



Government
of South Australia

Department of Trade and
Economic Development

BizFacts

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Conducting your own Feasibility Study Checklist

What information do you need?

At the end of your study, what questions do you want to be able to answer? Make a list of these questions before you start to ensure that you obtain all the data you need. Some examples of questions you might have are given below. The list is not exclusive and there are many other questions that you may need to answer in assessing the feasibility of your idea. More information on the questions you need to ask can be found in the "Starting Your Own Business" fact sheet.

What product or service?

Do you want to assess the potential of a product or service you wish to provide? Do you want to find out what product or service would be most suitable for your chosen location or target group? Do you want to identify a product or service most likely to return your required level of profit?

What is the demand for your product or service?

What is the size of the market for your product or service? Is there room for your business or is the market already full? How many units of your product or service can you expect to sell in a year? You will need to gather data about similar businesses, looking at their financial returns over a number of years.

Who are your potential customers?

Will you be part of a small, specialised market or is the entire population a potential customer? You will need to gather data such as who buys the product or uses the service, and when, where and how purchases are made.

Is there a purchasing pattern?

Do the purchasers of the product or service have anything in common such as age, income, sex, or occupation? These commonalities may help you identify your target population and assist with other questions such as location, trading hours, purchasing facilities (e.g. direct/telephone or mail order/internet) and later, advertising methods.

Where are your potential customers located?

Once you have identified who your potential customers are, you need to know what conditions might maximise your chances of their visiting/using your business. The

data you need to gather will depend a lot on the product or service you intend to provide and the purchasing pattern of your potential customers. If most purchases are made based on where people live, then one of the things you would need to consider is where your target population live. If most purchases are made on the journey to or from work, you might want to look at the areas most often travelled by your target population. In both cases, ABS census data can provide useful information. Once you have this information, you will then need to investigate such issues as the availability and cost of premises in the locations you have identified as desirable, as well as the presence of similar businesses in the area.

What is the history of the product or service?

How have businesses with a similar product or service performed in the past? Where have they been located? Who operated the business? How long has the business been established? These are just a few of the questions you will need to ask.

If you are looking at purchasing an existing business you will need to pay particular attention to its financial status over an extended period of time. Make sure the data you gather is comparable from year to year and does not contain any special circumstances that can affect the long-term accuracy of the numbers. Find out the factors that have made the business a success or a failure, and assess yourself and your plans against them.

What information is already available and how do you find it?

The ABS has substantial data on a number of the questions raised here. Information about ABS data, products and services can be found at [hyperlink to ABS bizline brochure]. Other sources of data might include Government departments or Industry and Business Associations relevant to your intended product or service.

Collecting your own data

Sometimes the data/information that you need is not already available. In these cases you will need to either collect the information yourself or in conjunction with a research consultant or agent.

Define your target population

Your target population is the people or product or service you want information about. The target population is made up of units. For example: if your target population was houses within a 10km radius of your preferred business location, each house within the 10km radius would be a unit.

Do you have an accurate list of all the units in your target population?

For household surveys you may choose not to use a list but for business surveys, you must have an accurate list of the units that make up your target population. Your list needs to contain all and only the units that make up your target population and each unit must only appear in your list only once. If you are surveying businesses you might include the name of business, contact person, address, an identification number, and size indicator such as turnover or number of employees on your list.

Census or Sample

In a census, data is collected from every unit in the target population. In a sample, data is collected from a subset of the target population. Because you are going to less units, a sample is generally quicker and cheaper than a census. However, a sample must be correctly designed and selected if you want to be able to say something about the total population. If you decide to use a sample, you should get expert advice on its design before proceeding with collecting your data. There are two types of sampling method, random and non-random.

Random sampling

In simple random sampling each unit in the target population has an equal chance of being included in the sample. A Crosslotto draw is a good example of simple random sampling. Here a sample of 6 numbers is randomly generated from a population of 45 with each number having an equal chance of being selected. More complex forms of sampling such as stratified sampling, build on simple random sampling. These more complex methods are all designed to improve the efficiency of the sample for a given population.

Non random sampling methods

Non random sampling techniques are often cheaper and quicker than random sampling techniques and do not always require a complete listing of your target population. The disadvantages of non-random sampling methods are they usually have a bias in the results and the information gathered is not representative of the total target population. Non-random sampling methods include quota, convenience, and judgement sampling.

Methods of collecting data

After deciding on a census or a sample, you will need to decide how you are going to collect your data. You will need to design a questionnaire to gather the information you require.

Make sure your questions are clear and can not be misunderstood, do not contain jargon your audience may not understand, do not suggest a desirable response, do follow a logical order, and are presented in a way that is visually easy to follow. To collect your data you can either

conduct a personal interview or get respondents to fill out the form themselves (self-enumeration). Personal interviews can be face to face, or by telephone. Self-enumeration is usually cheaper and you can access more units in a much shorter time.

However, the response rate is much lower, often around 30%, which requires a larger sample in order to get enough responses for your data to be meaningful. You can use hard copy questionnaires or electronic forms that can be electronically mailed and completed using the internet for example. For hard copy forms there are four ways to get responses. These are mail-out mail-back, mail-out pickup, hand deliver pickup, and hand deliver mail back.

Collating data

Once you have your forms back you will need to have some way of collating the data. A simple method is to enter the responses into a spreadsheet or an analysis package. Alternatively, you might choose to engage an agency to process the data for you. Remember check your data for errors such as wrong values entered and answers which do not make sense.

Estimation

Estimation is a mathematical technique for producing information about a population based on a sample of units from that population. Different sampling techniques require different estimation techniques. It is not always necessary to generate estimates. If you are using a sample, seek professional advice on whether you need to produce estimates and what technique is appropriate.

Analysing Data

Having collated your own data, or obtained existing data from other sources, you will then need to summarise the data into tables that you can interpret directly or use as a basis for drawing graphs. You may wish to do this by hand or you can use a spreadsheet. Below is an example of what your table might look like.

Reading a table

Look at the title of the table. What is it about? What is the time frame? In this case the table is about candy bars sold during June 2000. What is the source of the data? In this case the source is our fictional vending machine proprietor VMP Pty Ltd. Look at the row totals and the column totals, they will give you an overall picture of what is happening in the data. Look at the row labels and column labels, they will tell you what the numbers represent. For example: looking at the left label "Site 1" and the column label "Total" you can see that the total number of candy bars sold at Site 1 in June 2000, was 217.

In this table a number of simple analysis methods have been used.

To calculate a **percentage share** divide the value of interest by its relevant total and multiply by 100. For example, Site 1's percentage share of total candy bar sales is:

Total sales Site 1/Total sales All Sites) multiplied by 100 = $(217/3097) \times 100 = 7.01\%$ of total candy bar sales for all sites.

To calculate an **average** add all the relevant values together and divide by the total number of values included.

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For example, the weekly average for June 2000 for Site 1 is:

$(\text{Week 1} + \text{Week 2} + \text{Week 3} + \text{Week 4}) / \text{Total number of Weeks} = (45+55+50+67)/4 = \underline{54.25}$ candy bars per week.

To calculate the **median** or **middle** number, first rank the values from lowest to highest. Next divide the number of observations plus 1 in half and locate the number which corresponds to the middle value. For example:

Candy bars sold at Site 1: 45, 55, 50, 67
 4 Weeks + 1 = 5
 $5/2 = 2.5$

The 2.5th value in your ranked list is the middle value. Therefore, your middle value sits half way between 50 and 55. $(55+50)/2 = 52.5$. Your median number of candy bars sold in June 2000 for Site 1 is **52.5** candy bars per week.

To calculate the lower (LQV) and upper (UQV) quartile values use the same method as you used for calculating the median.

Lower quartile value

$(2 \text{ Weeks} + 1)/2 = 1.5\text{th value}$
 $= (45+50)/2$
=47.5

Upper quartile value

$(2 \text{ Weeks} + 1)/2 = 1.5\text{th value}$
 $= (55+67)/2$
=61.0

Candy Bars Sold in the Month of June 2000 by Location and by Week

Location	Week No.				Total	Percent	Average	Median	LQV	UQV	Highest	Lowest	Range
	1	2	3	4									
Site 1	45	55	50	67	217	7.01	54.25	52.5	47.5	61	67	45	22
Site 2	30	39	37	52	158	5.10	39.5	38	33.5	45.5	52	30	22
Site 3	30	37	23	31	121	3.91	30.25	30.5	26.5	34	37	23	14
Site 4	22	27	31	34	114	3.68	28.5	29	24.5	32.5	34	22	12
Site 5	150	4	140	145	439	14.18	109.75	142.5	72	147.5	150	4	146
Site 6	162	2	160	165	489	15.79	122.25	161	81	163.5	165	2	163
Site 7	50	340	55	60	505	16.31	126.25	57.5	52.5	200	340	50	290
Site 8	34	46	50	42	172	5.55	43	44	38	48	50	34	16
Site 9	100	130	122	107	459	14.82	114.75	114.5	103.5	126	130	100	30
Site 10	95	111	117	100	423	13.66	105.75	105.5	97.5	114	117	95	22
Total	718	791	785	803	3097	100	774.25	788	751.5	797	803	718	85

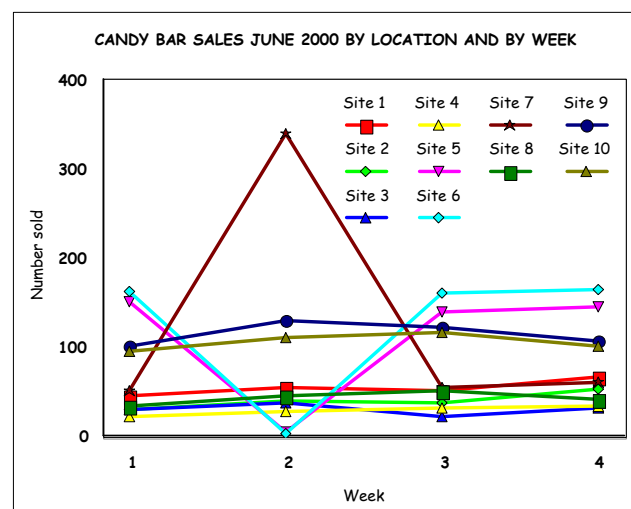
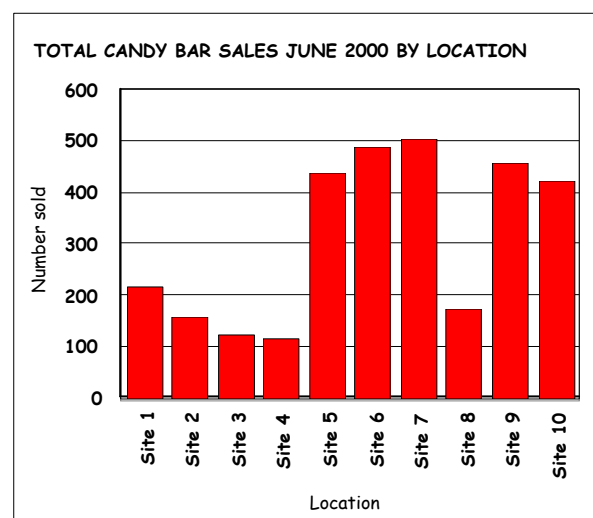
Other simple measures included in the table are the highest and lowest values and the range of values. The range is the highest number in the data minus the lowest number in the data.

Using Graphs

A simple method of summarising data is to draw a graph. Graphs can give you an instant picture of what is happening in your data but you must be careful of jumping to conclusions about what the graph is showing you. Look at the title of the graph, the labels on each axis, and the scale of each axis. Look below the surface. What is the measurement unit? If its dollars, is it hundreds, thousands or millions? Does the scale start at zero? Is it a wide scale with few points or a narrow scale with many? Make sure that what you think you see is really the true picture by checking the table of data the graph was drawn from.

There are many different types of graphs. Column graphs or vertical bar graph have short labels and are good for showing comparisons. Horizontal bar graphs are better for longer labels. Dot charts can display many data values without looking cluttered. Line Graphs are good for displaying information over a time period.

Following are two examples of using graphs. Example 1 is a column graph and example 2 is a line graph.



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Making comparisons

Always make sure you have the complete picture. In the column graph of total sales by site, Site 7 looks like the best performing location. However, looking at the line graph of sales by week, you can see that Site 7 was only high when Sites 5 and 6 were very low. You would need to investigate why this occurred as potentially, Site 5 and 6 are the best performing locations.

If you are using data from different sources, make sure the method used to collect the data and the definitions used are the same. In the case of comparing financial accounts, you should create common size accounts by dividing all the numbers by total assets. This allows comparisons between companies of various sizes.

If the collection method or definitions are not the same, you may have to analyse what each collection of data says on its own rather than make comparisons. If you are using data which covers different time periods, be aware of anything that might have affected the numbers. In our candy bar example, the candy machines at Sites 5 and 6 broke down so the workers went across the road to the rarely used machine at site 7. Sometimes you might want to know if what you see happening in one number has anything to do with what is occurring in another number. From the line graph, it looks like what happened at Site 7 had something to do with Sites 5 and 6 but to be certain you would have to check with the Site owners. In more complicated cases, statistical tests can be used to determine if a relationship exists.

Bringing it all together

Once you have completed your preliminary analysis, you need to draw all the pieces of information you have together to make decisions. Return to the questions you identified at the beginning of the process and use the results of your analysis to answer them.

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