| b8a5 | Business Administration - ERP | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b8a6 | Business Administration - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b8b | Business Administration - MOST used method | Numeric | 1 Business Administration - Handwritten Processes 2 Business Administration - Computers (standard softwares) 3 Business Administration - Mobile Apps or Digital Platform 4 Business Administration - Computers (specialised softwares) 5 Business Administration - ERP 6 Business Administration - Other |
| b8c | Years using b8a4, b8a5 | Numeric | -9 Don't Know -7 Not Applicable |
| b9a1 | Production Planning - Handwritten processes | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b9a2 | Production Planning - Computers (standard softwares) | Numeric | -9 Don't Know |

| | | | |
|--------|--|---------|--|
| | | | -7 Not Applicable 1 Yes 2 No |
| b9a3 | Production Planning - Mobile Apps or digital platforms | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b9a4 | Production Planning - Specialized software | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b9a5 | Production Planning - ERP | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b9a6 | Production Planning - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| b9b | Production Planning - MOST used method | Numeric | 1 Production Planning - Handwritten processes 2 Production Planning - Computers (standard softwares) 3 Production Planning - Mobile Apps or digital platforms 4 Production Planning - Specialized software 5 Production Planning - ERP 6 Production Planning - Other |
| c1_0a1 | Crops: Info. sources - Radio | Numeric | -9 Don't Know |

| | | | |
|--------|---|---------|--|
| | | | -7 Not Applicable 1 Yes 2 No |
| c1_0a2 | Crops: Info. sources - TV | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_0a3 | Crops: Info. sources - Non-internet mobile | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_0a4 | Crops: Info. sources - Mobile internet tech | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_0a5 | Crops: Info. sources - Meet other producers | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_0a6 | Crops: Info. sources - Pub. or Pvt. agent visit | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_0a7 | Crops: Info. sources - Precision agriculture | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_0b1 | Crops: Info. sources - MOST relevant source | Numeric | 1 Crops: Info. sources - Radio 2 Crops: Info. sources - TV 3 Crops: Info. sources - Non-internet mobile 4 Crops: Info. sources - Mobile internet tech |

| | | | |
|--------|---|---------|---|
| | | | 5 Crops: Info. sources - Meet other producers |
| | | | 6 Crops: Info. sources - Pub. or Pvt. agent visit |
| | | | 7 Crops: Info. sources - Precision agriculture |
| | | | 8 Crops: Info. sources - Others |
| c1_0c1 | Crops: N acres OWNED | Integer | -9 Don't Know |
| | | | -7 Not Applicable |
| c1_0c2 | Crops: N acres RENTED or LEASED FROM OTHERS | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| c1_0c3 | Crops: N acres RENTED or LEASED TO OTHERS | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| c1_0c4 | Crops: N acres available - Total | Integer | -9 Don't Know |
| | | | -7 Not Applicable |
| c1_0c5 | N tractors owned | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| c1_0c6 | Rent tractor, equipment, or machines | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_0c7 | Use digital or online platform for c1_0c6 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_0d1 | Main source of seeds used | Numeric | -9 Don't know |
| | | | 1 Own production |
| | | | 2 Private providers |
| | | | 3 Public programs |
| | | | 4 Other |
| c1_0d2 | Pre-treatment to seeds | Numeric | -9 Don't Know |

| | | | |
|--------|---|---------|---|
| | | | -7 Not Applicable 1 Yes 2 No |
| c1_1a1 | Land prep - own workers | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1a2 | Land prep - outsourced (another unit - same enterprise) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1a3 | Land prep - outsourced (other workers or enterprise) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1b1 | Land prep - Manual plowing (simple tools) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1b2 | Land prep - Animal Aided | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1b3 | Land prep - Manually operated machines | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1b4 | Land prep - Digitally operated tractors or equipment | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1b5 | Land prep - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_1c | Land prep - MOST used method | Numeric | -9 Don't Know 1 Land prep - Manual plowing (simple tools) 2 Land prep - Animal Aided 3 Land prep - Manually operated machines 4 Land prep - Digitally operated tractors or equipment 5 Land prep - Other |
| c1_1d | Years using c1_1b4 | Numeric | |
| c1_2a1 | Product requires irrigation | Numeric | -9 Don't Know -7 Not Applicable |
| c1_2b1 | Irrig.- Rain-fed, no additional irrig. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_2b2 | Irrig. - Manual irrig. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_2b3 | Irrig. - Surface Flood Irrig. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_2b4 | Irrig. - Small Pump | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|---|
| c1_2b5 | Irrig. - Drip, localized, underground, Sprinkler, centre pivot | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_2b6 | Irrig. - Automated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_2b7 | Irrig.- Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_2c | Irrig. - MOST used method | Numeric | 1 Irrig.- Rain-fed, no additional irrig. 2 Irrig. - Manual irrig. 3 Irrig. - Surface Flood Irrig. 4 Irrig. - Small Pump 5 Irrig. - Drip, localized, underground, Sprinkler, centre pivot 6 Irrig. - Automated 7 Irrig.- Other |
| c1_2d | Years using c1_2b5, c1_2b6 | Numeric | -9 Don't Know -7 Not Applicable |
| c1_3a1 | Weeding/pest control - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3a2 | Weeding/pest control - outsourced (another unit - same enterprise) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|---|
| c1_3a3 | Weeding/pest control - outsourced (another enterprise) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3b1 | Weeding/pest control - Manual application | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3b2 | Weeding/pest control - Mechanical application | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3b3 | Weeding/pest control - Biological methods | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3b4 | Weeding/pest control - Precision agriculture | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3b5 | Weeding/pest control - Advanced precision agriculture | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3b6 | Weeding/pest control - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_3c | Weeding/pest control - MOST used method | Numeric | |

| | | | |
|--------|---|---------|--|
| | | | <ul style="list-style-type: none"> 1 Weeding/pest control - Manual application 2 Weeding/pest control - Mechanical application 3 Weeding/pest control - Biological methods 4 Weeding/pest control - Precision agriculture 5 Weeding/pest control - Advanced precision agriculture 6 Weeding/pest control - Other |
| c1_3d | Years using c1_3b6, c1_3b7 | Numeric | |
| | | | -9 Don't Know -7 Not Applicable |
| c1_3e | Use organic or chemicals for weeding/pest control | Numeric | |
| | | | -9 Don't know 1 Organic 2 Chemical 3 Both |
| c1_4a1 | Harvesting, training or pruning - in house | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4a2 | Harvesting, training or pruning - outsourced (another unit - same enterprise) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4a3 | Harvesting, training or pruning - outsourced (another enterprise) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4b1 | Harvesting, training, or pruning - Manual | Numeric | |
| | | | -9 Don't Know |

| | | | |
|--------|--|---------|---|
| | | | -7 Not Applicable 1 Yes 2 No |
| c1_4b2 | Harvesting, training, or pruning - Animal Aided | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4b3 | Harvesting, training, or pruning - Human-operated machines | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4b4 | Harvesting, training, or pruning - Manually mechanised | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4b5 | Harvesting, training, or pruning - Digitally automated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4b6 | Harvesting, training, or pruning - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_4c | Harvesting, training, or pruning - MOST used method | Numeric | -9 Don't know 1 Harvesting, training, or pruning - Manual 2 Harvesting, training, or pruning - Animal Aided 3 Harvesting, training, or pruning - Human-operated machines |

| | | | |
|--------|--|---------|--|
| | | | 4 Harvesting, training, or pruning - Manually mechanised |
| | | | 5 Harvesting, training, or pruning - Digitally automated |
| | | | 6 Harvesting, training, or pruning - Other |
| c1_4d | Years using c1_4b4, c1_4b5 | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c1_5a1 | Storage - in house | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_5a2 | Storage - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_5a3 | Storage - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_5b1 | Storage facility - Precarious | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_5b2 | Storage facility - Protected (w/o temp. control) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c1_5b3 | Storage facility - Special Storage (temp. control) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |

| | | | |
|--------|---|---------|--|
| | | | 1 Yes 2 No |
| c1_5b4 | Storage facility - High-end central storage | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_5b5 | Storage facility - Cont. temp. monitoring | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_5b6 | Storage facility - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_5c | Storage facility - MOST used | Numeric | -9 Don't know 1 Storage facility - Precarious 2 Storage facility - Protected (w/o temp. control) 3 Storage facility - Special Storage (temp. control) 4 Storage facility - High-end central storage 5 Storage facility - Cont. temp. monitoring 6 Storage facility - Other |
| c1_5d | Years using c1_5b3, c1_5b4, c1_5b5 | Numeric | -9 Don't Know -7 Not Applicable |
| c1_6a1 | Packing - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6a2 | Packing - outsourced (another unit - same firm) | Numeric | -9 Don't Know |

| | | | |
|--------|---------------------------------------|---------|--|
| | | | -7 Not Applicable 1 Yes 2 No |
| c1_6a3 | Packing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6b1 | Packing - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6b2 | Packing - Human-operated mech. equip. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6b3 | Packing - Automated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6b4 | Packing - Modified atmosphere | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6b5 | Packing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c1_6c | Packing - MOST used method | Numeric | 1 Packing - Manual 2 Packing - Human-operated mech. equip. 3 Packing - Automated 4 Packing - Modified atmosphere 5 Packing - Other |
| c1_6d | Years using c1_6b, c1_6b4 | Numeric | -9 Don't Know |

| | | | |
|--------|--|---------|-------------------|
| c2_0a1 | Livestock: Info sources - Radio | Numeric | -7 Not Applicable |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0a2 | Livestock: Info sources - TV | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0a3 | Livestock: Info sources - Non-internet mobile | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0a4 | Livestock: Info sources - Mobile internet tech | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0a5 | Livestock: Info sources - Meet other producers | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0a6 | Livestock: Info sources - Pub or pvt agen visits | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0a7 | Livestock: Info sources - Precision agri tools | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_0b | Livestock: Info sources - MOST relevant source | Numeric | |
| | | | -9 Don't Know |

| | | | |
|--------|---|---------|--|
| | | | 1 Livestock: Info sources - Radio |
| | | | 2 Livestock: Info sources - TV |
| | | | 3 Livestock: Info sources - Non-internet mobile |
| | | | 4 Livestock: Info sources - Mobile internet tech |
| | | | 5 Livestock: Info sources - Meet other producers |
| | | | 6 Livestock: Info sources - Pub or pvt agen visits |
| | | | 7 Livestock: Info sources - Precision agri tools |
| | | | 8 Livestock: Info sources - Others |
| c2_0c1 | Livestocks: No. of acres OWNED | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c2_0c2 | Livestocks: No. of acres RENTED or LEASED FROM OTHERS | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c2_0c3 | Livestocks: No. of acres RENTED or LEASED TO OTHERS | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c2_0c4 | Livestocks: No. of acres OPERATES Total | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c2_0d | Process production - in house | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_1a1 | Breeding/genetic - in house | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |

| | | | |
|--------|--|---------|---|
| c2_1a2 | Breeding/genetic - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1a3 | Breeding/genetic - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1b1 | Breeding/genetic - Breed substitution | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1b2 | Breeding/genetic - Inbreeding or Crossbreeding | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1b3 | Breeding/genetic - Artificial insemination (AI) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1b4 | Breeding/genetic - Selective breeding | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1b5 | Breeding/genetic - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_1c | Breeding/genetic - MOST used method | Numeric | |

| | | | | |
|--------|---|---------|--|--|
| | | | | -9 Don't Know 1 Breeding/genetic - Breed substitution 2 Breeding/genetic - Inbreeding or Crossbreeding 3 Breeding/genetic - Artificial insemination (AI) 4 Breeding/genetic - Selective breeding 5 Breeding/genetic - Other |
| c2_1d | Years using c2_1b3, c2_1b4 | Numeric | | |
| c2_2a1 | Animal nutrition/feeding - in house | Numeric | | -9 Don't Know -7 Not Applicable |
| c2_2a2 | Animal nutrition/feeding- outsourced (another unit - same firm) | Numeric | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2a3 | Animal nutrition/feeding - outsourced (another firm) | Numeric | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b1 | Animal nutrition - Household waste or fibrous crop residues | Numeric | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b2 | Animal nutrition - Natural grasslands and pastures | Numeric | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

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| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b3 | Animal nutrition - Integrated crop-livestock systems | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b4 | Animal nutrition - Production of forage crops | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b5 | Animal nutrition - Production of supplementary feed | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b6 | Animal nutrition - Manu. or mixing of feed | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b7 | Animal nutrition - Prod. of genetically-modified feed | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2b8 | Animal nutrition - Other | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_2c | Animal nutrition - MOST used method | Numeric | |
| | | | -9 Don't Know |

| | | | |
|--------|---|---------|--|
| | | | <ul style="list-style-type: none"> 1 Animal nutrition - Household waste or fibrous crop residues 2 Animal nutrition - Natural grasslands and pastures 3 Animal nutrition - Integrated crop-livestock systems 4 Animal nutrition - Production of forage crops 5 Animal nutrition - Production of supplementary feed 6 Animal nutrition - Manu. or mixing of feed 7 Animal nutrition - Prod. of genetically-modified feed 8 Animal nutrition - Other |
| c2_2d | Years using c2_2b5, c2_2b6, c2_2b7 | Numeric | -9 Don't Know -7 Not Applicable |
| c2_3a1 | Animal healthcare - in house | Numeric | -9 Don't Know -7 Not Applicable |
| c2_3a2 | Animal healthcare - outsourced (another unit - same firm) | Numeric | 1 Yes 2 No |
| c2_3a3 | Animal healthcare - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3b1 | Animal healthcare - Rapid diagnostic tests | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

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|--------|--|---------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3b2 | Animal healthcare - Pest sprays | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3b3 | Animal healthcare - Vaccines | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3b4 | Animal healthcare - DNA or RNA vaccine | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3b5 | Animal healthcare - Disease med. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3b6 | Animal healthcare - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_3c | Animal healthcare - MOST used method | Numeric | -9 Don't Know 1 Animal healthcare - Rapid diagnostic tests 2 Animal healthcare - Pest sprays 3 Animal healthcare - Vaccines 4 Animal healthcare - DNA or RNA vaccine 5 Animal healthcare - Disease med. |

| | | | |
|--------|---|---------|-----------------------------|
| | | | 6 Animal healthcare - Other |
| c2_3d | Years using c2_3b3, c2_3b4 | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c2_4a1 | Herd mgt/monitoring - in house | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_4a2 | Herd mgt/monitoring - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_4a3 | Herd mgt/monitoring - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_4b1 | Herd mgt/monitoring - Human | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_4b2 | Herd mgt/monitoring - Animal-aided | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_4b3 | Herd mgt/monitoring - Feedlots or grazing | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c2_4b4 | Herd mgt/monitoring - Automated cameras/video | Numeric | |

| | | | |
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| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_4b5 | Herd mgt/monitoring - Unmanned aerial | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_4b6 | Herd mgt/monitoring - Analog tracking | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_4b7 | Herd mgt/monitoring - Digital tracking | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_4b8 | Herd mgt/monitoring - Other | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_4c | Herd mgt/monitoring - MOST used method | Numeric | |
| | | | -9 Don't Know 1 Herd mgt/monitoring - Human 2 Herd mgt/monitoring - Animal-aided 3 Herd mgt/monitoring - Feedlots or grazing 4 Herd mgt/monitoring - Automated cameras/video 5 Herd mgt/monitoring - Unmanned aerial 6 Herd mgt/monitoring - Analog tracking 7 Herd mgt/monitoring - Digital tracking |

| | | | |
|--------|---|---------|---|
| c2_4d | Years using c2_4b5, c2_4b6, c2_4b7 | Numeric | 8 Herd mgt/monitoring - Other |
| c2_5a1 | Transp. livestock - in house | Numeric | -9 Don't Know -7 Not Applicable |
| c2_5a2 | Transp. livestock - outsourced (another unit - same enterprise) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5a3 | Transp. livestock - outsourced (another enterprise) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5b1 | Transp. livestock - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5b2 | Transp. livestock - Non-motorized vehicles | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5b3 | Transp. livestock - Motorized vehicles | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5b4 | Transp. livestock - Specialized/climate-controlled vehicles | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|-------------------------------------|---------|---|
| c2_5b5 | Transp. livestock - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5c | Transp. - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c2_5d | Years using c2_5b4 | Numeric | -9 Don't Know 1 Transp. livestock - Manual 2 Transp. livestock - Non-motorized vehicles 3 Transp. livestock - Motorized vehicles 4 Transp. livestock - Specialized/climate-controlled vehicles 5 Transp. livestock - Other |
| c3_0a1 | Regulated/inspected by govt. agency | Numeric | -9 Don't Know -7 Not Applicable |
| c3_0a2 | Main agency regulating | String | -9 Don't Know -7 Not Applicable 1 Yes 2 No Open ended |
| c3_0b1 | Finished - shelf stable | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_0b2 | Finished - fresh/perishable | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1a1 | Input testing - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| | | | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|--|---------|---|
| | | | 1 Yes 2 No |
| c3_1a2 | Input testing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1a3 | Input testing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1b1 | Input testing - Sensory | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1b2 | Input testing - Review of supplier testing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1b3 | Input testing - Non- computer-controlled | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1b4 | Input testing - Computer testing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1b5 | Input testing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_1c | Input testing - MOST used method | Numeric | -9 Don't Know |

| | | | |
|--------|--|---------|---|
| | | | 1 Input testing - Sensory 2 Input testing - Review of supplier testing 3 Input testing - Non-computer-controlled 4 Input testing - Computer testing 5 Input testing - Other |
| c3_1d | Years using c3_1b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c3_2a1 | Food prep. - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_2a2 | Food prep. - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_2a3 | Food prep. - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_2b1 | Food prep. - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_2b2 | Food prep. - Mech. equipment (human force) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_2b3 | Food prep. - Power equipment (human interaction) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|--|---------|--|
| c3_2b4 | Food prep. - Power equipment (computers or robotics, minimal int.) | Numeric | 2 No |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c3_2b5 | Food prep. - Other | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c3_2c | Food prep. - MOST used method | Numeric | -9 Don't Know |
| | | | 1 Food prep. - Manual |
| | | | 2 Food prep. - Mech. equipment (human force) |
| | | | 3 Food prep. - Power equipment (human interaction) |
| | | | 4 Food prep. - Power equipment (computers or robotics, minimal int.) |
| | | | 5 Food prep. - Other |
| c3_2d | Years using c3_2b3, c3_2b4 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| c3_3a1 | Anti-bacterial - in house | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c3_3a2 | Anti-bacterial - outsourced (another unit - same firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c3_3a3 | Anti-bacterial - outsourced (another firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |

| | | | |
|--------|--|---------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_3b1 | Anti-bacterial - Minimal-processing preservation | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_3b2 | Anti-bacterial - Anti-bacterial wash or soaking | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_3b3 | Anti-bacterial - Thermal Processing | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_3b4 | Anti-bacterial - Other adv. methods | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_3b5 | Anti-bacterial - Other | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_3c | Anti-bacterial - MOST used method | Numeric | |
| | | | -9 Don't Know 1 Anti-bacterial - Minimal-processing preservation 2 Anti-bacterial - Anti-bacterial wash or soaking 3 Anti-bacterial - Thermal Processing 4 Anti-bacterial - Other adv. methods 5 Anti-bacterial - Other |

| | | | |
|--------|--|---------|---|
| c3_3d | Years using c3_3b3, c3_3b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c3_4a1 | Food pkg. - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4a2 | Food pkg. - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4a3 | Food pkg. - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4b1 | Food pkg. - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4b2 | Food pkg. - Human-operated mech. equip. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4b3 | Food pkg. - Power equip. (human interaction) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4b4 | Food pkg. - Power equip. (comp./robotics, min. human int.) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4b5 | Food pkg. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4c | Food pkg. - MOST used method | Numeric | -9 Don't Know 1 Food pkg. - Manual 2 Food pkg. - Human-operated mech. equip. 3 Food pkg. - Power equip. (human interaction) 4 Food pkg. - Power equip. (comp./robotics, min. human int.) 5 Food pkg. - Other |
| c3_4d | Years using c3_4b3, c_3b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c3_4e | Recyclable or Bio-Degradable Packaging | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_4f | Packing material (%) - recyclable or bio-degradable | Numeric | -9 Don't Know -7 Not Applicable |
| c3_5a1 | Store food - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5a2 | Store food - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5a3 | Store food - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|---|---------|---|
| c3_5b1 | Food storage - Minimal protection (some exposure) | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5b2 | Food storage - Ambient conditions (closed building) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5b3 | Food storage - Some climate control (secured building) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5b4 | Food storage - Automated climate (security-controlled building) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5b5 | Food storage - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c3_5c | Food storage - MOST used method | Numeric | -9 Don't Know 1 Food storage - Minimal protection (some exposure) 2 Food storage - Ambient conditions (closed building) |

| | | | |
|--------|---------------------------------|---------|---|
| | | | 3 Food storage - Some climate control (secured building) |
| | | | 4 Food storage - Automated climate (security-controlled building) |
| | | | 5 Food storage - Other |
| c3_5d | Years using c3_5b3, c3_5b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c4_0a1 | Prod. material - Printed fabric | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0a2 | Prod. material - White fabric | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0a3 | Prod. material - Fabric threads | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0a4 | Prod. material - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0b1 | Garments prod.- Basic | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0b2 | Garments prod. - Fashion | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0b3 | Garments prod. - Sports | Numeric | -9 Don't Know |

| | | | |
|--------|-------------------------------------|---------|---|
| | | | -7 Not Applicable 1 Yes 2 No |
| c4_0b4 | Garments prod. - Protective apparel | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0b5 | Garments prod. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0c1 | Finishes - Silk screen | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0c2 | Finishes - Embroidery | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0c3 | Finishes - Washing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0c4 | Finishes - Waterproofing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0c5 | Finishes - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0d1 | Standards - Evt. and Labor | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_0d2 | Standards - RCS | Numeric | -9 Don't Know |

| | | | |
|--------|--|---------|--|
| c4_0d3 | Standards - Social, Health, and Env't. Cert. | Numeric | -7 Not Applicable 1 Yes 2 No |
| c4_0d4 | Standards - Circular Economy | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1a1 | Provide files for design | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1a2 | Most common file provd. | Numeric | -9 Don't know 1 Graded file of all sizes ready to cut 2 A prototype cutting file for grading 3 Hand drawing of the design 4 Computer drawing of the design 5 3D file of the design 6 Other |
| c4_1a3 | Design drawing - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1a4 | Design drawing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|---|
| c4_1a5 | Design drawing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1b1 | Design drawing - Manual/hand-draw | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1b2 | Design drawing - Digital/semi-digital design | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1b3 | Design drawing - CAD | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1b4 | Design drawing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1c | Design drawing - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_1d | Years using c4_1b2, c4_1b3 | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2a1 | Cutting - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|---|
| c4_2a2 | Cutting - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2a3 | Cutting - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2b1 | Cutting - Manual cutting | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2b2 | Cutting - Cutting machine (manually operated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2b3 | Cutting - Semi-Automatic cutting machine | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2b4 | Cutting - Automatic/Computerized cutting machine (no Laser) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2b5 | Cutting - Automatic/Computerized cutting machine (Laser) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_2b6 | Cutting - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|--|
| c4_2c | Cutting - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| | | | -9 Don't know 1 Cutting - Manual cutting 2 Cutting - Cutting machine (manually operated) 3 Cutting - Semi-Automatic cutting machine 4 Cutting - Automatic/Computerized cutting machine (no Laser) 5 Cutting - Automatic/Computerized cutting machine (Laser) 6 Cutting - Other |
| c4_2d | Years using c4_2b4, c4_2b5 | Numeric | |
| c4_3a1 | Sewing - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3a2 | Sewing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3a3 | Sewing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--------------------------------------|---------|---|
| c4_3b1 | Sewing - Manually | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3b2 | Sewing - Machine (manually operated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3b3 | Sewing - Semi-automated machines | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3b4 | Sewing - Automated machines | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3b5 | Sewing - 3D Knitting | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3b6 | Sewing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_3c | Sewing - MOST used method | Numeric | -9 Don't know 1 Sewing - Manually 2 Sewing - Machine (manually operated) 3 Sewing - Semi-automated machines 4 Sewing - Automated machines 5 Sewing - 3D Knitting 6 Sewing - Other |
| c4_3d | Years using c4_3b3, c4_3b4, c4_3b5 | Numeric | |

| | | | |
|--------|---|---------|---|
| c4_4a1 | Finishing/ironing- in house | Numeric | -9 Don't Know -7 Not Applicable |
| c4_4a2 | Finishing/ironing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4a3 | Finishing/ironing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4b1 | Finishing/ironing - Basic manual ironing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4b2 | Finishing/ironing - Electric high-pressure steam iron | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4b3 | Finishing/ironing - Tunnel finisher | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4b4 | Finishing/ironing - Form finishing machine | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|--|
| c4_4b5 | Finishing/ironing - High tech pressing machine | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4b6 | Finishing/ironing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_4c | Finishing/ironing - MOST used method | Numeric | -9 Don't know 1 Finishing/ironing - Basic manual ironing 2 Finishing/ironing - Electric high-pressure steam iron 3 Finishing/ironing - Tunnel finisher 4 Finishing/ironing - Form finishing machine 5 Finishing/ironing - High tech pressing machine 6 Finishing/ironing - Other |
| c4_4d | Years using c4_4b3, c4_4b4, c4_4b5 | Numeric | -9 Don't Know -7 Not Applicable |
| c4_5a1 | Waste/Water Mgt. - Regular mixed trash | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_5a2 | Waste/Water Mgt. - Garment specialized mixed trash | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_5a3 | Waste/Water Mgt. - Sort and dispose recycling comp. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|---|
| c4_5a4 | Waste/Water Mgt. - Sort and reuse internally, dispose recycling comp. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_5a6 | Waste/Water Mgt. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c4_5b | Waste/Water Mgt. - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_1a1 | Assemble vehicles - in house | Numeric | -9 Don't know 1 Waste/Water Mgt. - Regular mixed trash 2 Waste/Water Mgt. - Garment specialized mixed trash 3 Waste/Water Mgt. - Sort and dispose recycling comp. 4 Waste/Water Mgt. - Sort and reuse internally, dispose recycling comp. 5 Waste/Water Mgt. - 6 Waste/Water Mgt. - Other |
| c5_1a2 | Assemble vehicles - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| | | | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|---|---------|-------------------|
| c5_1a3 | Assemble vehicles - outsourced (another firm) | Numeric | 2 No |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c5_1b1 | Assembly/fabrication - Machines (controlled by operators) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c5_1b2 | Assembly/fabrication - FMC or FMS | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c5_1b3 | Assembly/fabrication - Lasers (materials processing) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c5_1b4 | Assembly/fabrication - CNC machinery | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c5_1b5 | Assembly/fabrication - Robots | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c5_1b6 | Assembly/fabrication - Additive manufacturing | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |

| | | | |
|--------|--|---------|---|
| c5_1b7 | Assembly/fabrication - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_1c | Assembly/fabrication- MOST used method | Numeric | -9 Don't know 1 Assembly/fabrication - Machines (controlled by operators) 2 Assembly/fabrication - FMC or FMS 3 Assembly/fabrication - Lasers (materials processing) 4 Assembly/fabrication - CNC machinery 5 Assembly/fabrication - Robots 6 Assembly/fabrication - Additive manufacturing 7 Assembly/fabrication - Other |
| c5_1d | Years using c5_1b4, c5_1b5, c5_1b6 | Numeric | -9 Don't Know -7 Not Applicable |
| c5_2a1 | Body press/welding - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2a2 | Body press/welding - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2a3 | Body press/welding - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|--|---------|--|
| c5_2b1 | Body press/welding - Pressing of skin panels (operators) | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2b2 | Body press/welding - Pressing of structural components (operators) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2b3 | Body press/welding - Welding of main body (operators) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2b4 | Body press/welding - Pressing of skin panels (automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2b5 | Body press/welding - Pressing of structural components (automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2b6 | Body press/welding - Welding of main body (automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_2b7 | Body press/welding - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|--|
| c5_2c | Pressing/welding method - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No -9 Don't know 1 Body press/welding - Pressing of skin panels (operators) 2 Body press/welding - Pressing of structural components (operators) 3 Body press/welding - Welding of main body (operators) 4 Body press/welding - Pressing of skin panels (automated) 5 Body press/welding - Pressing of structural components (automated) 6 Body press/welding - Welding of main body (automated) 7 Body press/welding - Other |
| c5_2d | Years using c5_2b4, c5_2b5, c5_2b6 | Numeric | -9 Don't Know -7 Not Applicable |
| c5_3a1 | Painting - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3a2 | Painting - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|--|
| c5_3a3 | Painting - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3b1 | Painting - Water-based painting (operators) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3b2 | Painting - Solvent-based painting (operators) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3b3 | Painting - Water-based painting (automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3b4 | Painting - Solvent-based painting (automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3b5 | Painting - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_3c | Painting - MOST used method | Numeric | -9 Don't know 1 Painting - Water-based painting (operators) 2 Painting - Solvent-based painting (operators) 3 Painting - Water-based painting (automated) |

| | | | |
|--------|---|---------|---|
| | | | 4 Painting - Solvent-based painting (automated) |
| | | | 5 Painting - Other |
| c5_3d | Years using c5_3b3, c5_3b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c5_4a1 | Plastic injection molding - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_4a2 | Plastic injection molding - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_4a3 | Plastic injection molding - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_4b1 | Plastic injection- Non-visible interior plastic (operators) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_4b2 | Plastic injection - Plastic exterior body parts (operators) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_4b3 | Plastic injection- Non-visible interior plastic (robotics) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|--|---------|---|
| c5_4b4 | Plastic injection - Plastic exterior body parts (robotics) | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c5_4b5 | Plastic injection - Other | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c5_4c | Plastic injection - MOST used method | Numeric | 1 Yes 2 No -9 Don't know 1 Plastic injection- Non-visible interior plastic (operators) 2 Plastic injection - Plastic exterior body parts (operators) 3 Plastic injection- Non-visible interior plastic (robotics) 4 Plastic injection - Plastic exterior body parts (robotics) 5 Plastic injection - Other |
| c5_4d | Years using c5_4b3, c5_4b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c5_5a1 | Productive assets mgt. - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_5a2 | Productive assets mgt. - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|--|
| c5_5a3 | Productive assets mgt. - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_5b1 | Productive asset mgt. - Breakdown maintenance | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_5b2 | Productive asset mgt. - Preventative/predictive maintenance | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_5b3 | Productive asset mgt. - Model Based Condition Monitoring | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_5b4 | Productive asset mgt. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c5_5c | Productive asset mgt. - MOST used method | Numeric | -9 Don't know 1 Productive asset mgt. - Breakdown maintenance 2 Productive asset mgt. - Preventative/predictive maintenance 3 Productive asset mgt. - Model Based Condition Monitoring 4 Productive asset mgt. - Other |

| | | | |
|--------|-------------------------------------|---------|---|
| c5_5d | Years using c5_5b2, c5_5b3 | Numeric | -9 Don't Know -7 Not Applicable |
| c6_0a1 | Produce tablets and capsules | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_0a2 | Produce creams and ointments | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_0a3 | Produce eye and ear solutions | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_0a4 | Produce syrups and dry powders | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_0b1 | Main product produced | Numeric | 1 Tablets and capsules 2 Creams and ointments 3 Eye and ear solutions 4 Syrups and dry powders |
| c6_0c1 | Research with new-drug discovery | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_0c2 | Lead researchers - direct employees | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|---|
| c6_1a1 | Mix raw mat./compounding in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1a2 | Mix raw mat./ compounding - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1a3 | Mix raw mat./compounding - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1b1 | Air filtration - Unfiltered air | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1b2 | Air filtration - Basic | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1b3 | Air filtration - HEPA | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1b4 | Air filtration - Ultra HEPA, pressurization control | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1b5 | Air filtration - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|-----------------------------------|---------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_1c | Air filtration - MOST used method | Numeric | -9 Don't know 1 Air filtration - Unfiltered air 2 Air filtration - Basic 3 Air filtration - HEPA 4 Air filtration - Ultra HEPA, pressurization control 5 Air filtration - Other |
| c6_1d | Years using c6_1b3, c6_1b4 | Numeric | |
| c6_2b1 | Weighting - Beam Scales | Numeric | -9 Don't Know -7 Not Applicable |
| c6_2b2 | Weighting - Analog Scales | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_2b3 | Weighting - Electronic Scales | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_2b4 | Weighting - Automated Weighing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_2b5 | Weighting - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|---|
| c6_2c | Weighting - MOST used method | Numeric | -9 Don't know 1 Weighting - Beam Scales 2 Weighting - Analog Scales 3 Weighting - Electronic Scales 4 Weighting - Automated Weighing 5 Weighting - Other |
| c6_2d | Years using c6_2b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c6_3b1 | Mixing/compounding - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_3b2 | Mixing/compounding - Planetary Mixers OR homogenizers | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_3b3 | Mixing/compounding - High Speed, High Shear Granulators | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_3b4 | Mixing/compounding - Fluid Bed Processors (not with syrups) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_3b5 | Mixing/compounding - Fully Automated Compounding | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|---|---------|--|
| c6_3b6 | Mixing/compounding - Other | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c6_3c | Mixing/compounding - MOST used method | Numeric | 1 Yes 2 No -9 Don't know 1 Mixing/compounding - Manual 2 Mixing/compounding - Planetary Mixers OR homogenizers 3 Mixing/compounding - High Speed, High Shear Granulators 4 Mixing/compounding - Fluid Bed Processors (not with syrups) 5 Mixing/compounding - Fully Automated Compounding 6 Mixing/compounding - Other |
| c6_3d | Years using c6_3b3, c6_3b4, c6_3b5 | Numeric | -9 Don't Know -7 Not Applicable |
| c6_4a1 | Compression/encapsulation - in house | Numeric | -9 Don't Know -7 Not Applicable |
| c6_4a2 | Compression/encapsulation - outsourced (another unit - same firm) | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |

| | | | |
|--------|--|---------|---|
| c6_4a3 | Compression/encapsulation - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_4b1 | Compression/encapsulation - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_4b2 | Compression/encapsulation - Motorized | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_4b3 | Compression/encapsulation - Automated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_4b4 | Compression/encapsulation - Integrated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_4b5 | Compression/encapsulation - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_4c | Compression/encapsulation - MOST used method | Numeric | -9 Don't know 1 Compression/encapsulatio n - Manual 2 Compression/encapsulatio n - Motorized 3 Compression/encapsulatio n - Automated |

| | | | |
|--------|---|---------|--|
| | | | 4 Compression/encapsulation - Integrated |
| | | | 5 Compression/encapsulation - Other |
| c6_4d | Years using c6_4b3, c6_4b4 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| c6_5a1 | Quality control - in-house | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c6_5a2 | Quality control - outsourced (another unit - same firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c6_5a3 | Quality control - outsourced (another firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c6_5b1 | Quality control - Manual, titrimetric/chromatographic | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c6_5b2 | Quality control - Elec. chromatography | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c6_5b3 | Quality control - Elec. chromatography w data acquisition | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |

| | | | |
|--------|--|---------|--|
| c6_5b4 | Quality control - Other | Numeric | 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_5c | Quality Control - MOST used method | Numeric | -9 Don't know 1 Quality control - Manual, titrimetric/chromatographic 2 Quality control - Elec. chromatography 3 Quality control - Elec. chromatography w data acquisition 4 Quality control - Other |
| c6_5d | Years using c6_5b2, c6_5b3 | Numeric | -9 Don't Know -7 Not Applicable |
| c6_6a1 | Package pharma. products - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_6a2 | Package pharma. products - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_6a3 | Package pharma. products - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_6b1 | Packaging - Manual filling pills or syrups | Numeric | -9 Don't Know |

| | | | |
|--------|--|---------|---|
| | | | -7 Not Applicable 1 Yes 2 No |
| c6_6b2 | Packaging - Slat Counters, Cottoners, etc; machine filling | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_6b3 | Packaging - Automated, integrated packaging lines | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_6b4 | Packaging - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c6_6c | Packaging - MOST used method | Numeric | -9 Don't Know 1 Packaging - Manual filling pills or syrups 2 Packaging - Slat Counters, Cottoners, etc; machine filling 3 Packaging - Automated, integrated packaging lines 4 Packaging - Other |
| c6_6d | Years using c6_6b2, c6_6b3 | Numeric | -9 Don't Know -7 Not Applicable |
| c7_1a1 | Cust. supp. - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1a2 | Cust. supp. - outsourced (another unit - same firm) | Numeric | -9 Don't Know |

| | | | |
|--------|--|---------|---|
| | | | -7 Not Applicable 1 Yes 2 No |
| c7_1a3 | Cust. supp. - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1b1 | Cust. serv. - Store | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1b2 | Cust. serv. - Phone or Help Desk | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1b3 | Cust. serv. - Social Media | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1b4 | Cust. serv. - Online requests | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1b5 | Cust. serv. - Chatbots | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1b6 | Cust. serv. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_1c | Service procedure - MOST used method | Numeric | -9 Don't know 1 Cust. serv. - Store 2 Cust. serv. - Phone or Help Desk |

| | | | |
|--------|---|---------|---------------------------------|
| | | | 3 Cust. serv. - Social Media |
| | | | 4 Cust. serv. - Online requests |
| | | | 5 Cust. serv. - Chatbots |
| | | | 6 Cust. serv. - Other |
| c7_1d | Years using c7_1b3, c7_1b4, c7_1b5 | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c7_2a1 | Pricing - in house | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_2a2 | Pricing - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_2a3 | Pricing - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_2b1 | Pricing - Manual Cost | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_2b2 | Pricing - Automated markup | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_2b3 | Pricing - Automated promotional | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_2b4 | Pricing - Dynamic pricing systems | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |

| | | | |
|--------|---|---------|--|
| c7_2b5 | Pricing - Personalized pricing (predictive analytics) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_2b6 | Pricing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_2c | Pricing - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_2d | Years using c7_2b4, c7_2b5 | Numeric | -9 Don't know 1 Pricing - Manual Cost 2 Pricing - Automated markup 3 Pricing - Automated promotional 4 Pricing - Dynamic pricing systems 5 Pricing - Personalized pricing (predictive analytics) 6 Pricing - Other |
| c7_2da | Regulation - price mechanism | Numeric | -9 Don't Know -7 Not Applicable |
| c7_2db | Agency regulating price | String | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3a1 | Merchandising - in house | Numeric | Open ended -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|---|
| c7_3a2 | Merchandising - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3a3 | Merchandising - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3b1 | Merchandising - Manually selection | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3b2 | Merchandising - Category mgt. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3b3 | Merchandising - Retail Merch. Systems or Digital Merch. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3b4 | Merchandising - Product trend analytics | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3b5 | Merchandising - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_3c | Merchandising - MOST used method | Numeric | -9 Don't know |

| | | | |
|--------|--|---------|--|
| | | | <ul style="list-style-type: none"> 1 Merchandising - Manually selection 2 Merchandising - Category mgt. 3 Merchandising - Retail Merch. Systems or Digital Merch. 4 Merchandising - Product trend analytics 5 Merchandising - Other |
| c7_3d | Years using c7_3b3, c7_3b4 | Numeric | |
| | | | -9 Don't Know -7 Not Applicable |
| c7_4a1 | Mgt. inventory - in house | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4a2 | Mgt. inventory - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4a3 | Mgt. inventory - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4b1 | Inventory - Handwritten record keeping | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4b2 | Inventory - Computer databases (manual updates) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|--|---------|--|
| c7_4b3 | Inventory - WMS (specialised software) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4b4 | Inventory - CAO, vendor- managed, and/or radio- frequency identification | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4b5 | Inventory - AS/RS | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4b6 | Inventory - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_4c | Inventory - MOST used method | Numeric | -9 Don't know 1 Inventory - Handwritten record keeping 2 Inventory - Computer databases (manual updates) 3 Inventory - WMS (specialised software) 4 Inventory - CAO, vendor- managed, and/or radio- frequency identification 5 Inventory - AS/RS 6 Inventory - Other |
| c7_4d | Years using c7_4b4, c7_4b5 | Numeric | -9 Don't Know -7 Not Applicable |
| c7_5a1 | Ads - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|---|---------|-------------------|
| c7_5a2 | Ads - outsourced (another unit - same firm) | Numeric | 2 No |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5a3 | Ads - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5b1 | Ad channels - Paper based communication | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5b2 | Ad channels - Radio, Billboards, TV | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5b3 | Ad channels - Email or mobile phone | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5b4 | Ad channels - Social Media | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5b5 | Ad channels - Search Engine Marketing | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_5b6 | Ad channels - Big data Analytics or AI | Numeric | |
| | | | -9 Don't Know |

| | | | |
|--------|--|---------|--|
| | | | -7 Not Applicable 1 Yes 2 No |
| c7_5b7 | Ad channels - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_5c | Ad channels - MOST used method | Numeric | -9 Don't know 1 Ad channels - Paper based communication 2 Ad channels - Radio, Billboards, TV 3 Ad channels - Email or mobile phone 4 Ad channels - Social Media 5 Ad channels - Search Engine Marketing 6 Ad channels - Big data Analytics or AI 7 Ad channels - Other |
| c7_5d | Years using c7_5b5, c7_5b6 | Numeric | -9 Don't Know -7 Not Applicable |
| c7_6a1 | Reduce packaging waste - recyclable or reusable bags | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_6a2 | Reduce packaging waste - recyclable or biodegradable packaging | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c7_6a3 | Reduce packaging waste - digital receipts | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|---|---------|-------------------|
| c7_6a4 | Reduce packaging waste - recycling shipment packaging | Numeric | 2 No |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_6b1 | Reduce shipment waste - recycle vendor shipment and reuse for orders | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_6b2 | Reduce shipment waste - recyclable or biodegradable materials for customers | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_6c1 | Green Sourcing - sustainability standards | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c7_6c2 | Green Sourcing - % of vendors adhering standards | Numeric | |
| | | | -9 Don't know |
| | | | 1 0 |
| | | | 2 1 to 25 % |
| | | | 3 26 to 50 % |
| | | | 4 51 to 75 % |
| | | | 5 76 to 100 % |
| c8_0a | N checking accounts managed | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c8_0b | N saving acc. managed | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c8_0c | N loans managed | Integer | |
| | | | -9 Don't Know |

| | | | |
|--------|--|---------|-------------------|
| c8_1a1 | Cust. serv. (checking + savings acc) - in house | Numeric | -7 Not Applicable |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1a2 | Cust. serv. (checking + savings acc) - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1a3 | Cust. serv. (checking + savings acc) - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1b1 | Cust. serv. - Teller | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1b2 | Cust. serv. - ATM machines | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1b3 | Cust. serv. - On-line on company website | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1b4 | Cust. serv. - Mobile app | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c8_1b6 | Cust. serv. - Other | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |

| | | | |
|--------|---|---------|---|
| c8_1c | Cust. serv. - MOST used method | Numeric | 1 Yes 2 No -9 Don't know 1 Cust. serv. - Teller 2 Cust. serv. - ATM machines 3 Cust. serv. - On-line on company website 4 Cust. serv. - Mobile app 6 Cust. serv. - Other |
| c8_1d | Years using c8_1b3, c8_1b4 | Numeric | |
| c8_2a1 | Client id/fraud - in house | Numeric | -9 Don't Know -7 Not Applicable -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2a2 | Client id/fraud - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2a3 | Client id/fraud - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2b1 | Verification id - Teller | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2b2 | Verification id - online passwords | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---|---------|--|
| c8_2b3 | Verification id - online passwords (combined) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2b4 | Verification id - Digital auth. | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2b5 | Verification id - Biometrics | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2b6 | Verification id - Blockchain | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2b7 | Verification id - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_2c | Verification - MOST used method | Numeric | -9 Don't know 1 Verification id - Teller 2 Verification id - online passwords 3 Verification id - online passwords (combined) 4 Verification id - Digital auth. 5 Verification id - Biometrics 6 Verification id - Blockchain 7 Verification id - Other |
| c8_2d | Years using c8_2b4, c8_2b5, c8_2b6 | Numeric | -9 Don't Know |

| | | | |
|--------|---|---------|--|
| c8_3a1 | Loan app - in house | Numeric | -7 Not Applicable -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3a2 | Loan app - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3a3 | Loan app - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3b1 | Loan app - Loan officer (paper-based) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3b2 | Loan app - Mobile app + paper | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3b3 | Loan app - Channel partners | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3b4 | Loan app - Mobile app + digital process | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_3b5 | Loan app - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|--|---------|---|
| c8_3c | Loan app - MOST used method | Numeric | 2 No -9 Don't know 1 Loan app - Loan officer (paper-based) 2 Loan app - Mobile app + paper 3 Loan app - Channel partners 4 Loan app - Mobile app + digital process 5 Loan app - Other |
| c8_3d | Years using c8_3b2, c8_3b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c8_4a1 | Credit approvals - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4a2 | Credit approvals - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4a3 | Credit approvals - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4b1 | Credit approvals - Analyst (paper-based) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4b2 | Credit approvals - Analyst (digital info) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|---|---------|---|
| c8_4b3 | Credit approvals - Automated | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4b4 | Credit approvals - Algorithm (AI or Big-Data) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4b5 | Credit approvals - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_4c | Credit approvals - MOST used method | Numeric | -9 Don't know 1 Credit approvals - Analyst (paper-based) 2 Credit approvals - Analyst (digital info) 3 Credit approvals - Automated 4 Credit approvals - Algorithm (AI or Big-Data) 5 Credit approvals - Other |
| c8_4d | Years using c8_4b3, c8_4b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c8_5a1 | Operational supp. - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_5a2 | Operational supp. - outsourced (another unit - same firm) | Numeric | -9 Don't Know |

| | | | |
|--------|---|---------|--|
| | | | -7 Not Applicable 1 Yes 2 No |
| c8_5a3 | Operational supp. - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_5b1 | Op. supp. - writing records | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_5b2 | Op. supp. - dig. accounting (PCs) | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_5b3 | Op. supp. - dig. network | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_5b4 | Op. supp. - other | Numeric | |
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c8_5c | Op. supp. - MOST used method | Numeric | |
| | | | -9 Don't know 1 Op. supp. - writing records 2 Op. supp. - dig. accounting (PCs) 3 Op. supp. - dig. network 4 Op. supp. - other |
| c8_5d | Years using c8_5b2, c8_5b3 | Numeric | |
| | | | -9 Don't Know -7 Not Applicable |
| c9_0a1 | Transport serv. - Passengers | Numeric | |

| | | | |
|---------|---------------------------------|---------|-------------------|
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0a2 | Transport serv. - Freight | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0a3 | Transport serv. - Other | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0b1 | Fleet type - Trucks | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0b10 | N of vehicles with GPS tracking | Integer | -9 Don't Know |
| | | | -7 Not Applicable |
| c9_0b2 | Fleet type - Cars | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0b3 | Fleet type - Motorcycle | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0b4 | Fleet type - Others | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_0b5 | N of vehicles - Trucks | Integer | -9 Don't Know |
| | | | -7 Not Applicable |
| c9_0b6 | N of vehicles - Cars | Integer | -9 Don't Know |
| | | | -7 Not Applicable |
| c9_0b7 | N of vehicles - Motorcycle | Numeric | -9 Don't Know |

| | | | |
|--------|---|---------|--|
| c9_0b8 | N of vehicles with automatic transmission | Numeric | -7 Not Applicable |
| c9_0b9 | N of vehicles with hybrid or electric | Numeric | -9 Don't Know -7 Not Applicable |
| c9_0d1 | Carbon emission control levels | Numeric | -9 Don't Know -7 Not Applicable -9 Don't know 1 No regulation 2 Some regulation (non-binding and monitored compliance) 3 Some regulation (binding and compliance) 4 Highly regulated and monitored |
| c9_0d2 | Fleet compliance (%) | Numeric | -9 Don't Know -7 Not Applicable |
| c9_0e1 | Monitor and targets - speed compliance | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_0e2 | Monitor and targets - idle time | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_0e3 | Monitor and targets - mileage compliance | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_0e4 | Monitor and targets - carbon emissions | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|---|---------|-------------------|
| c9_1a1 | Load optimization - in house | Numeric | 2 No |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1a2 | Load optimization - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1a3 | Load optimization - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1b1 | Transportation planning - handwritten info. | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1b2 | Transportation planning - electronic file share | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1b3 | Transportation planning - installed software | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1b4 | Transportation planning - real time info. with ERP | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_1b5 | Transportation planning - Other | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |

| | | | |
|--------|--|---------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_1c | Transportation planning - MOST used method | Numeric | -9 Don't know 1 Information collected by non-specialized workers to create load plans 2 Information collected by electronic file share (e.g. Email or FAX to create load plans) 3 Batch information collected by software installed ERP to create ERP generated load plans 4 Real time information by online software interface with ERP to create load plans 5 Other |
| c9_1d | Years using c9_1b3, c9_1b4 | Numeric | |
| c9_1e | Software for mileage optimization | Numeric | -9 Don't Know -7 Not Applicable |
| c9_2a1 | Execute transp. load plans - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_2a2 | Execute transp. load plans - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|---|---------|-------------------|
| | | | 1 Yes |
| | | | 2 No |
| c9_2a3 | Execute transp. load plans - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2b1 | Loading - Manual process (fax, text, phone) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2b2 | Loading - Manual process (dig. platforms) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2b3 | Loading - web-based | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2b4 | Loading - specific software interface via Internet | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2b5 | Loading - file exchange (ERP integrated apps) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2b6 | Loading - Other | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_2c | Loading - MOST used method | Numeric | |
| | | | -9 Don't know |

| | | | |
|--------|--|---------|---|
| | | | 1 Loading - Manual process (fax, text, phone) 2 Loading - Manual process (dig. platforms) 3 Loading - web-based 4 Loading - specific software interface via Internet 5 Loading - file exchange (ERP integrated apps) 6 Loading - Other -9 Don't Know -7 Not Applicable |
| c9_2d | Years using c9_2b3, c9_2b4, c9_2b5 | Numeric | |
| c9_3a1 | Monitor load/delivery - in house | Numeric | -9 Don't Know -7 Not Applicable -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3a2 | Monitor load/delivery - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3a3 | Monitor load/delivery - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3b1 | Monitoring load/delivery - Event driven (fax, text, phone calls) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3b2 | Monitoring load/delivery - Event driven (digital) | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|--------|---|---------|--|
| | | | 1 Yes 2 No |
| c9_3b3 | Monitoring load/delivery - Paper documentation | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3b4 | Monitoring load/delivery - installed softwares | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3b5 | Monitoring load/delivery - ERP integrated apps | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3b6 | Monitoring load/delivery - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_3c | Transportation monitoring - MOST used method | Numeric | -9 Don't know 1 Monitoring load/delivery - Event driven (fax, text, phone calls) 2 Monitoring load/delivery - Event driven (digital) 3 Monitoring load/delivery - Paper documentation 4 Monitoring load/delivery - installed softwares 5 Monitoring load/delivery - ERP integrated apps |

| | | | |
|--------|---|---------|------------------------------------|
| c9_3d | Years using c9_3b3, c9_3b4, c9_3b5 | Numeric | 6 Monitoring load/delivery - Other |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c9_4a1 | Transport performance - in house | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_4a2 | Transport performance - outsourced (another unit - same firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_4a3 | Transport performance - outsourced (another firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_4b1 | Transp. perf. - manually | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_4b2 | Transp. perf. - computer (non-specialized software) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_4b3 | Transp. perf. - computer (specialised transp. reporting) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c9_4b4 | Transp. perf. - installed software | Numeric | |

| | | | |
|--------|--|---------|---|
| c9_4b5 | Transp. perf. - file exchange between ERP integrated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_4b6 | Transp. perf. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_4c | Transp. Perf. - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_4d | Years using c9_4b3, c9_4b4, c9_4b5 | Numeric | -9 Don't know 1 Transp. perf. - manually 2 Transp. perf. - computer (non-specialized software) 3 Transp. perf. - computer (specialised transp. reporting) 4 Transp. perf. - installed software 5 Transp. perf. - file exchange between ERP integrated 6 Transp. perf. - Other |
| c9_5a1 | Fleet assets - in house | Numeric | -9 Don't Know -7 Not Applicable |
| c9_5a2 | Fleet assets - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| | | | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|--------|--|---------|---|
| c9_5a3 | Fleet assets - outsourced (another firm) | Numeric | 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_5b1 | Fleet management - manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_5b2 | Fleet management - electronic file | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_5b3 | Fleet management - ETM | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_5b4 | Fleet management - ERP and software | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_5b5 | Fleet management - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c9_5c | Fleet management - MOST used method | Numeric | -9 Don't know 1 Fleet management - manual 2 Fleet management - electronic file 3 Fleet management - ETM 4 Fleet management - ERP and software |

| | | | |
|---------|--------------------------------|---------|--|
| | | | 5 Fleet management - Other |
| c9_5d | Years using c9_5b3, c9_5b4 | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c9_5e | Replacement frequency of fleet | Numeric | |
| | | | -9 Don't know |
| | | | 1 Replacement - vehicle breaks down |
| | | | 2 Replacement - predetermined time or mileage |
| | | | 3 Replacement - economic factors |
| | | | 4 Replacement - economic analysis using specialized software |
| c10_0 | Complexity of health treatment | Numeric | |
| | | | -9 Don't know |
| | | | -7 Not applicable |
| | | | 1 Level 1: Primary Care |
| | | | 2 Level 2: Specialty Physician Care |
| | | | 3 Level 3: Acute Care General Hospital or Ambulatory Surgical Center |
| | | | 4 Level 4: Specialty Acute Care Hospital |
| | | | 5 Other |
| c10_0a | No. of patients per day | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c10_0b | No. of patients night, per day | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c10_0c | No. of full-time doctors | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c10_0d | No. of full-time nurses | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c10_1a1 | Hosp. facilities - ER | Numeric | |

| | | | |
|----------|--|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a11 | Hosp. facilities - Pulse oximetry | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a12 | Hosp. facilities - ECG | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a2 | Hosp. facilities - Postoperative care area | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a3 | Hosp. facilities - ICU | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a4 | Hosp. facilities - Blood Bank | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a5 | Hosp. facilities - Testing labs | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a6 | Hosp. facilities - X-ray | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_1a7 | Hosp. facilities - ultrasound machine | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|----------|--|---------|---|
| c10_1a8 | Hosp. facilities - CT scan | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c10_1a9 | Hosp. facilities - MRI machine | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c10_1b1 | Hosp. facilities - ER no. | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c10_1b11 | Hosp. facilities - Pulse oximetry no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_1b12 | Hosp. facilities - ECG no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_1b2 | Hosp. facilities - Postoperative care area no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_1b3 | Hosp. facilities - ICU no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_1b4 | Hosp. facilities - Blood Bank no. | Integer | -9 Don't Know -7 Not Applicable |
| c10_1b5 | Hosp. facilities - Testing labs no. | Integer | -9 Don't Know -7 Not Applicable |
| c10_1b6 | Hosp. facilities - X-ray no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_1b7 | Hosp. facilities - ultrasound machine no. | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|---------|--|---------|---|
| c10_1b8 | Hosp.facilities - CT scan no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_1b9 | Hosp. facilities - MRI machine no. | Numeric | -9 Don't Know -7 Not Applicable |
| c10_2a1 | Appt. - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2a2 | Appt. - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2a3 | Appt. - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2b1 | Scheduling - Personal visit and paper | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2b2 | Scheduling - Phone call, SMS, or Email | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2b3 | Scheduling - Software or app (w/o automated reminders) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|---|---------|--|
| c10_2b4 | Scheduling - Software or app (w automated reminders) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2b5 | Scheduling - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_2c | Scheduling - MOST used method | Numeric | -9 Don't know 1 Scheduling - Personal visit and paper 2 Scheduling - Phone call, SMS, or Email 3 Scheduling - Software or app (w/o automated reminders) 4 Scheduling - Software or app (w automated reminders) 5 Scheduling - Other |
| c10_2d | Years using c10_2b3, c10_2b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c10_3a1 | Patient records - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3a2 | Patient records - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3a3 | Patient records - outsourced (another firm) | Numeric | -9 Don't Know |

| | | | |
|---------|--|---------|--|
| | | | -7 Not Applicable 1 Yes 2 No |
| c10_3b1 | Patient records - Handwritten process | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3b2 | Patient records - Digital patient records | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3b3 | Patient records - EHR | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3b4 | Patient records - Cloud- based HER | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3b5 | Patient records - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_3c | Patient record - MOST used method | Numeric | -9 Don't know 1 Patient records - Handwritten process 2 Patient records - Digital patient records 3 Patient records - EHR 4 Patient records - Cloud- based HER 5 Patient records - Other |
| c10_3d | Years using c10_3b3, c10_3b4 | Numeric | -9 Don't Know -7 Not Applicable |
| c10_4a1 | Pharmacy - in house | Numeric | |

| | | | |
|---------|--|---------|---|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_4b1 | Medication - Internal Pharmacy | Numeric | -9 Don't know 1 Med. mgt./admin. - Handwritten 2 Med. mgt./admin. - Barcode/electronic id 3 Med. mgt./admin. - Other |
| c10_4b2 | Medication - Order of medication | Numeric | -9 Don't know -7 Not applicable 1 Manual order 2 Electronic order |
| c10_4c1 | Med. mgt./admin. - Handwritten | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_4c2 | Med. mgt./admin. - Barcode/electronic id | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_4c3 | Med. mgt./admin. - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c10_4d | Years using c10_4c2 | Numeric | -9 Don't Know -7 Not Applicable |
| c10_5a1 | Sepsis treat. - antibiotics | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |

| | | | |
|---------|--|---------|---|
| c10_5a2 | Sepsis treat. - adv. therapies | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |
| c10_5b1 | Childbirth - C-section | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |
| c10_5b2 | Childbirth - High-risk labor | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |
| c10_5c1 | Trauma - Traction (closed fracture) | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |
| c10_5c2 | Trauma - Open Treatment of Fracture | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |
| c10_5d1 | Myocardial infarction/Strokes - defibrillation | Numeric | -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available 3 It is NEVER available |

| | | | |
|---------|--|---------|---|
| c10_5d2 | Myocardial infarction/-strokes - angiography | Numeric | 3 It is NEVER available -9 Don't know -7 Not applicable 1 It is always available 2 It is NOT always available |
| c11_01a | Material - natural leather | Numeric | 3 It is NEVER available -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_01b | Material - man-made leather | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_01c | Material - textile | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_01d | Material - synthetic + textile | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_01e | Material - synthetic + textile + leather | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_01f | Material - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_02a | Leather goods - basic | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|---------|--------------------------|---------|---|
| c11_02b | Leather goods - fashion | Numeric | 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_02c | Leather goods - sports | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_02d | Leather goods - shoes | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_02e | Leather goods - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_03a | Finishes - screen print | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_03b | Finishes - embroidery | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_03c | Finishes - seamless | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_03d | Finishes - ink or wax | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_03e | Finishes - waterproofing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_03f | Finishes - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|--|---------|--|
| | | | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1a1 | Provide files for design | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1a2 | Most common files | Numeric | -9 Don't know 1 Graded file of all sizes ready to cut 2 A prototype cutting file for grading 3 Hand drawing of the design 4 Computer drawing of the design 5 3D file of the design 6 Other |
| c11_1a3 | Design drawing - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1a4 | Design drawing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1a5 | Design drawing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1b1 | Design - Manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|---|---------|--|
| c11_1b2 | Design - Digital or semi-digital | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1b3 | Design - CAD, 3D, or virtual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1b4 | Design - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_1c | Design - MOST used method | Numeric | -9 Don't know 1 Design - Manual 2 Design - Digital or semi-digital 3 Design - CAD, 3D, or virtual 4 Design - Other |
| c11_1d | Years using c11_1b2, c11_1b3 | Numeric | -9 Don't Know -7 Not Applicable |
| c11_2a1 | Cutting - in-house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2a2 | Cutting - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2a3 | Cutting - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|---------|---|---------|--|
| c11_2b1 | Cutting - Manual | Numeric | 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2b2 | Cutting - Machine manually-operated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2b3 | Cutting - Semi-automatic machine | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2b4 | Cutting - Automatic/Computerised (no Laser) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2b5 | Cutting - Automatic/Computerised (Laser) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2b6 | Cutting - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_2c | Cutting - MOST used method | Numeric | -9 Don't know 1 Cutting - Manual 2 Cutting - Machine manually-operated 3 Cutting - Semi-automatic machine |

| | | | |
|---------|--|---------|---|
| | | | 4 Cutting - Automatic/Computerised (no Laser) |
| | | | 5 Cutting - Automatic/Computerised (Laser) |
| | | | 6 Cutting - Other |
| c11_2d | Years using c11_2b4, c11_2b5 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| c11_3a1 | Sewing - in-house | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c11_3a2 | Sewing - outsourced (another unit - same firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c11_3a3 | Sewing - outsourced (another firm) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c11_3b1 | Sewing - Manually | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c11_3b2 | Sewing - Machine (manually) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c11_3b3 | Sewing - Machine (semi-automated) | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |

| | | | |
|---------|--|---------|--|
| c11_3b4 | Sewing - Machine (automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_3b5 | Sewing - 3D Knitting | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_3b6 | Sewing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_3c | Sewing - MOST used method | Numeric | -9 Don't know 1 Sewing - Manually 2 Sewing - Machine (manually) 3 Sewing - Machine (semi-automated) 4 Sewing - Machine (automated) 5 Sewing - 3D Knitting 6 Sewing - Other |
| c11_3d | Years using c11_3b3, c11_3b4, c11_cb5 | Numeric | -9 Don't Know -7 Not Applicable |
| c11_4a1 | Assembly/Finishing - in-house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4a2 | Assembly/Finishing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|--|---------|---|
| c11_4a3 | Assembly/Finishing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4b1 | Assembly/Finishing - manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4b2 | Assembly/Finishing - conveyor/assembly (static/semi-automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4b3 | Assembly/Finishing - conveyor/assembly (dynamic/automated) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4b4 | Assembly/Finishing - injection machine | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4b5 | Assembly/Finishing - 3D printing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4b6 | Assembly/Finishing - Other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c11_4c | Assembly/Finishing - MOST used method | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|--------|---------------------------------------|---------|--|
| | | | <ul style="list-style-type: none"> -9 Don't know 1 Assembly/Finishing - manual 2 Assembly/Finishing - conveyor/assembly (static/semi-automated) 3 Assembly/Finishing - conveyor/assembly (dynamic/automated) 4 Assembly/Finishing - injection machine 5 Assembly/Finishing - 3D printing 6 Assembly/Finishing - Other |
| c11_4d | Years using c11_4b3, c11_4b4, c11_4b5 | Numeric | |
| c12_0 | Accommodation classification | Numeric | <ul style="list-style-type: none"> -9 Don't Know -7 Not Applicable |
| | | | <ul style="list-style-type: none"> -9 Don't know -7 Not applicable 1 Hotel: Luxury (De Luxe or First Class) 2 Hotel: Standard or budget (Standard or Economy Class) 3 Resort: Luxury (AAA) 4 Resort: Standard or budget (AA, A, or Special Interest) 5 Apart-hotel/Pension house/bed & breakfast 6 Motel |
| c12_0a | No. of rooms available | Integer | |
| | | | <ul style="list-style-type: none"> -9 Don't Know -7 Not Applicable |
| c12_0b | Max. capacity of guests | Integer | |
| | | | <ul style="list-style-type: none"> -9 Don't Know -7 Not Applicable |
| c12_0c | N rooms - internet connection | Integer | |
| | | | <ul style="list-style-type: none"> -9 Don't Know -7 Not Applicable |
| c12_0d | N rooms - AC | Integer | |

| | | | |
|---------|--|---------|-------------------|
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0e | N rooms - TV | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0f | N rooms - cable | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0g | N rooms - minibar | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0h | N rooms - coffee maker | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0i | N rooms - telephone | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0j | N rooms - hairdryer | Integer | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_0k | N of years with internet connections | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| c12_1a1 | Reservations - in house | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c12_1a2 | Reservations - outsourced (another unit - same firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c12_1a3 | Reservations - outsourced (another firm) | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| c12_1b1 | Reservations - handwritten | Numeric | |
| | | | -9 Don't Know |
| | | | -7 Not Applicable |

| | | | |
|---------|---------------------------------------|---------|---|
| c12_1b2 | Reservations - digital (std software) | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c12_1b3 | Reservations - dedicated | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c12_1b4 | Reservations - PMS | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c12_1b5 | Reservations - cloud-based | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c12_1b6 | Reservations - other | Numeric | 1 Yes 2 No -9 Don't Know -7 Not Applicable |
| c12_1c | Reservations - MOST used method | Numeric | 1 Reservations - handwritten 2 Reservations - digital (std software) 3 Reservations - dedicated 4 Reservations - PMS 5 Reservations - cloud-based 6 Reservations - other |
| c12_1d | Years using c12_1b3, c12_1b4, c12_1b5 | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|-----------|----------------------------------|---------|---|
| c12_1e1 | Online travel agency for booking | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_1e2 | Share of booking - online agency | Numeric | -9 Don't Know -7 Not Applicable |
| c12_1e3 | Online travel agency - MOST used | String | Open ended |
| c12_1e4 | c12_1e4 | String | Open ended |
| c12_1e4_1 | Online agency - Booking.com | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_1e4_2 | Online agency - Trip Advisor | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_1e4_3 | Online agency - Expedia | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_1e4_4 | Online agency - AirBnB | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_1e4_5 | Online agency - Others | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_1e5 | Other online agencies | String | Open ended |
| c12_2a1 | Accom Pricing - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|---|---------|---|
| c12_2a2 | Accom Pricing - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2a3 | Accom Pricing - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2b1 | Accom Pricing - manual cost | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2b2 | Accom Pricing - automated markup | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2b3 | Accom Pricing - automated promotional | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2b4 | Accom Pricing - dynamic pricing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2b5 | Accom Pricing - personalised pricing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_2b6 | Accom Pricing - other | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|---------|--|---------|--|
| c12_2c | Accom Pricing - MOST used method | Numeric | 1 Yes 2 No -9 Don't know 1 Accom Pricing - manual cost 2 Accom Pricing - automated markup 3 Accom Pricing - automated promotional 4 Accom Pricing - dynamic pricing 5 Accom Pricing - personalised pricing 6 Accom Pricing - other |
| c12_2d | Years using c12_2b4, c12_2b5 | Numeric | -9 Don't Know |
| c12_2da | Regulation limiting price accom | Numeric | -7 Not Applicable |
| c12_2db | Agency regulating price accom | String | -9 Don't Know -7 Not Applicable 1 Yes 2 No Open ended |
| c12_3a1 | Housekeeping - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3a2 | Housekeeping - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3a3 | Housekeeping - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|--|---------|---|
| c12_3b1 | Housekeeping - handwritten | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3b2 | Housekeeping - digital (std. software) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3b3 | Housekeeping - dedicated | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3b4 | Housekeeping - PMS | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3b5 | Housekeeping - cloud-based | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3b6 | Housekeeping - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3c | Housekeeping - MOST used method | Numeric | -9 Don't know 1 Housekeeping - handwritten 2 Housekeeping - digital (std. software) 3 Housekeeping - dedicated 4 Housekeeping - PMS 5 Housekeeping - cloud-based 6 Housekeeping - other |

| | | | |
|---------|---|---------|---|
| c12_3d | Years using c12_3b3, c12_3b4, c12_3b5 | Numeric | -9 Don't Know -7 Not Applicable |
| c12_3e1 | Use vacuum cleaner | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_3e2 | N of vacuum cleaners used | Numeric | -9 Don't Know -7 Not Applicable |
| c12_4a1 | Laundry - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4a2 | Laundry - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4a3 | Laundry - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4b1 | Laundry - manual | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4b2 | Laundry - domestic | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4b3 | Laundry - industrial (w automatic sheet fold) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|---|---------|--|
| c12_4b4 | Laundry - industrial (w/o automatic sheet fold) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4b5 | Laundry - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_4c | Laundry - MOST used method | Numeric | -9 Don't know 1 Laundry - manual 2 Laundry - domestic 3 Laundry - industrial (w automatic sheet fold) 4 Laundry - industrial (w/o automatic sheet fold) 5 Laundry - other |
| c12_4d | Years using c12_4c | Numeric | -9 Don't Know -7 Not Applicable |
| c12_5a1 | F and B - in house | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5a2 | F and B - outsourced (another unit - same firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5a3 | F and B - outsourced (another firm) | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5b1 | PoS - handwritten | Numeric | -9 Don't Know -7 Not Applicable 1 Yes |

| | | | |
|---------|--|---------|--|
| c12_5b2 | PoS - digital records | Numeric | 2 No -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5b3 | PoS - specialised software | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5b4 | PoS - PMS | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5b5 | PoS - cloud-based | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5b6 | PoS - other | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| c12_5c | PoS - MOST used method | Numeric | -9 Don't know 1 PoS - handwritten 2 PoS - digital records 3 PoS - specialised software 4 PoS - PMS 5 PoS - cloud-based 6 PoS - other |
| c12_5d | Years using c12_5b3, c12_5b4, c12_5b5 | Numeric | -9 Don't Know -7 Not Applicable |
| c12_6a1 | N. reviews - Booking.com | Integer | -9 Don't Know -7 Not Applicable |
| c12_6a2 | Rate - Booking.com | Numeric | -9 Don't Know -7 Not Applicable |

| | | | |
|---------|--|---------|--|
| c12_6b1 | N. reviews - Trip Advisor | Integer | -9 Don't Know -7 Not Applicable |
| c12_6b2 | Rate - Trip Advisor | Numeric | -9 Don't Know -7 Not Applicable |
| c12_6c1 | N. reviews - Expedia | Numeric | -9 Don't Know -7 Not Applicable |
| c12_6c2 | Rate - Expedia | Numeric | -9 Don't Know -7 Not Applicable |
| c12_6d1 | N. reviews - AirBnB | Numeric | -9 Don't Know -7 Not Applicable |
| c12_6d2 | Rate - AirBnB | Numeric | -9 Don't Know -7 Not Applicable |
| d1a | Purchase/Lease - Equip. or Mach. | Numeric | -9 Don't know 1 Yes, new 2 Yes, second hand 3 Yes, both (new and second hand) 4 No |
| d1b | Purchase or Lease - Software License | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d2a | Most used info. source for decision making | Numeric | -9 Don't know 1 Oth. firms in the sector 2 Oth. firms in the locality, but diff. sector 3 Suppliers or buyers 4 Industrial or trade assoc. 5 Public tech. extension services 6 Private consultants 7 Fairs, events, and missions 8 Other |

| | | | |
|-----|---|---------|---|
| d2d | Business Relationship - Multinational firm | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d2e | CEO Experience - Large firm in same sector/multinational firm | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d3a | Loan - mach., equip or licensing | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d3c | No. - needed to borrow but not get it | Numeric | -9 Don't Know -7 Not Applicable |
| d4a | Formal Incentives - Money, gift, or recognition | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d4b | No. KPIs monitored | Numeric | -9 Don't know 1 1-2 key performance indicators 2 3-9 key performance indicators 3 10 or more key performance indicators 4 No key performance indicators |
| d6a | Did export? | Numeric | -9 Don't know 1 Exported directly 2 Exported through trading firms 3 Did not export |

| | | | |
|-------|--|---------|---|
| d6b | Direct Exports (% of sales) | Numeric | -9 Don't Know -7 Not Applicable |
| d6c | Imported inputs, machines or equipment? | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7a | Awareness - govt. support program/subsidy for tech. adoption | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7b | Benefitted from any govt. program/subsidy | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7c_1 | Govt support - information | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7c_2 | Govt support - tech assistance | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7c_3 | Govt support - tax incentive | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7c_4 | Govt support - grant | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| d7c_5 | Govt support - loan | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |

| | | | |
|---------|--|---------|-------------------|
| | | | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| d7c_6 | Govt support - other | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| d7c_str | d7c | String | Open ended |
| d8a | 1st obstacle to adopt technology | String | Open ended |
| d8d | 1st reason for the acquisition of technology | String | Open ended |
| d9a | Envt. and Sustainable Mgt. - ISO 14001 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| d9b | Envt. and Sustainable Mgt. - ISO 50001 | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| d9c | Envt. and Sustainable Mgt. - Periodic audit third party | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| d9d | Envt. and Sustainable Mgt. - Formal evaluation of contractors and suppliers | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |
| | | | 1 Yes |
| | | | 2 No |
| d9e | Envt. and Sustainable Mgt. - Carbon trading, tracking, carbon offset credits | Numeric | -9 Don't Know |
| | | | -7 Not Applicable |

| | | | |
|------|--|---------|---|
| | | | 1 Yes 2 No |
| d9f | Envt. and Sustainable Mgt. - Monitor CO2/CO2 emissions | Numeric | -9 Don't Know -7 Not Applicable 1 Yes 2 No |
| e1 | Total no. workers by end of (ref_year1) | Integer | -9 Don't Know -7 Not Applicable |
| e10a | Main product - % share in total sales | Numeric | -9 Don't Know -7 Not Applicable |
| e10b | Main product - average markup | Numeric | -9 Don't Know -7 Not Applicable |
| e1a | No. of permanent workers, full-time (ref_year1) | Integer | -9 Don't Know -7 Not Applicable |
| e1f | Total share of female workers (ref_year1) | Integer | -9 Don't Know -7 Not Applicable |
| e2 | Total no. workers by end of (ref_year2) | Integer | -9 Don't Know -7 Not Applicable |
| e3a | No. of CEOs and Managers (ref_year1) | Numeric | -9 Don't Know -7 Not Applicable |
| e3d | No. of Clerical support workers (ref_year1) | Integer | -9 Don't Know -7 Not Applicable |
| e3e | No. of Production workers (ref_year1) | Integer | -9 Don't Know -7 Not Applicable |

| | | | |
|------|---|---------|------------------------------------|
| e3f | No. of Service or sales workers (ref_year1) | Integer | -9 Don't Know -7 Not Applicable |
| e3h | No. of workers dedicated to R&D activities? | Numeric | -9 Don't Know -7 Not Applicable |
| e5b | % of workers - completed secondary education | Numeric | -9 Don't Know -7 Not Applicable |
| e5c | % of workers - vocational training | Numeric | -9 Don't Know -7 Not Applicable |
| e5d | % of workers - completed college degree or more | Numeric | -9 Don't Know -7 Not Applicable |
| e6a | Total sales (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e6b | Total sales (ref_year2) | long | -9 Don't Know -7 Not Applicable |
| e7a | Total labor cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e7b | Total material cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e7c | Total energy cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e7c1 | Total natural gas cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e7c2 | Total fuel oils cost (ref_year1) | Numeric | -9 Don't Know |

| | | | |
|------|--|---------|------------------------------------|
| e7c3 | Total LPG cost (ref_year1) | long | -7 Not Applicable |
| e7c4 | Total Coal or Wood fuels cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e7c5 | Total own renewable cost (ref_year1) | Numeric | -9 Don't Know -7 Not Applicable |
| e7d | Operation cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e7e | e7e | double | Open ended |
| e8a | Equipment cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e8b | Building cost (ref_year1) | long | -9 Don't Know -7 Not Applicable |
| e8c | Power plant for renewable resources cost (ref_year1) | Numeric | -9 Don't Know -7 Not Applicable |
| e9rd | Total R&D expenditure (ref_year1) | long | -9 Don't Know -7 Not Applicable |