The Sweden 2014 Enterprise Surveys Data Set

I. Introduction

1. This document provides additional information on the data collected in Sweden between January 2014 and November 2014. The objective of the Enterprise Survey is to gain an understanding of what firms experience in the private sector.

As part of its strategic goal of building a climate for investment, job creation, and sustainable growth, the World Bank has promoted improving business environments as a key strategy for development, which has led to a systematic effort in collecting enterprise data across countries. The Enterprise Surveys (ES) are an ongoing World Bank project in collecting both objective data based on firms' experiences and enterprises' perception of the environment in which they operate.

The Enterprise Surveys currently cover over 130,000 firms in 135 countries, of which 121 have been surveyed following the standard methodology. This allows for better comparisons across countries and across time. Data are used to create statistically significant business environment indicators that are comparable across countries. The Enterprise Surveys are also used to build a panel of enterprise data that will make it possible to track changes in the business environment over time and allow, for example, impact assessments of reforms.

The report outlines and describes the sampling design of the data, the data set structure as well as additional information that may be useful when using the data, such as information on non-response cases and the appropriate use of the weights.

II. Sampling Structure

2. The sample for Sweden was selected using stratified random sampling, following the methodology explained in the *Sampling Manual*[1]. Stratified random sampling[2] was preferred over simple random sampling for several reasons[3]:

a. To obtain unbiased estimates for different subdivisions of the population with some known level of precision.

b. To obtain unbiased estimates for the whole population. The whole population, or universe of the study, is the non-agricultural economy. It comprises: all manufacturing sectors according to the group classification of ISIC Revision 3.1: (group D), construction sector (group F), services sector (groups G and H), and transport, storage, and communications sector (group I). Note that this definition excludes the following sectors: financial intermediation (group J), real estate and renting activities (group K, except sub-sector 72, IT, which was added to the population under study), and all public or utilities-sectors.

[1] The complete text can be found at http://www.enterprisesurveys.org/documents/Implementation_note.pdf

[2] A stratified random sample is one obtained by separating the population elements into non-overlapping groups, called strata, and then selecting a simple random sample from each stratum. (Richard L. Scheaffer; Mendenhall, W.; Lyman, R., "Elementary Survey Sampling", Fifth Edition).

[3] Cochran, W., 1977, pp. 89; Lohr, Sharon, 1999, pp. 95

c. To make sure that the final total sample includes establishments from all different sectors and that it is not concentrated in one or two of industries/sizes/regions.

d. To exploit the benefits of stratified sampling where population estimates, in most cases, will be more precise than using a simple random sampling method (i.e., lower standard errors, other things being equal.)

e. Stratification may produce a smaller bound on the error of estimation than would be produced by a simple random sample of the same size. This result is particularly true if measurements within strata are homogeneous.

f. The cost per observation in the survey may be reduced by stratification of the population elements into convenient groupings.

3. Three levels of stratification were used in this country: industry, establishment size, and region. The original sample design with specific information of the industries and regions chosen is described in Appendix E.

4. Industry stratification was designed in the way that follows: the universe was stratified into three manufacturing industries (Fabricated metal product; Machinery and Equipment; and Other manufacturing) and two service sectors (Retail; Sale, maintenance and repair of motor vehicles; and Other services).

5. For the Sweden Enterprise Survey (ES), size stratification was defined following the standardized definition for the rollout: small (5 to 19 employees), medium (20 to 99 employees), and large (more than 99 employees).

6. Regional stratification for the Sweden ES was defined as follow:

- Stockholm-Solna,
- Borås/Göteborg/Jönköping/Trollhättan-Vänersborg,
- Malmö-Lund,
- Linköping/Örebro/Karlstad/Västerås.

The four regions for stratification identified include the largest 10 labor-market areas out of 76 in the whole country. The sample covers 66% of the total population between 20 and 64 years of age (data provided by SCB for 2011). This coverage entails 64 percent of working places, a unit used by SCB which is equivalent to the establishment definition used by the standard ES throughout the world. The decision on how two group the 10 labor market areas in the four regions for stratification was taken in consultation with Statistics Sweden (SCB).

III. Sampling implementation

7. Given the stratified design, sample frames containing a complete and updated list of establishments as well as information on all stratification variables (number of employees, industry, and region) are required to draw the sample. Great efforts were made to obtain the best source for these listings. However, the quality of the sample frames was not optimal and, therefore, some adjustments were needed to correct for the presence of ineligible units. These adjustments are reflected in the weights computation (*see below*).

8. Norstat Sverige AB was hired to implement the Sweden 2014 enterprise surveys roll out.

9. The sample frame used for the Survey in Sweden was from Statistics Sweden (SCB). For confidentiality purposes, SCB randomly drew the sample of fresh establishment to be interviewed based on the sample design provided by the World Bank. The database contained the following information

- Detailed stratification variables;
- Location identifiers- address, phone number, email;
- Contact name(s).

Counts from the sample frame are shown below.

Sweden ES, Sample Frame

Source: Statistics Sweden, 2013

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**324**	**157**	**1413**	**3901**	**734**	**11791**	**18320**
1-Small	269	97	1002	3213	578	8849	14008
2-Medium	42	34	231	484	105	2059	2955
3-Large	13	26	180	204	51	883	1357
Borås, Göteborg, Jönköping, Trollhättan-Vänersborg	**493**	**256**	**1543**	**2612**	**621**	**7592**	**13117**
1-Small	377	162	950	2217	486	5702	9894
2-Medium	86	49	328	270	90	1374	2197
3-Large	30	45	265	125	45	516	1026
Malmö-Lund	**216**	**151**	**922**	**1663**	**378**	**4168**	**7498**
1-Small	172	79	563	1428	304	3072	5618
2-Medium	35	39	189	151	54	775	1243
3-Large	9	33	170	84	20	321	637
Linköping, Örebro, Karlstad, Västerås	**354**	**137**	**801**	**1426**	**350**	**3540**	**6608**
1-Small	244	64	486	1224	294	2701	5013
2-Medium	81	34	172	154	38	622	1101
3-Large	29	39	143	48	18	217	494
Grand Total	**1387**	**701**	**4679**	**9602**	**2083**	**27091**	**45543**

10. The enumerated establishments with 5 employees or more were then used as the sample frame for the Sweden Enterprise Survey with the aim of obtaining interviews at 600 establishments.

11. The quality of the frame was assessed at the onset of the project through visits to a random subset of firms and local contractor knowledge. The sample frame was not immune from the typical problems found in establishment surveys: positive rates of non-eligibility, repetition, non-existent units, etc. In addition, the sample frame contains no telephone/fax numbers so the local contractor had to screen the contacts by visiting them.

12. Given the impact that non-eligible units included in the sample universe may have on the results, adjustments may be needed when computing the appropriate weights for individual observations. The percentage of confirmed non-eligible units as a proportion of the total number of sampled establishments contacted for the survey was 8.6% (112 out of 1,307 establishments)[4].

Breaking down by industries and size, the following sample targets were achieved (using screener variables a3a, a4b and a6b):

Achieved sample

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**19**	**20**	**17**	**25**	**16**	**22**	**119**
1-Small	4	5	3	6	6	14	38
2-Medium	11	8	6	17	9	7	58
3-Large	4	7	8	2	1	1	23
Borås, Göteborg, Jönköping, Trollhättan-Vänersborg	**36**	**39**	**32**	**20**	**26**	**22**	**175**
1-Small	11	13	9	2	7	8	50
2-Medium	19	13	15	12	14	12	85
3-Large	6	13	8	6	5	2	40
Malmö-Lund	**21**	**24**	**23**	**29**	**13**	**17**	**127**
1-Small	6	6	6	10	5	9	42
2-Medium	14	11	9	18	6	7	65
3-Large	1	7	8	1	2	1	20
Linköping, Örebro, Karlstad, Västerås	**39**	**28**	**36**	**21**	**24**	**31**	**179**
1-Small	12	6	9	7	7	21	62
2-Medium	22	14	18	10	14	7	85
3-Large	5	8	9	4	3	3	32
Grand Total	**115**	**111**	**108**	**95**	**79**	**92**	**600**

[4] Based on out of target contacts and impossible to contact establishments

IV. Data Base Structure:

13. The structure of the data base reflects the fact that 3 different versions of the survey instrument were used for all registered establishments. Questionnaires have common questions (*core* module) and respectfully additional manufacturing and retail specific questions. The eligible manufacturing industries have been surveyed using the ***Manufacturing*** questionnaire (includes the *core* module, plus manufacturing specific questions). Retail firms have been interviewed using the ***Retail*** questionnaire (includes the *core* module plus retail specific questions) and the residual eligible services have been covered using the core module only (***Other Services*** questionnaire). Each variation of the questionnaire is identified by the index variable, *a0*.

14. All variables are named using, first, the letter of each section and, second, the number of the variable within the section, i.e. *a1* denotes section *A*, question *1* (some exceptions apply due to comparability reasons). Variable names proceeded by a prefix *"s"* indicate questions specific to Sweden, therefore, they may not be found in the implementation of the rollout in other countries. All other suffixed variables are global and are present in all country surveys over the world. All variables are numeric with the exception of those variables with an "x" at the end of their names. The suffix "x" denotes that the variable is alpha-numeric.

15. There are 2 establishment identifiers, *idstd* and *id*. The first is a global unique identifier. The second is a country unique identifier. The variables *a2* (sampling region), *a6a* (sampling establishment's size), and *a4a* (sampling sector) contain the establishment's classification into the strata chosen for each country using information from the sample frame. The strata were defined according to the guidelines described above.

16. There are three levels of stratification: industry, size and region. Different combinations of these variables generate the strata cells for each industry/region/size combination. A distinction should be made between the variable a4a and d1a2 (industry expressed as ISIC rev. 3.1 code). The former gives the establishment's classification into one of the chosen industry-strata, whereas the latter gives the actual establishment's industry classification (four digit code) in the sample frame.

17. All of the following variables contain information from the sampling frame. They may not coincide with the reality of individual establishments as sample frames may contain inaccurate information. The variables containing the sample frame information are included in the data set for researchers who may want to further investigate statistical features of the survey and the effect of the survey design on their results.

-*a2* is the variable describing sampling regions

-*a6a*: coded using the same standard for micro, small, medium, and large establishments as defined above. The code -*9* was used to indicate units for which size was undetermined in the sample frame.

-*a4a*: coded using ISIC codes for the chosen industries for stratification. These codes include most manufacturing industries (15 to 37), other manufacturing (2), retail (52), and (45, 50, 51, 55, 60, 63, 72) for other Services.

18. The surveys were implemented following a 2 stage procedure. Typically first a screener questionnaire is applied over the phone to determine eligibility and to make appointments. Then a face-to-face interview takes place with the Manager/Owner/Director of each establishment. However, the phone numbers were unavailable in the sample frame, and thus the enumerators applied the screeners in person. The variables *a4b* and *a6b* contain the industry and size of the establishment from the screener questionnaire. Variables *a8* to *a11* contain additional information and were also collected in the screening phase.

19. Note that there are variables for size (*l1*, *l6* and *l8*) that reflect more accurately the reality of each establishment. Advanced users are advised to use these variables for analytical purposes. Variables *l1*, *l6* and *l8* were designed to obtain a more accurate measure of employment accounting for permanent and temporary employment. Special efforts were made to make sure that this information was not missing for most establishments.

20. Variables *a17x* gives interviewer comments, including problems that occurred during an interview and extraordinary circumstances which could influence results. Please note that sometimes this variable is removed due to privacy issues.

21. Note that the fiscal years vary by firm as there is no standard for all firms in Sweden. The start and end dates for the fiscal year for each firm can be found in the a20 variables in the dataset

V. Universe Estimates

21. Universe estimates for the number of establishments in each cell in Sweden were produced for the strict, weak and median eligibility definitions. The estimates were the multiple of the relative eligible proportions.

22. Appendix B shows the overall estimates of the numbers of establishments in Sweden based on the sample frame.

23. For some establishments where contact was not successfully completed during the screening process (because the firm has moved and it is not possible to locate the new location, for example), it is not possible to directly determine eligibility. Thus, different assumptions about the eligibility of establishments result in different adjustments to the universe cells and thus different sampling weights.

24. Three sets of assumptions on establishment eligibility are used to construct sample adjustments using the status code information.

25. Strict assumption: eligible establishments are only those for which it was possible to directly determine eligibility. The resulting weights are included in the variable *wstrict*.

Strict eligibility = (Sum of the firms with codes 1,2,3,4,&16) / Total

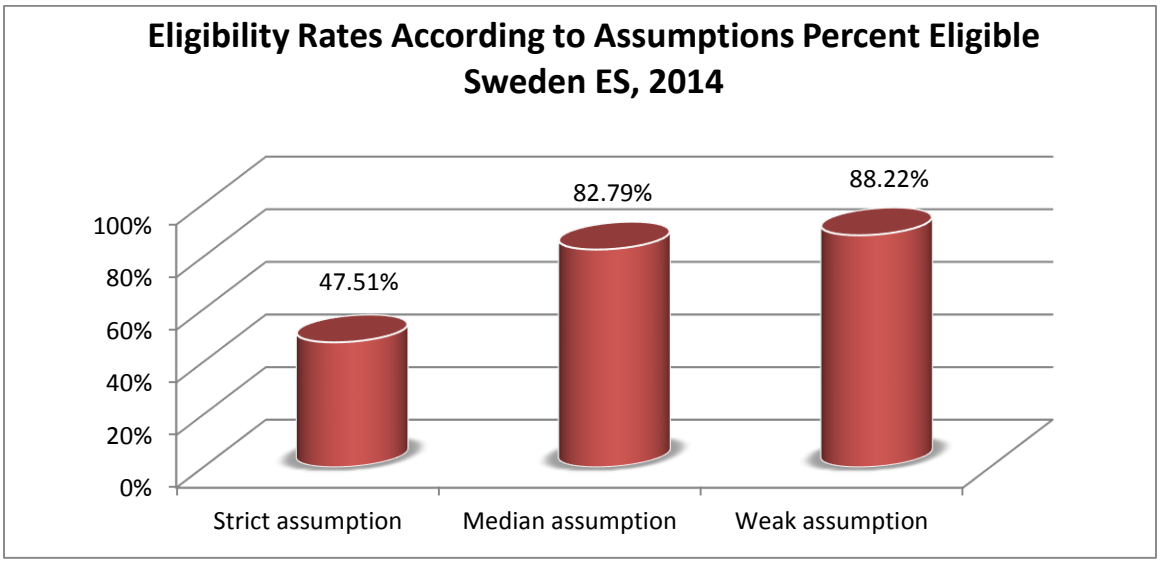
26. Median assumption: eligible establishments are those for which it was possible to directly determine eligibility and those that rejected the screener questionnaire or an answering machine or fax was the only response. The resulting weights are included in the variable *wmedian*.

Median eligibility = (Sum of the firms with codes 1,2,3,4,16,10,11, & 13) / Total

27. Weak assumption: in addition to the establishments included in points a and b, all establishments for which it was not possible to contact or that refused the screening questionnaire are assumed eligible. This definition includes as eligible establishments with dead or out of service phone lines, establishments that never answered the phone, and establishments with incorrect addresses for which it was impossible to find a new address. Under the weak assumption only observed non-eligible units are excluded from universe projections. The resulting weights are included in the variable *wweak*.

Weak eligibility= (Sum of the firms with codes 1,2,3,4,16,91,92,93,10,11,12,&13) / Total

28. The indicators computed for the Enterprise Survey website use the median weights. The following graph shows the different eligibility rates calculated for firms in the sample frame under each set of assumptions.



29. Universe estimates for the number of establishments in each industry-region-size cell in Sweden were produced for the strict, weak and median eligibility definitions. Appendix D shows the universe estimates of the numbers of registered establishments that fit the criteria of the Enterprise Surveys.

30. Once an accurate estimate of the universe cell projection was made, weights for the probability of selection were computed using the number of completed interviews for each cell.

VI. Weights

31. Since the sampling design was stratified and employed differential sampling, individual observations should be properly weighted when making inferences about the population. Under stratified random sampling, unweighted estimates are biased unless sample sizes are proportional to the size of each stratum. With stratification the probability of selection of each unit is, in general, not the same. Consequently, individual observations must be weighted by the inverse of their probability of selection (probability weights or *pw* in Stata.)[5]

32. Special care was given to the correct computation of the weights. It was imperative to accurately adjust the totals within each region/industry/size stratum to account for the presence of ineligible units (the firm discontinued businesses or was unattainable, education or government establishments, establishments with less than 5 employees, no reply after having called in different days of the week and in different business hours, no tone in the phone line, answering machine, fax line[6], wrong address or moved away and could not get the new references) The information required for the adjustment was collected in the first stage of the implementation: the screening process. Using this information, each stratum cell of the universe was scaled down by the observed proportion of ineligible units within the cell. Once an accurate estimate of the universe cell (projections) was available, weights were computed using the number of completed interviews.

33. Because sampling size information in the Retail and Other Services sectors turned out to be unreliable, with several firms being recorded during the screening process as having a different size compared to what recorded in the sampling frame, all firm sizes were combined into one single overall category ("all sizes > 5"). Therefore, weights in these two sectors are not size-specific.

34. Appendix C shows the cell weights for registered establishments in Sweden.

VII. Appropriate use of the weights

35. Under stratified random sampling weights should be used when making inferences about the population. Any estimate or indicator that aims at describing some feature of the population should take into account that individual observations may not represent equal shares of the population.

36. However, there is some discussion as to the use of weights in regressions (see Deaton, 1997, pp.67; Lohr, 1999, chapter 11, Cochran, 1953, pp.150). There is not strong large sample econometric argument in favor of using weighted estimation for a common population coefficient if the underlying model varies per stratum (stratum-specific coefficient): both simple OLS and weighted OLS are inconsistent under regular conditions. However, weighted OLS has the advantage of providing an estimate that is independent of the sample design. This latter point may be quite relevant for the Enterprise Surveys as in most cases the objective is not only to obtain model-unbiased estimates but also design-

[5] This is equivalent to the weighted average of the estimates for each stratum, with weights equal to the population shares of each stratum.

[6] For the surveys that implemented a screener over the phone.

unbiased estimates (see also Cochran, 1977, pp 200 who favors the used of weighted OLS for a common population coefficient.)[7]

37. From a more general approach, if the regressions are descriptive of the population then weights should be used. The estimated model can be thought of as the relationship that would be expected if the whole population were observed.[8] If the models are developed as structural relationships or behavioral models that may vary for different parts of the population, then, there is no reason to use weights.

VIII. Non-response

38. Survey non-response must be differentiated from item non-response. The former refers to refusals to participate in the survey altogether whereas the latter refers to the refusals to answer some specific questions. Enterprise Surveys suffer from both problems and different strategies were used to address these issues.

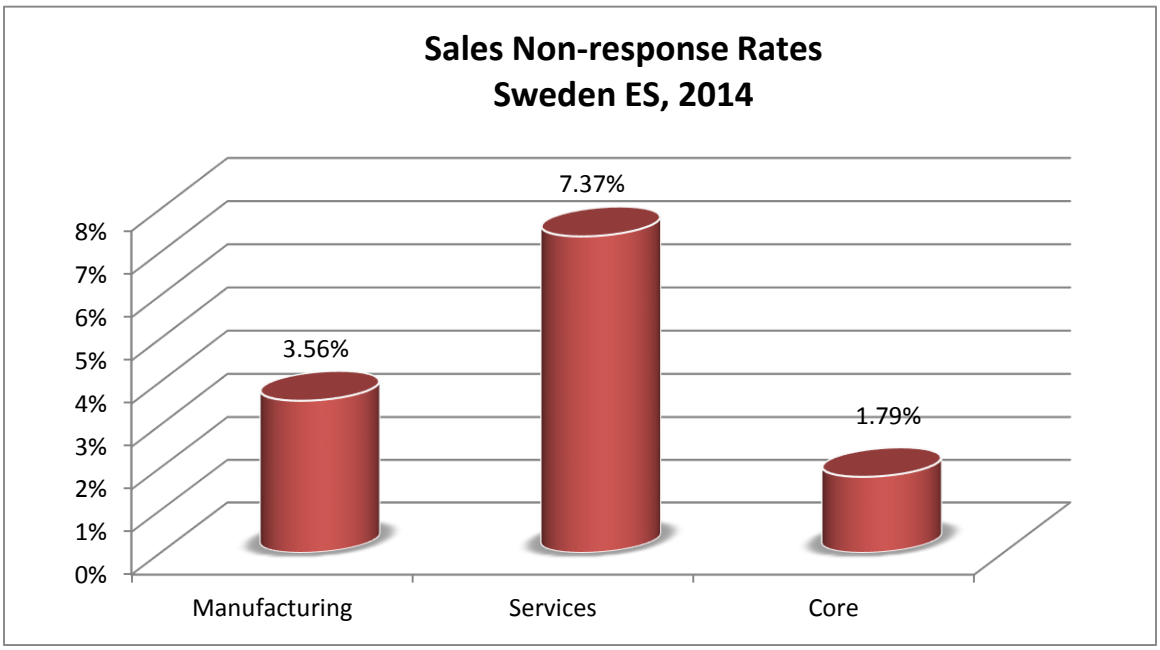
39. Item non-response was addressed by two strategies:

a- For sensitive questions that may generate negative reactions from the respondent, such as corruption or tax evasion, enumerators were instructed to collect the refusal to respond as a different option from don't know (-7).

b- Establishments with incomplete information were re-contacted in order to complete this information, whenever necessary. However, there were clear cases of low response. The following graph shows non-response rates for the sales variable, *d2*, by sector. Please, note that the coding utilized in this dataset does not allow us to differentiate between "Don't know" and "refuse to answer", thus the non-response in the charts below reflect both categories (DKs and NAs).

[7] Note that weighted OLS in Stata using the command regress with the option of weights will estimate wrong standard errors. Using the Stata survey specific commands *svy* will provide appropriate standard errors.

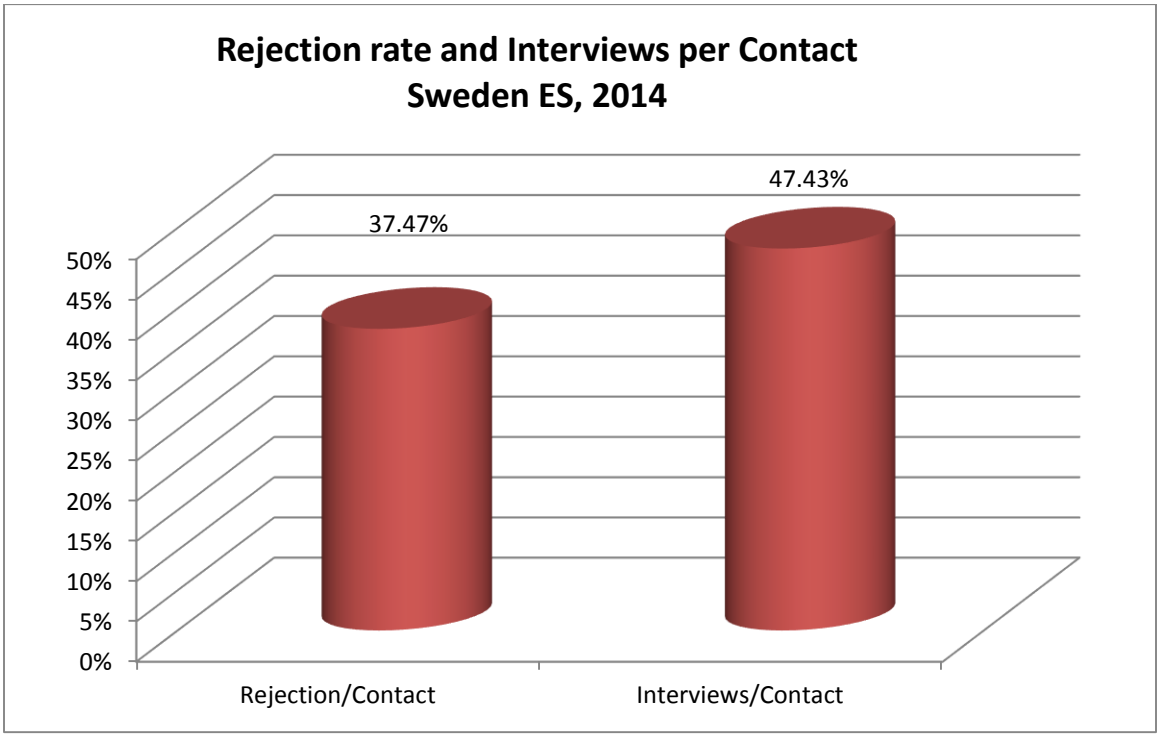
[8] The use weights in most model-assisted estimations using survey data is strongly recommended by the statisticians specialized on survey methodology of the JPSM of the University of Michigan and the University of Maryland.



40. Survey non-response was addressed by maximizing efforts to contact establishments that were initially selected for interview. Attempts were made to contact the establishment for interview at different times/days of the week before a replacement establishment (with similar strata characteristics) was suggested for interview. Survey non-response did occur but substitutions were made in order to potentially achieve strata-specific goals. Further research is needed on survey non-response in the Enterprise Surveys regarding potential introduction of bias.

41. As the following graph shows, the number of interviews per contacted establishments was 0.16[9]. This number is the result of two factors: explicit refusals to participate in the survey, as reflected by the rate of rejection (which includes rejections of the screener and the main survey) and the quality of the sample frame, as represented by the presence of ineligible units. The number of rejections per contact was 0.12.

[9] The estimate is based on the total no. of firms contacted including ineligible establishments.



42. Details on the rejection rate, eligibility rate, and item non-response are available at the level strata. This report summarizes these numbers to alert researchers of these issues when using the data and when making inferences. Item non-response, selection bias, and faulty sampling frames are not unique to Sweden. All enterprise surveys suffer from these shortcomings, but in very few cases they have been made explicit.

References:

Cochran, William G., Sampling Techniques, 1977.

Deaton, Angus, The Analysis of Household Surveys, 1998.

Levy, Paul S. and Stanley Lemeshow, Sampling of Populations: Methods and Applications, 1999.

Lohr, Sharon L. Samping: Design and Techniques, 1999.

Scheaffer, Richard L.; Mendenhall, W.; Lyman, R., Elementary Survey Sampling, Fifth Edition, 1996.

Appendix A

Status Codes Enterprise Survey (ES):

	Sweden
1.Elegible establishment (Correct name and address)	590
2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	4
3. Eligible establishment (Different name but same address - the firm/establishment changed its name)	4
4. Eligible establishment (Wrong address - the firm/establishment has changed address and the address could be found)	23
5. The establishment has less than 5 permanent full time employees	32
6. The firm discontinued businesses	25
7. Not a business: private household	0
8. Ineligible activity: education, agriculture, finances, governments…	46
91. No reply *(after having called in different days of the week and in different business hours)*	64
92. Line out of order	0
93. No tone	0
94. Phone number does not exist	0
10. Answering machine	4
11. Fax line - data line	2
12. Wrong address/ moved away and could not get the new references	7
13. Refuses to answer the screener	455
14. In process *(the establishment is being called/ is being contacted - previous to ask the screener)*	**42**
151. Out of target - outside the covered regions	0
152. Out of target - moved abroad	0
154. Out of target - establishment is HQ without production or sales of goods or services	9
155. Out of target - establishment was not in operation for the entire last fiscal year	0
	1307

Response Outcomes Enterprise (ES) Survey:

	Sweden
Sample target	**600**
Complete interviews **(Total)**	600
Incomplete interviews	2
Eligible in process	0
Refusals	19
Ineligible	103
Impossible to contact	77
Ineligible - coop.	9
Refusal to the Screener	455
	1265

Response rate	**56%**

Out of target + impossible to contact	**7%**

Impossible to contact	**6%**

Appendix B

Universe Sweden:

Source: Statistics Sweden's Business Database

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**324**	**157**	**1413**	**3901**	**734**	**11791**	**18320**
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Appendix C

Strict Cell Weights Sweden:

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services
Stockholm-Solna						
1-Small	24.17	14.17	69.31		43.64	
2-Medium	2.00	3.79	24.41		8.41	
3-Large	1.04	1.18	9.31		4.00	
4-All sizes (>5)				105.90		192.71
Boras, Göteborg, Jönköping, Trollhättan-Vänersborg						
1-Small	11.21	4.38	30.43		24.28	
2-Medium	4.14	2.81	17.84		4.45	
3-Large	1.11	1.63	7.05		2.45	
4-All sizes (>5)				56.92		137.92
Malmö-Lund						
1-Small	15.06	10.11	45.52		33.54	
2-Medium	2.34	2.83	16.68		5.06	
3-Large	1.18	1.50	9.34		2.75	
4-All sizes (>5)				26.39		127.40
Linköping, Örebro, Karlstad, Västeras						
1-Small	9.91	3.55	28.37		23.41	
2-Medium	3.91	2.18	11.50		2.10	
3-Large	1.87	2.07	4.93		1.53	
4-All sizes (>5)				37.47		67.60

Median Cell Weights Sweden:

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services
Stockholm-Solna						
1-Small	47.58	26.89	133.14		101.78	
2-Medium	3.35	6.13	39.92		16.70	
3-Large	1.65	1.81	14.45		7.54	
4-All sizes (>5)				253.34		407.79
Boras, Göteborg, Jönköping, Trollhättan-Vänersborg						
1-Small	22.92	8.64	60.73		58.82	
2-Medium	7.21	4.72	30.30		9.18	
3-Large	1.84	2.59	11.38		4.80	
4-All sizes (>5)				141.45		303.15
Malmö-Lund						
1-Small	25.94	16.80	76.53		68.46	
2-Medium	3.43	4.00	23.87		8.79	
3-Large	1.64	2.02	12.70		4.54	
4-All sizes (>5)				55.25		235.97
Linköping, Örebro, Karlstad, Västeras						
1-Small	15.65	5.40	43.70		43.80	
2-Medium	5.25	2.83	15.09		3.35	
3-Large	2.38	2.55	6.14		2.32	
4-All sizes (>5)				71.89		114.72

Weak Cell Weights Sweden:

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services
Stockholm-Solna						
1-Small	50.89	29.52	144.60		106.57	
2-Medium	3.45	6.46	41.63		16.79	
3-Large	1.83	2.06	16.23		8.16	
4-All sizes (>5)				258.12		411.83
Boras, Göteborg, Jönköping, Trollhättan-Vänersborg						
1-Small	25.12	9.72	67.59		63.11	
2-Medium	7.59	5.10	32.38		9.46	
3-Large	2.08	3.01	13.09		5.32	
4-All sizes (>5)				147.70		313.76
Malmö-Lund						
1-Small	27.48	18.27	82.33		71.00	
2-Medium	3.49	4.17	24.65		8.75	
3-Large	1.80	2.27	14.12		4.86	
4-All sizes (>5)				55.75		236.02
Linköping, Örebro, Karlstad, Västeras						
1-Small	16.82	5.96	47.70		46.08	
2-Medium	5.42	3.00	15.81		3.38	
3-Large	2.65	2.91	6.92		2.52	
4-All sizes (>5)				73.61		116.43

Appendix D

Strict Universe Estimates

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**152**	**76**	**631**	**1377**	**293**	**4625**	**7153**
1-Small	121	42	416		218		797
2-Medium	24	19	122		50		216
3-Large	7	14	93		24		139
4-All sizes (>5)				1377		4625	6002
Boras, Göteborg, Jönköping, Trollhättan-Vänersborg	**218**	**114**	**653**	**854**	**230**	**2758**	**4826**
1-Small	157	66	365		170		758
2-Medium	46	25	161		40		272
3-Large	16	23	127		20		185
4-All sizes (>5)				854		2758	3612
Malmö-Lund	**120**	**87**	**493**	**686**	**175**	**1911**	**3472**
1-Small	90	40	273		134		538
2-Medium	23	25	117		30		196
3-Large	6	21	103		11		141
4-All sizes (>5)				686		1911	2597
Linköping, Örebro, Karlstad, Västeras	**218**	**86**	**464**	**637**	**174**	**1758**	**3337**
1-Small	139	35	255		140		570
2-Medium	59	24	115		23		221
3-Large	21	27	94		11		152
4-All sizes (>5)				637		1758	2395
Grand Total	**708**	**363**	**2240**	**3554**	**872**	**11052**	**18789**

Median Universe Estimates

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**290**	**133**	**1143**	**3293**	**654**	**9787**	**15300**
1-Small	238	81	799	0	509	0	1626
2-Medium	40	31	200	0	100	0	371
3-Large	12	22	145	0	45	0	223
4-All sizes (>5)				3293		9787	13080
Boras, Göteborg, Jönköping, Trollhättan-Vänersborg	**426**	**208**	**1206**	**2122**	**533**	**6063**	**10558**
1-Small	321	130	729	0	412	0	1591
2-Medium	79	42	273	0	83	0	477
3-Large	26	36	205	0	38	0	305
4-All sizes (>5)				2122		6063	8185
Malmö-Lund	**198**	**131**	**766**	**1436**	**345**	**3539**	**6416**
1-Small	156	67	459	0	274	0	956
2-Medium	34	36	167	0	53	0	290
3-Large	8	28	140	0	18	0	194
4-All sizes (>5)				1436		3539	4976
Linköping, Örebro, Karlstad, Västeras	**324**	**118**	**661**	**1222**	**316**	**2983**	**5624**
1-Small	219	54	393	0	263	0	929
2-Medium	79	31	151	0	37	0	298
3-Large	26	33	117	0	16	0	192
4-All sizes (>5)				1222		2983	5833
Grand Total	**1238**	**591**	**3776**	**8074**	**1848**	**22372**	**37898**

Weak Universe Estimates

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**309**	**146**	**1238**	**3356**	**683**	**9884**	**15614**
1-Small	254	89	868	0	533	0	1743
2-Medium	41	32	208	0	101	0	383
3-Large	13	25	162	0	49	0	249
4-All sizes (>5)				3356		9884	13239
Boras, Göteborg, Jönköping, Trollhättan-Vänersborg	**464**	**234**	**1338**	**2215**	**570**	**6275**	**11097**
1-Small	352	146	811	0	442	0	1750
2-Medium	83	46	291	0	85	0	506
3-Large	29	42	236	0	43	0	349
4-All sizes (>5)				2215		6275	8491
Malmö-Lund	**209**	**142**	**822**	**1449**	**356**	**3540**	**6519**
1-Small	165	73	494	0	284	0	1016
2-Medium	35	38	173	0	52	0	298
3-Large	9	32	155	0	19	0	216
4-All sizes (>5)				1449		3540	4990
Linköping, Örebro, Karlstad, Västeras	**346**	**130**	**719**	**1251**	**331**	**3027**	**5805**
1-Small	235	60	429	0	276	0	1001
2-Medium	81	33	158	0	37	0	310
3-Large	29	38	132	0	18	0	216
4-All sizes (>5)				1251		3027	4279
Grand Total	**1328**	**652**	**4117**	**8272**	**1939**	**22727**	**39034**

Appendix E

Original Sample Design, Sweden:

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**25**	**23**	**19**	**18**	**15**	**21**	**121**
1-Small	5	4	3	8	7	13	40
2-Medium	6	8	4	4	7	7	36
3-Large	14	11	12	6	1	1	45
Borås, Göteborg, Jönköping, Trollhättan-Vänersborg	**33**	**40**	**37**	**24**	**26**	**20**	**180**
1-Small	14	13	11	6	7	7	59
2-Medium	14	16	16	6	14	11	77
3-Large	5	11	10	11	5	2	44
Malmö-Lund	**24**	**26**	**24**	**16**	**14**	**16**	**120**
1-Small	6	6	6	6	6	8	38
2-Medium	13	12	9	2	6	7	49
3-Large	5	8	9	8	2	1	33
Linköping, Örebro, Karlstad, Västerås	**38**	**31**	**40**	**18**	**26**	**26**	**179**
1-Small	14	8	11	5	9	17	64
2-Medium	19	17	15	3	14	7	75
3-Large	5	6	14	10	3	2	40
Grand Total	**120**	**120**	**120**	**76**	**81**	**83**	**600**

Completed Interviews, Sweden:

	Fabricated metal product	Machinery & Equipment	Other manufacturing	Retail	Sale, maintenance and repair of motor vehicles	Other Services	Grand Total
Stockholm-Solna	**19**	**20**	**17**	**25**	**16**	**22**	**119**
1-Small	4	5	3	6	6	14	38
2-Medium	11	8	6	17	9	7	58
3-Large	4	7	8	2	1	1	23
Borås, Göteborg, Jönköping, Trollhättan-Vänersborg	**36**	**39**	**32**	**20**	**26**	**22**	**175**
1-Small	11	13	9	2	7	8	50
2-Medium	19	13	15	12	14	12	85
3-Large	6	13	8	6	5	2	40
Malmö-Lund	**21**	**24**	**23**	**29**	**13**	**17**	**127**
1-Small	6	6	6	10	5	9	42
2-Medium	14	11	9	18	6	7	65
3-Large	1	7	8	1	2	1	20
Linköping, Örebro, Karlstad, Västerås	**39**	**28**	**36**	**21**	**24**	**31**	**179**
1-Small	12	6	9	7	7	21	62
2-Medium	22	14	18	10	14	7	85
3-Large	5	8	9	4	3	3	32
Grand Total	**115**	**111**	**108**	**95**	**79**	**92**	**600**

Appendix F

Local Agency team involved in the study:

Local Agency	**Name:** Norstat Sverige AB **Country:** Sweden **Activities since:** 2001
Enumerators involved:	**Enumerators:** 20 **Recruiters**: 5
Other staff involved:	**Fieldwork Coordinators:** 2 **Data Entry:** None, CAPI was used **Data Processing:** 1

Sample Frame:

Characteristic of sample frame used:	Statistics Sweden's Business Database
Source:	Statistics Sweden (SCB)
Year:	2013
Additional list	None
Comments on the quality of sample frame:	The sample frame was of very high quality, with few establishments having wrong or incorrect contact information.

Sectors included in the Sample:

Original Sectors	Manufacturing Sector which included • Fabricated Metal products (NACE 25) • Machinery and Equipment (NACE28) • Other Manufacturing. Services sector which included: • Sale, maintenance and repair of motor vehicles (NACE 45) • Retail (NACE 47) • Other services (NACE 46, F, H, I, and 61 and 62)
Added (top up) Sectors	None

Fieldwork and country situation:

Date of Fieldwork	January 22 2014 - November 25 2014
Country	Sweden
Use of CAPI	• Yes. Confirmit's offline CAPI was used. Set-up of questionnaire was done first in English; the approved programmed version was later changed into Swedish
Implementation set-up	▪ From the beginning it was decided to allow respondents to complete section L and N over a weblink. For those respondents that could not answer these sections straight away, the questions of the section needed where emailed to the respondents and could be filled in over the Internet using a weblink programmed in Confirmit. ▪ As a token of appreciation respondents were given an incentive of 400 SEK ($48). It was decided to use incentives since this is common practice in Sweden, particularly when performing B2B-interviews. Respondents could choose from the following; a gift certificate, not to accept the incentive or donate the sum to charity. Charities to choose from: WWF, Amnesty International, Barnfonden, Barncancerfonden, Bris, Rädda Barnen and Röda Korset. Approximately 73% of respondents chose to donate to charities, 23% the gift certificate and 4% declined the incentive.
Problems found during fieldwork:	▪ The numerous taxes imposed on firms makes some respondents hesitant to provide accurate financial indicators with the view that such information may be leaked to the governmental authorities which are in charge of taxes. ▪ There were numerous labor agitations during the time of the fieldwork that made some appointments to be rescheduled continually.
Country specific situation	▪ Elections to the Swedish Parliament occurred during fieldwork (September, 2014). A change of rule occurred, with government changing from a right wing minority government to a left wing minority government. Sverigedemokraterna, a party with its roots in racial discrimination, received 13% of the votes, which does not give one of either left or right wings majority. ▪ Election to the European Parliament were also held in May 2014.