

Ghana - Enterprise Survey 2014, Innovation Follow-up Survey

World Bank

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Sampling

Sampling Procedure

Respondents were randomly selected from a list of establishments interviewed for Ghana 2013 Enterprise Survey. The goal was to have a final sample of 75% of the original businesses.

Weighting

Weights for the innovation survey are calculated from the original Enterprise Survey weights through upwards adjustment by multiplying with a cell-specific factor which equals the proportion of originally completed ES interviews to completed innovation interviews.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2014-01	2014-08	N/A

Data Collection Mode

Face-to-face [f2f]

Data Processing

No content available

Data Appraisal

No content available

File Description

Variable List

ghana_2013_innovation_data

Content

Cases	549
Variable(s)	177
Structure	Type: Keys: ()
Version	
Producer	
Missing Data	

Variables

ID	Name	Label	Type	Format	Question
V1	idstd	WEB STD FIRMID	discrete	numeric	
V2	id	Questionnaire number	discrete	numeric	
V3	recnumber	Record number	discrete	numeric	
V4	preference	Preference	discrete	numeric	
V5	wstrict_innov		contin	numeric	
V6	wmedian_innov		contin	numeric	
V7	wweak_innov		contin	numeric	
V8	ha0	Questionnaire	discrete	numeric	
V9	ha14d	Day when the interview begins	discrete	numeric	
V10	ha14m	Month when the interview begins	discrete	numeric	
V11	ha14y	Year when the interview begins	discrete	numeric	
V12	ha14h	Hour when the interview begins	discrete	numeric	
V13	ha14min	Minutes when the interview begins	discrete	numeric	
V14	ha0b	Same respondent as the ES	discrete	numeric	
V15	hb1	Did the firm introduce any innovative product or service?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce any innovative product or service?
V16	hb2	How many innovative products or services did the firm introduced?	discrete	numeric	From fiscal year 2010 thru 2012, how many innovative products or services did this establishment introduce?
V17	hb3	Percentage of sales from all innovative products	discrete	numeric	In fiscal year 2012, what percentage of this establishment's total sales was represented by sales from all innovative products or services introduced from fiscal year 2010 thru 2012?
V18	hb5x	Describe the main innovative product or service that the firm introduced	discrete	character	Please describe in detail the main innovative product or service that this establishment introduced from fiscal year 2010 thru 2012.
V19	hb6	Year the main innovative product or service was introduced	discrete	numeric	In which year did this establishment introduce the main innovative product or service?
V20	hb4	Percentage of the main innovative product or service	discrete	numeric	In fiscal year 2012, what percentage of this establishment's total sales was represented by sales from the main innovative product or service?

ID	Name	Label	Type	Format	Question
V21	hb7x	How the main innovative product/service is different than the most similar one?	discrete	character	Please describe in detail how the main innovative product or service is different than the most similar product or service, if any, previously produced by this establishment
V22	hb7	The product or service is completely new	discrete	numeric	Please describe in detail how the main innovative product or service is different than the most similar product or service, if any, previously produced by this establishment . The product or service is completely new, there are no similar products
V23	hb9a	Does the main innovative product/service have completely new functions?	discrete	numeric	I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment. Does it have completely new functions?
V24	hb9b	Is it cheaper to produce or offer?	discrete	numeric	I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment. Is it cheaper to produce or offer?
V25	hb9c	Is it a better quality product/service?	discrete	numeric	I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment. Is it a better quality product or service?
V26	hb9d	Does it use different inputs?	discrete	numeric	I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment. Does it use different inputs?
V27	hb9f	Is it based on a techno/indust. design not already used by the firm?	discrete	numeric	I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment. Is it based on a technology or industrial design not already used by this establishment?
V28	hb10a	To replace a product or service offered by firm	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To replace a product or service offered by this establishment
V29	hb10b	To extend the range of products or service offered by firm	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To extend the range of products or service offered by this establishment
V30	hb10c	To open up new markets or increase market share	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To open up new markets or increase market share
V31	hb10d	To decrease the cost of production or offering the service	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To decrease the cost of production or offering the service
V32	hb10e	To offer products or service already offered by competitors	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To offer products or service already offered by competitors
V33	hb10f	To comply with regulations or standards	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To comply with regulations or standards (e.g. safety or environmental regulations)

ID	Name	Label	Type	Format	Question
V34	hb10g	To deal with a decrease in the demand for other products or service	discrete	numeric	Do any of the following describe why this establishment introduced this main innovative product: To deal with a decrease in the demand for other products or service
V35	hb11a	The main innovative product : New to the local market	discrete	numeric	When this main innovative product or service was introduced by this establishment, was it New to the local market
V36	hb11b	The main innovative product : New to the national market	discrete	numeric	When this main innovative product or service was introduced by this establishment, was it New to the national market
V37	hb11c	The main innovative product : New to the international market	discrete	numeric	When this main innovative product or service was introduced by this establishment, was it New to the international market
V38	hb12	How did the firm develop the idea for this main innovative product/service?	discrete	numeric	How did this establishment develop the idea for this main innovative product or service?
V39	hb13	Was the main innovative product or service developed entirely by firm?	discrete	numeric	Was the main innovative product or service developed entirely by this establishment?
V40	hb14	Was the main innovative product or service developed entirely by another firm?	discrete	numeric	Was the main innovative product or service developed entirely by another firm (e.g. headquarter, sister company or any other firm within your company or independent from your company)?
V41	hb15a	Developed in cooperation with: Any domestic firms	discrete	numeric	Was the main innovative product or service developed in cooperation with any of the following? Any domestic firms
V42	hb15b	Developed in cooperation with: Any foreign firms or a foreign-owned parent firm	discrete	numeric	Was the main innovative product or service developed in cooperation with any of the following? Any foreign firms or a foreign-owned parent firm
V43	hb15c	Developed in cooperation with: Domestic academic or research institutions	discrete	numeric	Was the main innovative product or service developed in cooperation with any of the following? Domestic academic or research institutions
V44	hb15d	Developed in cooperation with: Foreign academic or research institutions	discrete	numeric	Was the main innovative product or service developed in cooperation with any of the following? Foreign academic or research institutions
V45	hb15e	Developed in cooperation with: Private consulting company or individuals	discrete	numeric	Was the main innovative product or service developed in cooperation with any of the following? Private consulting company or individuals
V46	hb15f	Developed in cooperation with: Government	discrete	numeric	Was the main innovative product or service developed in cooperation with any of the following? Government
V47	hb16	Were employees hired for the purpose of developing the main innovative product?	discrete	numeric	Were employees hired specifically for the purpose of developing the main innovative product or service?
V48	hb17	Number of skilled workers increased, decreased or remained the same?	discrete	numeric	From fiscal year 2010 thru 2012, as a consequence of introducing any innovative product or service, did the number of skilled workers employed by the establishment increase, decrease or remain the same?
V49	hb18	Number of unskilled workers increased, decreased or remained the same?	discrete	numeric	From fiscal year 2010 thru 2012, as a consequence of introducing any innovative product or service, did the number of unskilled workers employed by the establishment increase, decrease or remain the same?

ID	Name	Label	Type	Format	Question
V50	hb19a	Attempt to develop innovative product: Abandoned/suspended before completion	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment attempt to develop an innovative product or service that was Abandoned or suspended before completion
V51	hb19b	Attempt to develop innovative product: Ongoing at the end of fiscal year 2012	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment attempt to develop an innovative product or service that was Still ongoing at the end of fiscal year 2012
V52	hc1	Introduced any innovative methods of manufacturing products/offering services?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce any innovative methods of manufacturing products or offering services?
V53	hc2	Introduced any innovative logistics, del./dist. methods/ products/services?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce any innovative logistics, delivery, or distribution methods for inputs, products, or services?
V54	hc3	Introduced any innovative supporting activity for processes?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce any innovative supporting activity for processes, such as maintenance systems or operations for purchasing, accounting, or computing?
V55	hc4	ANY or NONE of above 3 questions are "yes"	discrete	numeric	
V56	hc5x	Describe in detail firm's main innovative process	discrete	character	Please describe in detail this establishment's main innovative process
V57	hc6	Year the most important innovative process was introduced	discrete	numeric	In which year did this establishment introduce this most important innovative process?
V58	hc7x	How the innovative process is different from the most similar process	discrete	character	Please describe in detail how the innovative process is different from the most similar process, if any, that is or was used by this establishment
V59	hc7	The process is completely new, there is no similar process	discrete	numeric	Please describe in detail how the innovative process is different from the most similar process, if any, that is or was used by this establishment. The process is completely new, there is no similar process
V60	hc8a	The most important innovative process: Automate manual processes?	discrete	numeric	Does the most important innovative process Automate manual processes, partially or fully?
V61	hc8b	The most important innovative process: Adapt a technology used by firm?	discrete	numeric	Does the most important innovative process Adapt a technology or method previously used by this establishment?
V62	hc8c	The most important innovative process: Introduce a new technology or method?	discrete	numeric	Does the most important innovative process Introduce a new technology or method?
V63	hc8d	The most important innovative process: Use efficient tech. already used by firm	discrete	numeric	Does the most important innovative process: Use a more efficient technology or method already used by this establishment
V64	hc9	Most imp. inno. process associated with an inno.product introduced by firm?	discrete	numeric	Is the most important innovative process associated with an innovative product or service introduced by this establishment?
V65	hc10a	Introduced the most imp. inno. pro.: To increase quality of products/services	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To increase the quality of products or services
V66	hc10b	Introduced the most imp. inno. pro.: To increase total prod./amount of services	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To increase the total production or amount of services offered

ID	Name	Label	Type	Format	Question
V67	hc10c	Introduced the most imp. inno. pro.: To increase flexibility of prod./service	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To increase the flexibility of production or offering service
V68	hc10d	Introduced the most imp. inno. pro.: To increase speed of production/ service	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To increase the speed of production or offering service
V69	hc10e	Introduced the most imp. inno. pro.: To increase speed of delivery to customer	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To increase the speed of delivery to the customer
V70	hc10f	Introduced the most imp. inno. pro.: To decrease the cost of production/service	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To decrease the cost of production or offering service
V71	hc10g	Introduced the most imp. inno. pro.: To reduce waste or errors	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To reduce waste or errors (defect rate or rejection rate)
V72	hc10h	Introduced the most imp. inno. pro.: To comply with regulations or standards	discrete	numeric	Do any of the following describe why this establishment introduced the most important innovative process? To comply with regulations or standards (e.g. safety or environmental regulations)
V73	hc11a	When the most imp. inno. process was introduced: New to the local market	discrete	numeric	When the most important innovative process was introduced in this establishment, was it New to the local market
V74	hc11b	When the most imp. inno. process was introduced: New to the national market	discrete	numeric	When the most important innovative process was introduced in this establishment, was it New to the national market
V75	hc11c	When the most imp. inno. process was introduced: New to the international market	discrete	numeric	When the most important innovative process was introduced in this establishment, was it New to the international market
V76	hc12	How did firm develop the idea for this most important innovative process?	discrete	numeric	How did this establishment develop the idea for this most important innovative process?
V77	hc13	Was the most important innovative process developed entirely by firm?	discrete	numeric	Was the most important innovative process developed entirely by this establishment?
V78	hc14	Was the most important innovative process developed entirely by another firm?	discrete	numeric	Was the most important innovative process developed entirely by another firm (e.g. headquarter, sister company or any other firm within your company or independent from your company)?
V79	hc15a	Developed in cooperation with: Domestic firms or a domestic-owned parent firm	discrete	numeric	Was the most important innovative process developed in cooperation with any of the following?
V80	hc15b	Developed in cooperation with: Foreign firms or a foreign-owned parent firm	discrete	numeric	Was the most important innovative process developed in cooperation with any of the following?
V81	hc15c	Developed in cooperation with: Domestic academic or research institutions	discrete	numeric	Was the most important innovative process developed in cooperation with any of the following?
V82	hc15d	Developed in cooperation with: Foreign academic or research institutions	discrete	numeric	Was the most important innovative process developed in cooperation with any of the following?
V83	hc15e	Developed in cooperation with: Private consulting company or individuals	discrete	numeric	Was the most important innovative process developed in cooperation with any of the following?

ID	Name	Label	Type	Format	Question
V84	hc15f	Developed in cooperation with: Government	discrete	numeric	Was the most important innovative process developed in cooperation with any of the following?
V85	hc16	Employees hired specifically for developing the most imp. innovative process?	discrete	numeric	Were employees hired specifically for the purpose of developing the most important innovative process?
V86	hc17	With introduction of innovative processes: The number of skilled workers?	discrete	numeric	From fiscal year 2010 thru 2012, as a consequence of introducing any innovative processes, did the number of skilled workers employed by the establishment increase, decrease or remain the same?
V87	hc18	With introduction of innovative processes: The number of unskilled workers?	discrete	numeric	From fiscal year 2010 thru 2012, as a consequence of introducing any innovative processes, did the number of unskilled workers employed by the establishment increase, decrease or remain the same?
V88	hd1a	Number of employees reporting directly to Top Manager in fiscal year 2012	discrete	numeric	In fiscal year 2012, how many employees reported directly to the Top Manager of this establishment? (An employee who reports directly implies the employee meets with the Top Manager on a regular basis (middle manager)).
V89	hd1b	Number of employees reporting directly to Top Manager in fiscal year 2010	discrete	numeric	In fiscal year 2010, how many employees reported directly to the Top Manager of this establishment?
V90	hd2a	Number of layers of direct reporting in fiscal year 2012	discrete	numeric	In fiscal year 2012, how many layers of direct reporting were there in this establishment from the Top Manager down to the lowest-level of employee?
V91	hd2b	Number of layers of direct reporting in fiscal year 2010	discrete	numeric	In fiscal year 2010, how many layers of direct reporting were there in this establishment from the Top Manager down to the lowest-level of employee?
V92	hd3a	Changes in its structure: Create a new unit or department	discrete	numeric	From fiscal year 2010 thru 2012, did the establishment make any changes in its organizational structure in any of the following ways: Create a new unit or department
V93	hd3b	Changes in its structure: Dissolve any units or department	discrete	numeric	From fiscal year 2010 thru 2012, did the establishment make any changes in its organizational structure in any of the following ways: Dissolve any units or department
V94	hd3c	Changes in its structure: Merge any units or department	discrete	numeric	From fiscal year 2010 thru 2012, did the establishment make any changes in its organizational structure in any of the following ways: Merge any units or department
V95	hd7	Contracted other firms to perform any activities previously done in-house?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment contract other firms to perform any activities previously done in-house (outsourcing)?
V96	hd8	Started doing in-house any activities previously contracted to other firms?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment start doing in-house any activities previously contracted to other firms (insourcing)?
V97	hd4	Introduce any change in the method of hiring employees?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce any change in the method of hiring employees, excluding managerial and supervisory staff?
V98	hd5	Introduce any change in the method of hiring managerial and supervisory staff?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce any change in the method of hiring managerial and supervisory staff?

ID	Name	Label	Type	Format	Question
V99	hd6a	Manager(s) learn about management practices from: Suppliers or customers	discrete	numeric	From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Suppliers or customers
V100	hd6b	Manager(s) learn about management practices from: Trade associations or workshop	discrete	numeric	From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Trade associations or workshops
V101	hd6c	Manager(s) learn about management practices from: New employees	discrete	numeric	From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from New employees
V102	hd6d	Manager(s) learn about management practices from: Competitors	discrete	numeric	From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Competitors
V103	hd6e	Manager(s) learn about management practices from: Consultants	discrete	numeric	From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Consultants
V104	hd9a	Year 2012: Best describes when a problem arose in the production process	discrete	numeric	In fiscal year 2012 what best describes what happened at this establishment when a problem arose in the production process, such as a quality defect or machinery or equipment break-downs?
V105	hd9b	Year 2010: Best describes when a problem arose in the production process	discrete	numeric	In fiscal year 2010 what best describes what happened at this establishment when a problem arose in the production process, such as a quality defect or machinery or equipment break-downs?
V106	hd10a	Year 2012, were key performance indicators monitored at firm?	discrete	numeric	In fiscal year 2012, were key performance indicators monitored at this establishment? Examples of performance indicators are metrics on production, cost, waste, quality, inventory, energy, absenteeism and on-time delivery.
V107	hd10b	Year 2012, how many key performance indicators were monitored at firm?	discrete	numeric	In fiscal year 2012, how many key performance indicators were monitored at this establishment?
V108	hd10c	Year 2012, how frequently key performance indicators were reviewed by managers?	discrete	numeric	In fiscal year 2012, how frequently were the key performance indicators reviewed by managers at this establishment?
V109	hd11a	Year 2010, were key performance indicators monitored at firm?	discrete	numeric	In fiscal year 2010, were key performance indicators monitored at this establishment?
V110	hd11b	Year 2010, how many key performance indicators were monitored at firm?	discrete	numeric	In fiscal year 2010, how many key performance indicators were monitored at this establishment?
V111	hd11c	Year 2010, how frequently key performance indicators were reviewed by managers?	discrete	numeric	In fiscal year 2010, how frequently were the key performance indicators reviewed by managers at this establishment?
V112	hd12a	Year 2012, best describes the time frame of production/sales targets at firm?	discrete	numeric	In fiscal year 2012, what best describes the time frame of production/sales targets at this establishment? (Production targets may include desired amounts of production, quality, efficiency, waste reduction, and on-time delivery).
V113	hd12b	Year 2012, did firm have any performance bonus for employees or managers?	discrete	numeric	In fiscal year 2012, did this establishment have any performance bonus for employees or managers?
V114	hd12c	What were these performance bonuses usually based on?	discrete	numeric	What were these performance bonuses usually based on?

ID	Name	Label	Type	Format	Question
V115	hd13a	Year 2010, best describes the time frame of production/sales targets at firm?	discrete	numeric	In fiscal year 2010, what best describes the time frame of production/sales targets at this establishment?
V116	hd13b	Year 2010, had any performance bonus for employees or managers?	discrete	numeric	In fiscal year 2010, did this establishment have any performance bonus for employees or managers?
V117	hd13c	What were these performance bonuses usually based on?	discrete	numeric	What were these performance bonuses usually based on?
V118	he1a	Introduced/Significantly changed: Packaging	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Packaging
V119	he1b	Introduced/Significantly changed: Branding, logo, name, or trademark	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Branding, logo, name, or trademark
V120	he1c	Introduced/Significantly changed: Products' appearance	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Products' appearance, excluding packaging or branding
V121	he1d	Introduced/Significantly changed: Advertising methods	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Advertising methods
V122	he1e	Introduced/Significantly changed: Promotion of the product or service	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Promotion of the product or service
V123	he1f	Introduced/Significantly changed: Sales channels or sales points	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Sales channels or sales points
V124	he1g	Introduced/Significantly changed: Discount schemes	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Discount schemes
V125	he1h	Introduced/Significantly changed: Pricing strategies, excluding discount schemes	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Pricing strategies, excluding discount schemes
V126	he1i	Introduced/Significantly changed: Payment schemes	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Payment schemes
V127	he1j	Introduced/Significantly changed: Customer loyalty rewards	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following? Customer loyalty rewards
V128	he2a	Used services of a marketing firm/ consumer research firm/ advertising firm?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment use the services of a marketing firm, consumer research firm, or advertising firm?
V129	he2b	Total cost serv. of a marketing firm/ consumer research firm/ advertising firm	discrete	numeric	From fiscal year 2010 thru 2012, how much did this establishment pay in total for those services?
V130	hf1a	Did firm conduct internal R&D?	discrete	numeric	From fiscal year 2010 thru 2012 did this establishment conduct internal R&D? (Internal R&D is defined as creative work undertaken to increase knowledge for developing innovative products and processes.)

ID	Name	Label	Type	Format	Question
V131	hf1b	Total cost of internal R&D	discrete	numeric	How much did this establishment spend in total from fiscal year 2010 thru 2012 on internal R&D?
V132	hf2a	Did firm conduct external R&D?	discrete	numeric	From fiscal year 2010 thru 2012 did this establishment conduct external R&D? (External R&D is defined as creative work, undertaken by other enterprises, public or private research organizations, which was paid for by this establishment.)
V133	hf2b	Total cost of external R&D	discrete	numeric	How much did this establishment spend in total from fiscal year 2010 thru 2012 on external R&D?
V134	hf3a	Provided formal training to employees for innovative products/ services?	discrete	numeric	From fiscal year 2010 thru 2012 did this establishment provide formal training to any of its employees specifically for the development and/or introduction of innovative products or services and processes?
V135	hf3b	Total cost of formal training for employees	discrete	numeric	How much did this establishment spend in total from fiscal year 2010 thru 2012 on that formal training?
V136	hf4a	Purchased new equip./ machinery/ software for innovative products/ services?	discrete	numeric	From fiscal year 2010 thru 2012 did this establishment purchase new equipment, machinery, or software to develop or produce any innovative products or services and processes?
V137	hf4b	Total cost of new equipment, machinery, or software	discrete	numeric	How much did this establishment spend in total from fiscal year 2010 thru 2012 on the purchase of that new equipment, machinery, or software?
V138	hf5a	Purchased/Licensed any patented or non-patented inventions?	discrete	numeric	From fiscal year 2010 thru 2012 did this establishment purchase or license any patented or non-patented inventions, or other types of knowledge for the development of innovative products or services and processes?
V139	hf5b	Total cost of inventions or other types of knowledge	discrete	numeric	How much did this establishment spend in total from fiscal year 2010 thru 2012 on any patented or non-patented inventions, or other types of knowledge?
V140	hf7a	Did firm fund its innovation activities from: Own funds	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: Own funds
V141	hf7b	Did firm fund its innovation activities from: Private or state-owned banks	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: Private or state-owned banks
V142	hf7c	Did firm fund its innovation activities from: Government agencies/departments	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: Government agencies or departments
V143	hf7d	Did firm fund its innovation activities from: NGOs/ international organizations	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: NGOs or international organizations
V144	hf7e	Did firm fund its innovation activities from: Other	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: Other

ID	Name	Label	Type	Format	Question
V145	hf8	Received non-financial support from the government for inno.-rel. activities?	discrete	numeric	Between fiscal years 2010 and 2012, did this establishment receive any non-financial support from the government for innovation-related activities? (This includes training in the use of innovation equipment, assistance in research and product development, and assistance and training for marketing innovations)
V146	hf6	Most important source of information	discrete	numeric	Thinking about innovation, which of the following is the most important source of information or ideas for any innovation activity for this establishment?
V147	hf9a	Did firm: Apply for a patent concerning a product innovation	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment: Apply for a patent concerning a product innovation
V148	hf9b	Did firm: Apply for a patent concerning a process innovation	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment: Apply for a patent concerning a process innovation
V149	hf9c	Did firm: Apply for a utility model	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment: Apply for a utility model
V150	hf9d	Did firm: Register an industrial design	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment: Register an industrial design
V151	hf9e	Did firm: Apply for a trademark	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment: Apply for a trademark
V152	hf9f	Did firm: Apply for a copyright	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment: Apply for a copyright
V153	ha1	Percentage of employees regularly using computers	discrete	numeric	Currently, what percentage of this establishment's employees regularly uses computers in their jobs, including management?
V154	ha2	Did firm purchase or develop in-house any software?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment purchase or develop in-house any software, which was customized to meet its needs?
V155	ha3	Did firm have any employees entirely designated for IT?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment have any employees entirely designated for IT?
V156	ha4	Did firm use the services of an external computer/software consultant?	discrete	numeric	From fiscal year 2010 thru 2012, did this establishment use the services of an external computer consultant or software consultant?
V157	ha5	Total cost of external computer or software consultants	discrete	numeric	From fiscal year 2010 thru 2012, what was the total cost of these external computer consultant or software consultant?
V158	ha6	Currently, does firm have an internet connection?	discrete	numeric	Currently, does this establishment have an internet connection?
V159	ha7	Year the firm first obtain an internet connection	discrete	numeric	When did this establishment first obtain an internet connection?
V160	ha8a	E-mail with clients and suppliers	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: E-mail with clients and suppliers
V161	ha8b	Internal communication amongst employees	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: Internal communication amongst employees
V162	ha8c	Online purchases of inputs or finished goods purchased to resell ha8c	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: Online purchases of inputs or finished goods purchased to resell

ID	Name	Label	Type	Format	Question
V163	ha8d	Online sales and order fulfillment	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: Online sales and order fulfillment
V164	ha8e	Manage the inventory	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: Manage the inventory
V165	ha8f	Marketing of products	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: Marketing of products
V166	ha8g	Do research and develop ideas on new products and services	discrete	numeric	Currently, does this establishment use the internet to conduct any of the following activities: Do research and develop ideas on new products and services
V167	ha15d	Day when the interview ends	discrete	numeric	
V168	ha15m	Month when the interview ends	discrete	numeric	
V169	ha15y	Year when the interview ends	discrete	numeric	
V170	ha15h	Hour when the interview ends	discrete	numeric	
V171	ha15min	Minutes when the interview ends	discrete	numeric	
V172	ha21a	Main respondent: Years with the firm	contin	numeric	
V173	ha21c	Main respondent: Gender	discrete	numeric	
V174	ha22a	Second respondent: Years with the firm	contin	numeric	
V175	ha22c	Second respondent: Gender	discrete	numeric	
V176	ha23a	Third respondent: Years with the firm	discrete	numeric	
V177	ha23c	Third respondent: Gender	discrete	numeric	

WEB STD FIRMID (idstd)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 6
Decimals: 0
Range: 557272-557991

Valid cases: 549
Invalid: 0
Minimum: 557272
Maximum: 557991

Questionnaire number (id)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 5
Decimals: 0
Range: 2-96064

Valid cases: 549
Invalid: 0
Minimum: 2
Maximum: 96064

Record number (recnumber)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 5
Decimals: 0
Range: 2-20290

Valid cases: 549
Invalid: 0
Minimum: 2
Maximum: 20290

Preference (preference)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: 1-10

Valid cases: 549
Invalid: 0

(wstrict_innov)

File: ghana_2013_innovation_data

Overview

Type: Continuous
Format: numeric
Width: 16
Decimals: 0
Range: 1-5.79289768178938

Valid cases: 549
Invalid: 0
Minimum: 1
Maximum: 5.8

(wmedian_innov)

File: ghana_2013_innovation_data

Overview

Type: Continuous
 Format: numeric
 Width: 16
 Decimals: 0
 Range: 1-11.8987165263934

Valid cases: 549
 Invalid: 0
 Minimum: 1
 Maximum: 11.9

(wweak_innov)

File: ghana_2013_innovation_data

Overview

Type: Continuous
 Format: numeric
 Width: 16
 Decimals: 0
 Range: 1-65.5929827708111

Valid cases: 549
 Invalid: 0
 Minimum: 1
 Maximum: 65.6

Questionnaire (ha0)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0
 Range: 1-2

Valid cases: 549
 Invalid: 0

Day when the interview begins (ha14d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 1-31

Valid cases: 549
 Invalid: 0

Month when the interview begins (ha14m)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0
 Range: 1-7

Valid cases: 549
 Invalid: 0

Year when the interview begins (ha14y)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 4
 Decimals: 0
 Range: 2014-2014

Valid cases: 549
 Invalid: 0

Hour when the interview begins (ha14h)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 7-19

Valid cases: 549
 Invalid: 0

Minutes when the interview begins (ha14min)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 0-58

Valid cases: 549
 Invalid: 0

Same respondent as the ES (ha0b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0
 Range: 1-2

Valid cases: 549
 Invalid: 0

Did the firm introduce any innovative product or service? (hb1)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 2
 Decimals: 0
 Range: -9-2

Valid cases: 549
 Invalid: 0

Pre question

Did the firm introduce any innovative product or service? (hb1)

File: ghana_2013_innovation_data

I would like to start by asking you some questions about any new or significantly improved product or service introduced by this establishment, where "new" means new to the establishment and not necessarily new to the market. The next questions will refer to this new or significantly improved product or service as an "innovative" product or service.

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce any innovative product or service?

How many innovative products or services did the firm introduced? (hb2)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-50

Valid cases: 154
Invalid: 395

Literal question

From fiscal year 2010 thru 2012, how many innovative products or services did this establishment introduce?

Percentage of sales from all innovative products (hb3)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 3
Decimals: 0
Range: -9-100

Valid cases: 73
Invalid: 476

Literal question

In fiscal year 2012, what percentage of this establishment's total sales was represented by sales from all innovative products or services introduced from fiscal year 2010 thru 2012?

Describe the main innovative product or service that the firm introduced (hb5x)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: character
Width: 143

Valid cases: 154

Pre question

The next questions are about this establishment's main innovative product or service. The main innovative product or service is the one that represented the largest proportion of this establishment's sales in value (not volume) during fiscal year 2012.

Literal question

Please describe in detail the main innovative product or service that this establishment introduced from fiscal year 2010 thru 2012.

Year the main innovative product or service was introduced (hb6)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 4
Decimals: 0
Range: -9-2013

Valid cases: 154
Invalid: 395

Literal question

In which year did this establishment introduce the main innovative product or service?

Percentage of the main innovative product or service (hb4)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 3
Decimals: 0
Range: -9-100

Valid cases: 154
Invalid: 395

Literal question

In fiscal year 2012, what percentage of this establishment's total sales was represented by sales from the main innovative product or service?

How the main innovative product/service is different than the most similar one? (hb7x)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: character
Width: 150

Valid cases: 89

Literal question

Please describe in detail how the main innovative product or service is different than the most similar product or service, if any, previously produced by this establishment

The product or service is completely new (hb7)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -7--7

Valid cases: 65
Invalid: 484

Literal question

Please describe in detail how the main innovative product or service is different than the most similar product or service, if any, previously produced by this establishment .

The product or service is completely new, there are no similar products

Does the main innovative product/service have completely new functions? (hb9a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment.
Does it have completely new functions?

Is it cheaper to produce or offer? (hb9b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment.
Is it cheaper to produce or offer?

Is it a better quality product/service? (hb9c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment.
Is it a better quality product or service?

Does it use different inputs? (hb9d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Does it use different inputs? (hb9d)

File: ghana_2013_innovation_data

I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment.

Does it use different inputs?

Is it based on a techno/indust. design not already used by the firm? (hb9f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

I will now ask you a few questions about the main innovative product or service compared with all other products and services already produced in this establishment.

Is it based on a technology or industrial design not already used by this establishment?

To replace a product or service offered by firm (hb10a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:

To replace a product or service offered by this establishment

To extend the range of products or service offered by firm (hb10b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:

To extend the range of products or service offered by this establishment

To open up new markets or increase market share (hb10c)

File: ghana_2013_innovation_data

To open up new markets or increase market share (hb10c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:
To open up new markets or increase market share

To decrease the cost of production or offering the service (hb10d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:
To decrease the cost of production or offering the service

To offer products or service already offered by competitors (hb10e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:
To offer products or service already offered by competitors

To comply with regulations or standards (hb10f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:
To comply with regulations or standards (e.g. safety or environmental regulations)

To deal with a decrease in the demand for other products or service (hb10g)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Do any of the following describe why this establishment introduced this main innovative product:
To deal with a decrease in the demand for other products or service

The main innovative product : New to the local market (hb11a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

When this main innovative product or service was introduced by this establishment, was it
New to the local market

The main innovative product : New to the national market (hb11b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

When this main innovative product or service was introduced by this establishment, was it
New to the national market

The main innovative product : New to the international market (hb11c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

The main innovative product : New to the international market (hb11c)

File: ghana_2013_innovation_data

When this main innovative product or service was introduced by this establishment, was it New to the international market

How did the firm develop the idea for this main innovative product/service? (hb12)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 1
Decimals: 0
Range: 1-3

Valid cases: 154
Invalid: 395

Literal question

How did this establishment develop the idea for this main innovative product or service?

Was the main innovative product or service developed entirely by firm? (hb13)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 154
Invalid: 395

Literal question

Was the main innovative product or service developed entirely by this establishment?

Was the main innovative product or service developed entirely by another firm? (hb14)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 53
Invalid: 496

Literal question

Was the main innovative product or service developed entirely by another firm (e.g. headquarter, sister company or any other firm within your company or independent from your company)?

Developed in cooperation with: Any domestic firms (hb15a)

File: ghana_2013_innovation_data

Developed in cooperation with: Any domestic firms (hb15a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 20
Invalid: 529

Literal question

Was the main innovative product or service developed in cooperation with any of the following?
Any domestic firms

Developed in cooperation with: Any foreign firms or a foreign-owned parent firm (hb15b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 20
Invalid: 529

Literal question

Was the main innovative product or service developed in cooperation with any of the following?
Any foreign firms or a foreign-owned parent firm

Developed in cooperation with: Domestic academic or research institutions (hb15c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 20
Invalid: 529

Literal question

Was the main innovative product or service developed in cooperation with any of the following?
Domestic academic or research institutions

Developed in cooperation with: Foreign academic or research institutions (hb15d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 20
Invalid: 529

Literal question

Developed in cooperation with: Foreign academic or research institutions (hb15d)

File: ghana_2013_innovation_data

Was the main innovative product or service developed in cooperation with any of the following?
Foreign academic or research institutions

Developed in cooperation with: Private consulting company or individuals (hb15e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 20
Invalid: 529

Literal question

Was the main innovative product or service developed in cooperation with any of the following?
Private consulting company or individuals

Developed in cooperation with: Government (hb15f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 20
Invalid: 529

Literal question

Was the main innovative product or service developed in cooperation with any of the following?
Government

Were employees hired for the purpose of developing the main innovative product? (hb16)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 153
Invalid: 396

Literal question

Were employees hired specifically for the purpose of developing the main innovative product or service?

Number of skilled workers increased, decreased or remained the same? (hb17)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-3

Valid cases: 153
Invalid: 396

Literal question

From fiscal year 2010 thru 2012, as a consequence of introducing any innovative product or service, did the number of skilled workers employed by the establishment increase, decrease or remain the same?

Number of unskilled workers increased, decreased or remained the same? (hb18)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-3

Valid cases: 153
Invalid: 396

Literal question

From fiscal year 2010 thru 2012, as a consequence of introducing any innovative product or service, did the number of unskilled workers employed by the establishment increase, decrease or remain the same?

Attempt to develop innovative product: Abandoned/suspended before completion (hb19a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment attempt to develop an innovative product or service that was Abandoned or suspended before completion

Attempt to develop innovative product: Ongoing at the end of fiscal year 2012 (hb19b)

File: ghana_2013_innovation_data

Overview

Attempt to develop innovative product: Ongoing at the end of fiscal year 2012 (hb19b)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment attempt to develop an innovative product or service that was still ongoing at the end of fiscal year 2012

Introduced any innovative methods of manufacturing products/offering services? (hc1)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Pre question

I would now like to ask you some questions related to any new or significantly improved process introduced by this establishment. The next questions will refer to any new or significantly improved process as an "innovative" process.

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce any innovative methods of manufacturing products or offering services?

Introduced any innovative logistics, del./dist. methods/ products/services? (hc2)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce any innovative logistics, delivery, or distribution methods for inputs, products, or services?

Introduced any innovative supporting activity for processes? (hc3)

File: ghana_2013_innovation_data

Overview

Introduced any innovative supporting activity for processes? (hc3)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce any innovative supporting activity for processes, such as maintenance systems or operations for purchasing, accounting, or computing?

ANY or NONE of above 3 questions are “yes” (hc4)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 1
Decimals: 0
Range: 1-2

Valid cases: 549
Invalid: 0

Describe in detail firm’s main innovative process (hc5x)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: character
Width: 150

Valid cases: 194

Pre question

The next questions refer to this establishment's main innovative process, that is, the innovative process that had the largest impact on the operations of the establishment.

Literal question

Please describe in detail this establishment's main innovative process

Year the most important innovative process was introduced (hc6)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 4
Decimals: 0
Range: -9-2013

Valid cases: 194
Invalid: 355

Literal question

In which year did this establishment introduce this most important innovative process?

How the innovative process is different from the most similar process (hc7x)

File: ghana_2013_innovation_data

How the innovative process is different from the most similar process (hc7x)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Valid cases: 127

Format: character

Width: 150

Literal question

Please describe in detail how the innovative process is different from the most similar process, if any, that is or was used by this establishment

The process is completely new, there is no similar process (hc7)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Valid cases: 67

Format: numeric

Invalid: 482

Width: 2

Decimals: 0

Range: -7--7

Literal question

Please describe in detail how the innovative process is different from the most similar process, if any, that is or was used by this establishment.

The process is completely new, there is no similar process

The most important innovative process: Automate manual processes? (hc8a)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Valid cases: 194

Format: numeric

Invalid: 355

Width: 2

Decimals: 0

Range: -9-2

Literal question

Does the most important innovative process
Automate manual processes, partially or fully?

The most important innovative process: Adapt a technology used by firm? (hc8b)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Valid cases: 194

Format: numeric

Invalid: 355

Width: 2

Decimals: 0

Range: -9-2

Literal question

The most important innovative process: Adapt a technology used by firm? (hc8b)

File: ghana_2013_innovation_data

Does the most important innovative process

Adapt a technology or method previously used by this establishment?

The most important innovative process: Introduce a new technology or method? (hc8c)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Format: numeric

Width: 2

Decimals: 0

Range: -9-2

Valid cases: 194

Invalid: 355

Literal question

Does the most important innovative process

Introduce a new technology or method?

The most important innovative process: Use efficient tech. already used by firm (hc8d)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Format: numeric

Width: 2

Decimals: 0

Range: -9-2

Valid cases: 194

Invalid: 355

Literal question

Does the most important innovative process:

Use a more efficient technology or method already used by this establishment

Most imp. inno. process associated with an inno.product introduced by firm? (hc9)

File: ghana_2013_innovation_data

Overview

Type: Discrete

Format: numeric

Width: 2

Decimals: 0

Range: -9-2

Valid cases: 194

Invalid: 355

Literal question

Is the most important innovative process associated with an innovative product or service introduced by this establishment?

Introduced the most imp. inno. pro.: To increase quality of products/services (hc10a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To increase the quality of products or services

Introduced the most imp. inno. pro.: To increase total prod./amount of services (hc10b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To increase the total production or amount of services offered

Introduced the most imp. inno. pro.: To increase flexibility of prod./service (hc10c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To increase the flexibility of production or offering service

Introduced the most imp. inno. pro.: To increase speed of production/ service (hc10d)

File: ghana_2013_innovation_data

Overview

Introduced the most imp. inno. pro.: To increase speed of production/ service (hc10d)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To increase the speed of production or offering service

Introduced the most imp. inno. pro.: To increase speed of delivery to customer (hc10e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To increase the speed of delivery to the customer

Introduced the most imp. inno. pro.: To decrease the cost of production/service (hc10f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To decrease the cost of production or offering service

Introduced the most imp. inno. pro.: To reduce waste or errors (hc10g)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Introduced the most imp. inno. pro.: To reduce waste or errors
(hc10g)

File: ghana_2013_innovation_data

Do any of the following describe why this establishment introduced the most important innovative process?
To reduce waste or errors (defect rate or rejection rate)

Introduced the most imp. inno. pro.: To comply with regulations or standards (hc10h)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Do any of the following describe why this establishment introduced the most important innovative process?
To comply with regulations or standards (e.g. safety or environmental regulations)

When the most imp. inno. process was introduced: New to the local market (hc11a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

When the most important innovative process was introduced in this establishment, was it
New to the local market

When the most imp. inno. process was introduced: New to the national market (hc11b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

When the most important innovative process was introduced in this establishment, was it
New to the national market

When the most imp. inno. process was introduced: New to the international market (hc11c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

When the most important innovative process was introduced in this establishment, was it New to the international market

How did firm develop the idea for this most important innovative process? (hc12)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 1
Decimals: 0
Range: 1-3

Valid cases: 194
Invalid: 355

Literal question

How did this establishment develop the idea for this most important innovative process?

Was the most important innovative process developed entirely by firm? (hc13)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Was the most important innovative process developed entirely by this establishment?

Was the most important innovative process developed entirely by another firm? (hc14)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 86
Invalid: 463

Literal question

Was the most important innovative process developed entirely by another firm? (hc14)

File: ghana_2013_innovation_data

Was the most important innovative process developed entirely by another firm (e.g. headquarter, sister company or any other firm within your company or independent from your company)?

Developed in cooperation with: Domestic firms or a domestic-owned parent firm (hc15a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 33
Invalid: 516

Literal question

Was the most important innovative process developed in cooperation with any of the following?

Developed in cooperation with: Foreign firms or a foreign-owned parent firm (hc15b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 33
Invalid: 516

Literal question

Was the most important innovative process developed in cooperation with any of the following?

Developed in cooperation with: Domestic academic or research institutions (hc15c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 33
Invalid: 516

Literal question

Was the most important innovative process developed in cooperation with any of the following?

Developed in cooperation with: Foreign academic or research institutions (hc15d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 33
Invalid: 516

Literal question

Was the most important innovative process developed in cooperation with any of the following?

Developed in cooperation with: Private consulting company or individuals (hc15e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 33
Invalid: 516

Literal question

Was the most important innovative process developed in cooperation with any of the following?

Developed in cooperation with: Government (hc15f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 33
Invalid: 516

Literal question

Was the most important innovative process developed in cooperation with any of the following?

Employees hired specifically for developing the most imp. innovative process? (hc16)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 194
Invalid: 355

Literal question

Were employees hired specifically for the purpose of developing the most important innovative process?

With introduction of innovative processes: The number of skilled workers? (hc17)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-3

Valid cases: 194
Invalid: 355

Literal question

From fiscal year 2010 thru 2012, as a consequence of introducing any innovative processes, did the number of skilled workers employed by the establishment increase, decrease or remain the same?

With introduction of innovative processes: The number of unskilled workers? (hc18)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-3

Valid cases: 194
Invalid: 355

Literal question

From fiscal year 2010 thru 2012, as a consequence of introducing any innovative processes, did the number of unskilled workers employed by the establishment increase, decrease or remain the same?

Number of employees reporting directly to Top Manager in fiscal year 2012 (hd1a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-50

Valid cases: 171
Invalid: 378

Pre question

I would now like to ask you some questions related to innovation in organization or management. Please note that these changes in organization or management do not necessarily need to be related to other innovations, such as product or process innovations.

All questions are about the situation in fiscal years 2010 and 2012.

Literal question

In fiscal year 2012, how many employees reported directly to the Top Manager of this establishment? (An employee who reports directly implies the employee meets with the Top Manager on a regular basis (middle manager)).

Number of employees reporting directly to Top Manager in fiscal year 2010 (hd1b)

File: ghana_2013_innovation_data

Number of employees reporting directly to Top Manager in fiscal year 2010 (hd1b)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 171
Format: numeric	Invalid: 378
Width: 2	
Decimals: 0	
Range: -9-50	

Literal question

In fiscal year 2010, how many employees reported directly to the Top Manager of this establishment?

Number of layers of direct reporting in fiscal year 2012 (hd2a)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 171
Format: numeric	Invalid: 378
Width: 2	
Decimals: 0	
Range: -9-99	

Literal question

In fiscal year 2012, how many layers of direct reporting were there in this establishment from the Top Manager down to the lowest-level of employee?

Number of layers of direct reporting in fiscal year 2010 (hd2b)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 171
Format: numeric	Invalid: 378
Width: 2	
Decimals: 0	
Range: -9-99	

Literal question

In fiscal year 2010, how many layers of direct reporting were there in this establishment from the Top Manager down to the lowest-level of employee?

Changes in its structure: Create a new unit or department (hd3a)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 171
Format: numeric	Invalid: 378
Width: 2	
Decimals: 0	
Range: -9-2	

Literal question

From fiscal year 2010 thru 2012, did the establishment make any changes in its organizational structure in any of the following ways:
Create a new unit or department

Changes in its structure: Dissolve any units or department (hd3b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the establishment make any changes in its organizational structure in any of the following ways:
Dissolve any units or department

Changes in its structure: Merge any units or department (hd3c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the establishment make any changes in its organizational structure in any of the following ways:
Merge any units or department

Contracted other firms to perform any activities previously done in-house? (hd7)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did this establishment contract other firms to perform any activities previously done in-house (outsourcing)?

Started doing in-house any activities previously contracted to other firms? (hd8)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

Started doing in-house any activities previously contracted to other firms? (hd8)

File: ghana_2013_innovation_data

From fiscal year 2010 thru 2012, did this establishment start doing in-house any activities previously contracted to other firms (insourcing)?

Introduce any change in the method of hiring employees? (hd4)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce any change in the method of hiring employees, excluding managerial and supervisory staff?

Introduce any change in the method of hiring managerial and supervisory staff? (hd5)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce any change in the method of hiring managerial and supervisory staff?

Manager(s) learn about management practices from: Suppliers or customers (hd6a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Suppliers or customers

Manager(s) learn about management practices from: Trade associations or workshop (hd6b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Trade associations or workshops

Manager(s) learn about management practices from: New employees (hd6c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from New employees

Manager(s) learn about management practices from: Competitors (hd6d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Competitors

Manager(s) learn about management practices from: Consultants (hd6e)

File: ghana_2013_innovation_data

Overview

Manager(s) learn about management practices from: Consultants (hd6e)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

From fiscal year 2010 thru 2012, did the manager(s) at this establishment learn about management practices from Consultants

Year 2012: Best describes when a problem arose in the production process (hd9a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-4

Valid cases: 171
Invalid: 378

Pre question

The next questions are about changes in management practices

Literal question

In fiscal year 2012 what best describes what happened at this establishment when a problem arose in the production process, such as a quality defect or machinery or equipment break-downs?

Year 2010: Best describes when a problem arose in the production process (hd9b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-4

Valid cases: 171
Invalid: 378

Literal question

In fiscal year 2010 what best describes what happened at this establishment when a problem arose in the production process, such as a quality defect or machinery or equipment break-downs?

Year 2012, were key performance indicators monitored at firm? (hd10a)

File: ghana_2013_innovation_data

Overview

Year 2012, were key performance indicators monitored at firm?
(hd10a)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

In fiscal year 2012, were key performance indicators monitored at this establishment? Examples of performance indicators are metrics on production, cost, waste, quality, inventory, energy, absenteeism and on-time delivery.

Year 2012, how many key performance indicators were monitored at firm? (hd10b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-3

Valid cases: 130
Invalid: 419

Literal question

In fiscal year 2012, how many key performance indicators were monitored at this establishment?

Year 2012, how frequently key performance indicators were reviewed by managers? (hd10c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-5

Valid cases: 130
Invalid: 419

Literal question

In fiscal year 2012, how frequently were the key performance indicators reviewed by managers at this establishment?

Year 2010, were key performance indicators monitored at firm?
(hd11a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

In fiscal year 2010, were key performance indicators monitored at this establishment?

Year 2010, how many key performance indicators were monitored at firm? (hd11b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-3

Valid cases: 107
Invalid: 442

Literal question

In fiscal year 2010, how many key performance indicators were monitored at this establishment?

Year 2010, how frequently key performance indicators were reviewed by managers? (hd11c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-5

Valid cases: 107
Invalid: 442

Literal question

In fiscal year 2010, how frequently were the key performance indicators reviewed by managers at this establishment?

Year 2012, best describes the time frame of production/sales targets at firm? (hd12a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-4

Valid cases: 171
Invalid: 378

Literal question

In fiscal year 2012, what best describes the time frame of production/sales targets at this establishment? (Production targets may include desired amounts of production, quality, efficiency, waste reduction, and on-time delivery).

Year 2012, did firm have any performance bonus for employees or managers? (hd12b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

Year 2012, did firm have any performance bonus for employees or managers? (hd12b)

File: ghana_2013_innovation_data

In fiscal year 2012, did this establishment have any performance bonus for employees or managers?

What were these performance bonuses usually based on? (hd12c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 93
Invalid: 456

Literal question

What were these performance bonuses usually based on?

Year 2010, best describes the time frame of production/sales targets at firm? (hd13a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-4

Valid cases: 171
Invalid: 378

Literal question

In fiscal year 2010, what best describes the time frame of production/sales targets at this establishment?

Year 2010, had any performance bonus for employees or managers? (hd13b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 171
Invalid: 378

Literal question

In fiscal year 2010, did this establishment have any performance bonus for employees or managers?

What were these performance bonuses usually based on? (hd13c)

File: ghana_2013_innovation_data

Overview

What were these performance bonuses usually based on? (hd13c)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 80
Invalid: 469

Literal question

What were these performance bonuses usually based on?

Introduced/Significantly changed: Packaging (he1a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Pre question

I would now like to ask some questions related to any innovative marketing methods.

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Packaging

Introduced/Significantly changed: Branding, logo, name, or trademark (he1b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Branding, logo, name, or trademark

Introduced/Significantly changed: Products' appearance (he1c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Products' appearance, excluding packaging or branding

Introduced/Significantly changed: Advertising methods (he1d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Advertising methods

Introduced/Significantly changed: Promotion of the product or service (he1e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Promotion of the product or service

Introduced/Significantly changed: Sales channels or sales points (he1f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Sales channels or sales points

Introduced/Significantly changed: Discount schemes (he1g)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

Introduced/Significantly changed: Discount schemes (he1g)

File: ghana_2013_innovation_data

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Discount schemes

Introduced/Significantly changed: Pricing strategies, excluding discount schemes (he1h)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Pricing strategies, excluding discount schemes

Introduced/Significantly changed: Payment schemes (he1i)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Payment schemes

Introduced/Significantly changed: Customer loyalty rewards (he1j)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment introduce or significantly change any of the following?
Customer loyalty rewards

Used services of a marketing firm/ consumer research firm/ advertising firm? (he2a)

File: ghana_2013_innovation_data

Overview

Used services of a marketing firm/ consumer research firm/ advertising firm? (he2a)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment use the services of a marketing firm, consumer research firm, or advertising firm?

Total cost serv. of a marketing firm/ consumer research firm/ advertising firm (he2b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 6
Decimals: 0
Range: -9-200000

Valid cases: 50
Invalid: 499
Minimum: -9
Maximum: 200000

Literal question

From fiscal year 2010 thru 2012, how much did this establishment pay in total for those services?

Did firm conduct internal R&D? (hf1a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Pre question

Now, I would like to ask you a few questions about activities associated with the development of innovation.

Literal question

From fiscal year 2010 thru 2012 did this establishment conduct internal R&D? (Internal R&D is defined as creative work undertaken to increase knowledge for developing innovative products and processes.)

Total cost of internal R&D (hf1b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 7
Decimals: 0
Range: -9-1500000

Valid cases: 90
Invalid: 459

Literal question

How much did this establishment spend in total from fiscal year 2010 thru 2012 on internal R&D?

Did firm conduct external R&D? (hf2a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012 did this establishment conduct external R&D? (External R&D is defined as creative work, undertaken by other enterprises, public or private research organizations, which was paid for by this establishment.)

Total cost of external R&D (hf2b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 5
Decimals: 0
Range: -9-10000

Valid cases: 22
Invalid: 527

Literal question

How much did this establishment spend in total from fiscal year 2010 thru 2012 on external R&D?

Provided formal training to employees for innovative products/services? (hf3a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012 did this establishment provide formal training to any of its employees specifically for the development and/or introduction of innovative products or services and processes?

Total cost of formal training for employees (hf3b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 5
Decimals: 0
Range: -9-60000

Valid cases: 147
Invalid: 402

Literal question

How much did this establishment spend in total from fiscal year 2010 thru 2012 on that formal training?

Purchased new equip./ machinery/ software for innovative products/ services? (hf4a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012 did this establishment purchase new equipment, machinery, or software to develop or produce any innovative products or services and processes?

Total cost of new equipment, machinery, or software (hf4b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 7
Decimals: 0
Range: -9-8000000

Valid cases: 232
Invalid: 317

Literal question

How much did this establishment spend in total from fiscal year 2010 thru 2012 on the purchase of that new equipment, machinery, or software?

Purchased/Licensed any patented or non-patented inventions? (hf5a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012 did this establishment purchase or license any patented or non-patented inventions, or other types of knowledge for the development of innovative products or services and processes?

Total cost of inventions or other types of knowledge (hf5b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 5
Decimals: 0
Range: -9-50000

Valid cases: 13
Invalid: 536

Literal question

Total cost of inventions or other types of knowledge (hf5b)

File: ghana_2013_innovation_data

How much did this establishment spend in total from fiscal year 2010 thru 2012 on any patented or non-patented inventions, or other types of knowledge?

Did firm fund its innovation activities from: Own funds (hf7a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources:
Own funds

Did firm fund its innovation activities from: Private or state-owned banks (hf7b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources:
Private or state-owned banks

Did firm fund its innovation activities from: Government agencies/departments (hf7c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources:
Government agencies or departments

Did firm fund its innovation activities from: NGOs/ international organizations (hf7d)

File: ghana_2013_innovation_data

Did firm fund its innovation activities from: NGOs/ international organizations (hf7d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: NGOs or international organizations

Did firm fund its innovation activities from: Other (hf7e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment fund its innovation activities from any of the following sources: Other

Received non-financial support from the government for inno.-rel. activities? (hf8)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

Between fiscal years 2010 and 2012, did this establishment receive any non-financial support from the government for innovation-related activities? (This includes training in the use of innovation equipment, assistance in research and product development, and assistance and training for marketing innovations)

Most important source of information (hf6)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-12

Valid cases: 549
Invalid: 0

Literal question

Most important source of information (hf6)

File: ghana_2013_innovation_data

Thinking about innovation, which of the following is the most important source of information or ideas for any innovation activity for this establishment?

Did firm: Apply for a patent concerning a product innovation (hf9a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment:
Apply for a patent concerning a product innovation

Did firm: Apply for a patent concerning a process innovation (hf9b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment:
Apply for a patent concerning a process innovation

Did firm: Apply for a utility model (hf9c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment:
Apply for a utility model

Did firm: Register an industrial design (hf9d)

File: ghana_2013_innovation_data

Overview

Did firm: Register an industrial design (hf9d)

File: ghana_2013_innovation_data

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment:
Register an industrial design

Did firm: Apply for a trademark (hf9e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment:
Apply for a trademark

Did firm: Apply for a copyright (hf9f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

From fiscal year 2010 thru 2012, did this establishment:
Apply for a copyright

Percentage of employees regularly using computers (ha1)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 3
Decimals: 0
Range: -9-100

Valid cases: 549
Invalid: 0

Pre question

I would like to ask you some questions about the use of computers and the internet in this establishment

Literal question

Currently, what percentage of this establishment's employees regularly uses computers in their jobs, including management?

Did firm purchase or develop in-house any software? (ha2)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 364
Invalid: 185

Literal question

From fiscal year 2010 thru 2012, did this establishment purchase or develop in-house any software, which was customized to meet its needs?

Did firm have any employees entirely designated for IT? (ha3)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 364
Invalid: 185

Literal question

From fiscal year 2010 thru 2012, did this establishment have any employees entirely designated for IT?

Did firm use the services of an external computer/software consultant? (ha4)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 364
Invalid: 185

Literal question

From fiscal year 2010 thru 2012, did this establishment use the services of an external computer consultant or software consultant?

Total cost of external computer or software consultants (ha5)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 6
Decimals: 0
Range: -9-200000

Valid cases: 166
Invalid: 383

Literal question

From fiscal year 2010 thru 2012, what was the total cost of these external computer consultant or software consultant?

Currently, does firm have an internet connection? (ha6)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 549
Invalid: 0

Literal question

Currently, does this establishment have an internet connection?

Year the firm first obtain an internet connection (ha7)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 4
Decimals: 0
Range: -9-2013

Valid cases: 310
Invalid: 239

Literal question

When did this establishment first obtain an internet connection?

E-mail with clients and suppliers (ha8a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 310
Invalid: 239

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
E-mail with clients and suppliers

Internal communication amongst employees (ha8b)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 310
Invalid: 239

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
Internal communication amongst employees

Online purchases of inputs or finished goods purchased to resell ha8c (ha8c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 310
Invalid: 239

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
Online purchases of inputs or finished goods purchased to resell

Online sales and order fulfillment (ha8d)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 310
Invalid: 239

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
Online sales and order fulfillment

Manage the inventory (ha8e)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 310
Invalid: 239

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
Manage the inventory

Marketing of products (ha8f)

File: ghana_2013_innovation_data

Overview

Type: Discrete
Format: numeric
Width: 2
Decimals: 0
Range: -9-2

Valid cases: 310
Invalid: 239

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
Marketing of products

Do research and develop ideas on new products and services (ha8g)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 310
Format: numeric	Invalid: 239
Width: 2	
Decimals: 0	
Range: -9-2	

Literal question

Currently, does this establishment use the internet to conduct any of the following activities:
Do research and develop ideas on new products and services

Day when the interview ends (ha15d)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 549
Format: numeric	Invalid: 0
Width: 2	
Decimals: 0	
Range: 1-31	

Month when the interview ends (ha15m)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 549
Format: numeric	Invalid: 0
Width: 1	
Decimals: 0	
Range: 1-8	

Year when the interview ends (ha15y)

File: ghana_2013_innovation_data

Overview

Type: Discrete	Valid cases: 549
Format: numeric	Invalid: 0
Width: 4	
Decimals: 0	
Range: 2014-2014	

Hour when the interview ends (ha15h)

File: ghana_2013_innovation_data

Overview

Hour when the interview ends (ha15h)

File: ghana_2013_innovation_data

Type: Discrete
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 8-19

Valid cases: 549
 Invalid: 0

Minutes when the interview ends (ha15min)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 0-59

Valid cases: 549
 Invalid: 0

Main respondent: Years with the firm (ha21a)

File: ghana_2013_innovation_data

Overview

Type: Continuous
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 1-50

Valid cases: 549
 Invalid: 0
 Minimum: 1
 Maximum: 50

Main respondent: Gender (ha21c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0
 Range: 1-2

Valid cases: 549
 Invalid: 0

Second respondent: Years with the firm (ha22a)

File: ghana_2013_innovation_data

Overview

Type: Continuous
 Format: numeric
 Width: 2
 Decimals: 0
 Range: 1-25

Valid cases: 15
 Invalid: 534
 Minimum: 1
 Maximum: 25

Second respondent: Gender (ha22c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0
 Range: 1-2

Valid cases: 15
 Invalid: 534

Third respondent: Years with the firm (ha23a)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0

Valid cases: 0
 Invalid: 549

Third respondent: Gender (ha23c)

File: ghana_2013_innovation_data

Overview

Type: Discrete
 Format: numeric
 Width: 1
 Decimals: 0
 Range: 1-2

Valid cases: 0
 Invalid: 549

Related Materials

Questionnaires

Innovation Follow-up Survey Questionnaire

Title Innovation Follow-up Survey Questionnaire
Language English
Filename ghana_innov_quest_2013.pdf

Technical documents

Ghana Innovation Follow-up Survey Note

Title Ghana Innovation Follow-up Survey Note
Language English
Filename ghana_innovation_follow_up_survey_note.pdf
